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THE SEDONA CONFERENCE

*The Sedona Principles, Third Edition:
Best Practices, Recommendations & Principles
for Addressing Electronic Document Production*

A Project of The Sedona Conference
Working Group on Electronic Document
Retention & Production (WG1)

MARCH 2017

PUBLIC COMMENT VERSION

Submit comments by **June 30, 2017**, to
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The Sedona Principles, Third Edition: Best Practices, Recommendations & Principles for Addressing Electronic Document Production

*A Project of The Sedona Conference Working Group on
Electronic Document Retention and Production (WG1)*

2017 PUBLIC COMMENT VERSION

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The Sedona Principles, Third Edition, Principle 11 (2017 Public Comment Version).

The Sedona Principles, Third Edition, Cmt. 5.e. (2017 Public Comment Version).

In Memoriam

The 2017 Third Edition of *The Sedona Principles* would not be a reality without the vision and efforts of two great lawyers and human beings, who are no longer with us—Richard Braman and Bill Butterfield.

Richard G. Braman (1953–2014) was the founder and first Executive Director of The Sedona Conference. Much has been written and said in the nearly three years since Richard left us, but it is undeniable that Richard’s vision turned The Sedona Conference from an idea on paper into a world-renowned think tank that can move the law forward in reasoned and just ways. Richard’s passion for meaningful human interaction—and dialogue not debate—guided his inspirational journey at The Sedona Conference, as well as his early careers as a practicing lawyer and even jazz club owner. He challenged convention in all the right ways, while building and sustaining personal and professional relationships. His positive impact on the profession, as well as on his family and friends, was profound.

What may be relatively unknown, however, is how Richard’s vision, entrepreneurial spirit, and drive provided all the right ingredients to allow the concept of *The Sedona Principles* to grow and blossom in the first place. In the Spring of 2002, Richard was keen to take The Sedona Conference to the “next level” beyond the highly successful educational “regular season” experiences provided in the areas of Complex Litigation, Antitrust, and Intellectual Property. When presented with the idea to invite a group of people to Phoenix in the Fall of 2002 with the ambitious goal of developing principles that could help guide litigants and courts in the nascent arena of “electronic discovery,” Richard did not hesitate. He instantly recognized the area as one where the magic of dialogue among interested professionals, many of whom he had never met, could well lead to the development of something worthwhile that would move the law forward in a reasoned and just way. He dove in headfirst to build the structure of the Working Group Series to help support the effort, while also seeing the opportunity to use Working Groups across many areas in the future as a way to realize his dream of that “next level” for The Sedona Conference.

And then Richard did what many people find impossible to do: he trusted the assembled group to follow the formula of open dialogue to reach that reasoned and fair output, which was first embodied in 2003 in *The Sedona Principles*. Richard certainly challenged the group, and had his eye on the meetings and work product to ensure fealty to the core principles of The Sedona Conference. But he did not try to write the document himself, and he did not interfere with the editorial process or dictate outcomes. Instead, he relentlessly fanned the flames of active, intense, and meaningful dialogue as the document took shape. After the first public comment version of the *Principles* was distributed free of charge for the world to scrutinize, Richard did not rest, but he immediately spurred and led efforts to actively recruit new members from diverse backgrounds and perspectives to join the dialogue to refine and reshape the Principles.

Richard’s unique combination of passion, vision, energy, intellect, humor, and agility were all critical to providing the safe space for the development of *The Sedona Principles* from its inception fifteen years ago through the publication of this Third Edition, and the publication of many more works by

The Sedona Conference, including the marquee *The Cooperation Proclamation* which was a signature achievement for Richard.

William P. Butterfield (“Bill”) (1953–2016) was renowned as a successful complex business litigation and class action lawyer. Over nearly two decades, he also achieved top recognition as a leading electronic discovery specialist—as a practitioner, a teacher, a mentor, a speaker, an author, and an expert.

Among his most coveted roles, Bill served as an ambassador of Working Group 1 of The Sedona Conference for many years, first as an active member of the Working Group, next as an appointed member of the Steering Committee, and ultimately as Vice-chair and then Chair of the Steering Committee.

Bill was an early architect of *The Cooperation Proclamation*, first published in 2008. Working side-by-side with Richard Braman, Bill and others crafted a white paper (*The Case for Cooperation*) that was both provocative and practical, and launched a “national drive to promote open and forthright information sharing, dialogue (internal and external), training, and the development of practical tools to facilitate cooperative, collaborative, transparent discovery.” As of this writing, the *Proclamation* has been endorsed by more than 215 judges nationwide, and has served as a guidepost for lawyers and judges as they navigate discovery of electronically stored information from ever-evolving technologies. The *Proclamation* also paved the way for the acknowledgement of the importance of cooperation, as reflected in the Advisory Committee Notes to the 2015 amendments to the Federal Rules of Civil Procedure.

The fact that Bill was an early proponent of cooperation was characteristic of his exemplary life. A man of dignity, honor, kindness, humility, and grace, Bill worked tirelessly to achieve fairness and justice in the courtroom, and in the development of the law.

Bill’s recognition as a leader in the electronic discovery field was unique among plaintiffs’ lawyers and required tenacity, strategic thinking, exorbitant amounts of time, and very, very thick skin. And thick skin he had—for the Steering Committee struggled for years to update *The Sedona Principles*, but it was under his leadership that the goal was achieved and this publication is now a reality.

Bill’s success was the result of something extraordinary among a large crowd of intellects and geeks—Bill was a man of pure grace. He let others speak first, he listened, and he considered all that he heard before he mapped the direction to be taken, and even then he offered the direction as a proposal to be considered. Bill brought to his endeavors not only his superior intellect, but also logic and his commitment to fairness and justice.

Bill’s life and his tenure as Chair both completed their beautiful circles in December 2016.

With the publication of *The Sedona Principles, Third Edition*, may Bill’s and Richard’s voices be heard, encouraging all lawyers to be not only smart and strategic, but also thoughtful, considerate, and fair.

Jonathan M. Redgrave

Ariana J. Tadler

Preface

Welcome to the 2017 Public Comment Version of *The Sedona Principles, Third Edition: Best Practices, Recommendations & Principles for Addressing Electronic Document Production*, a project of The Sedona Conference Working Group on Electronic Document Retention and Production (WG1). The Sedona Conference is a 501(c)(3) research and educational institute that exists to allow leading jurists, lawyers, experts, academics, and others at the cutting edge of issues in the areas of antitrust law, complex litigation, and intellectual property rights, to come together in conferences and mini-think tanks called Working Groups to engage in true dialogue—not debate—in an effort to move the law forward in a reasoned and just way.

The Sedona Principles was the first, and is still perhaps the best-known, publication in the Sedona Conference Working Group Series. As detailed in the Foreword, the genesis of *The Sedona Principles* goes back to 2002. While still in draft form, the First Edition influenced the development of the law and was cited in the landmark case of *Zubulake v. UBS Warburg*, 229 F.R.D. 422, 440 (S.D.N.Y. 2004). Throughout its 15-year evolution, *The Sedona Principles* has been recognized as a foundational guide for attorneys and judges confronting the novel challenges of eDiscovery.

But just as the Second Edition was necessitated by advances in the law and amendments to the Federal Rules of Civil Procedure in December 2006, this Third Edition has been necessitated by an even greater explosion in the volume and diversity of forms of electronically stored information, the constant evolution of technology applied to eDiscovery, and by further amendments to the Federal Rules of Civil Procedure that went into effect in December 2015. Perhaps an even more significant motivation for a Third Edition is that we have an additional ten years of experience with eDiscovery, which has refined our analysis and sharpened some differences in outlook. This was reflected in the amount of time it took to reach consensus on a few particularly thorny issues. And by “consensus,” we do not mean unanimity, but a series of compromises that the drafting team and WG1 members were willing to live with as general statements of principle, even if they may advocate for a different position in an individual case.

Building consensus through dialogue is not an easy process, and as the Foreword describes in detail, it takes significant time and effort. But a publication that is the result of dialogue and consensus will be more valuable to the bench and bar than even the best law review article or brief written by individuals who are in agreement from the outset. It is now your opportunity to join the dialogue and expand the consensus. This version of *The Sedona Principles* will be open for public comment until **June 30, 2017**, and we welcome your questions, observations, and suggestions for improvement. Please send your comments to comments@sedonaconference.org.

In a departure from past practice, we have acknowledged all the members of the drafting team together on the title page, as no distinction in rank between editors and contributors is appropriate for this work. Over the course of many years, every member of the team contributed what they could, when they could. We are particularly grateful to four members of the drafting team who volunteered

to serve as a “Style Committee,” smoothing out the rough edges of a document to which many people contributed: Ted Hiser, Dean Kuckelman, Judge Andrew Peck, and Charles Ragan. We are also grateful to three volunteers who stepped forward to perform a task which may not be glamorous, but is absolutely necessary for an authoritative reference work such as *The Sedona Principles, Third Edition*—checking rule, statute, and case citations for accuracy and conformance with accepted legal citation form. We thank Drew B. Howk, K. Alex Khoury, and Andrew H. Walcoff for their invaluable assistance with this task.

The current and *ex officio* members of the WG1 Steering Committee are listed at the end of the Foreword, but several former members of the WG1 Steering Committee served during the long drafting period for this publication, and they contributed to the earliest drafts and reviews: Sherry Harris, John Rosenthal, David Shonka, and Edward Wolfe.

Finally, we recognize the several hundred members of WG1 who took the time to read innumerable drafts, sit through many meetings in person and online, contribute comments, point out inconsistencies, and suggest solutions to problems. The membership makes The Sedona Conference Working Group Series publications possible and lends them the authority that only diversity and inclusiveness can provide. WG1 is only one of several Sedona Conference Working Groups engaged in producing primers, principles, guidelines, and best practices to move the law forward in the areas of antitrust, patent, data security, and cross-border litigation. If you are not already a member of The Sedona Conference Working Group Series, we urge you to consider joining and becoming part of this unique effort. More information on the Working Groups and membership may be found at <https://thesedonaconference.org/join>.

Craig Weinlein
Executive Director
The Sedona Conference
March 2017

Foreword

A History of *The Sedona Principles*

As described in the Second Edition, The Sedona Conference Working Group on Electronic Document Retention and Production (WG1), a group of attorneys and others with experience in handling electronic information in litigation, met in October 2002 for the first time to address the production of electronic information in discovery. The group was concerned about whether rules and concepts developed largely for paper discovery would be adequate to address issues of electronic discovery, and whether guidance on the issues could be expected to emerge quickly from individual court decisions. After vigorous dialogue, a set of core principles and best practice recommendations emerged for addressing the production of electronic information in litigation. These principles became known as *The Sedona Principles*.

The initial draft was published for comment in March 2003, widely disseminated through various channels to the legal community by members of WG1, and cited by the federal courts as early as May 2003. WG1 met again in October 2003 to discuss and evaluate comments and possible revisions, and to seek further input from WG1 members.

In January 2004, the First Edition of *The Sedona Principles* was published in final form. It reflected the considered comments to the initial draft, and resulting changes that were believed to enhance the document as a guide to courts, parties, and counsel. An “Annotated Version” of the First Edition was published in June 2004, showing how court decisions dovetailed with or varied from *The Sedona Principles*. A 2005 Annotated Version, incorporating cases decided in 2004 and 2005, was published in July 2005.

During the same period (2004–2005), the Advisory Committee on the Federal Rules of Civil Procedure met, evaluated, and published for public comment a set of draft amendments to the Federal Rules, for the first time specifically addressing discovery of electronic information. The Committee held three public hearings, heard oral testimony from 74 witnesses, and received 180 written submissions. In April 2006, the U.S. Supreme Court, acting through the Rules Enabling Act, adopted the final proposals, which went into effect on December 1, 2006.

WG1 found itself at the center of the approaching 2006 amendments, and in the Fall 2006, WG1 met and agreed to revise Principles 12 and 14, extensively redraft nearly all Comments, and add several new Comments, predominantly to reflect the changes to the Federal Rules of Civil Procedure.¹ During Winter and Spring 2007, the WG1 Steering Committee made additional changes to Principles 8 and 13, as well as further edits to the Comments.² In June 2007, the Second Edition of *The*

¹ Thomas Y. Allman, *The Sedona Principles after the Federal Amendments: The Second Edition (2007)*, THE SEDONA CONFERENCE (2007), <https://thesedonaconference.org/publication/The%20Sedona%20Principles>.

² *Id.*

Sedona Principles was published. An Annotated Version of the Second Edition followed four months later.

Over the subsequent years, as technologies evolved and issues surrounding discovery of electronic information became more complex and costly, many in WG1 expressed interest in further updates to the *Principles*. Accordingly, in 2010, a drafting team was formed to reexamine the *Principles* in light of experiences with the 2006 amendments as well as the newer technologies, and to suggest updates to Principles and the Comments. A draft was presented at the Spring 2011 WG1 meeting, but the effort stalled due to a lack of consensus. In 2012 the WG1 Steering Committee formed an ad hoc subcommittee to reexamine the *Principles*, and in 2013 the current drafting team was recruited.

In the ensuing three-plus years, drafts of the Principles and Comments were presented for dialogue at two meetings of WG1 in 2014. In response to significant feedback from the members, the drafting team met in person in Phoenix in December 2014, with Judge Peck participating telephonically, and after two days came out with a consensus draft of the Principles for a Third Edition. This was presented to the WG1 Steering Committee in January 2015, where feedback was provided to the drafting team, which then made additional edits during Winter 2015. A full draft of the Principles and Comments for a Third Edition was presented to the WG1 membership in multiple sessions at the 2015 Midyear Meeting in Texas, but nothing close to consensus emerged and it was apparent that additional changes to several key Principles, as well as related Comments, were in order. Following further work by the drafting team, three online meetings open to the entire WG1 membership were held over the Summer of 2015, during which the membership had the opportunity to provide feedback on the third draft of the Third Edition. In addition, numerous written comments were received from the membership. As a result, the issues in contention were narrowed, and the drafting team again revised several Comments. These edits were carefully considered by the WG1 Steering Committee in September 2015, particularly in regards to the Comments to Principle 6. Again, revisions were made by the drafting team in short order and presented to the WG1 membership at the 2015 Annual Meeting, where consensus seemed to be reached on all but a few contentious sections of Comments. After another round of revisions by the drafting team, a new draft was presented at the 2016 Midyear meeting, and posted on the WG1 website for all members to consider and provide input, as appropriate. Consensus was reached on nearly all issues, the drafting committee produced yet another draft, and the editorial Style Committee (comprised of three drafting team members and the judicial participant) worked long hours to harmonize the voice and style across all 14 Principles and throughout the draft. The resulting product was considered by the WG1 Steering Committee in September 2016. At that time, consensus was established, except with respect to certain language in Comment 6.b. as to which strongly-held views were presented by members who predominantly represented opposing sides in large-scale, asymmetrical litigation.

Thereafter, the WG1 Steering Committee made several attempts to resolve the remaining issue on the competing positions regarding the text of Comment 6.b. Sadly, in December 2016, William Butterfield, our dear friend and colleague, who was serving not only as the Chair of the WG1 Steering Committee, but also as the Steering Committee Liaison and Team Leader of the *Principles* project,

passed away after a short illness. Following the holidays and a period of mourning, the WG1 Steering Committee met in person in January 2017, and reached consensus on the final language for Comment 6.b. that is reflected in this publication.

The Structure of *The Sedona Principles*

There are three substantive components to this document:

The first component is an Introduction that summarizes the role of *The Sedona Principles* and the main modifications made to Principles and Comments from the Second Edition to the Third Edition. Additionally, the Introduction provides guidance from the WG1 Steering Committee and the drafters on interpreting *The Sedona Principles* and related Comments.

The second component is The Sedona Principles, Third Edition—fourteen succinct statements that embody the consensus view of WG1 on a reasonable and balanced approach to the treatment of electronically stored information in the legal process. For reference purposes and to facilitate use of this publication, following the list of The Sedona Principles, we provide a chart cross-referencing each of the Principles (and their supporting commentary) to key issues in electronic discovery and the pertinent Federal Rules.

The third component is the detailed Commentaries to the Sedona Principles, Third Edition which expand on each Principle statement to provide analysis and guidance to the bench and bar on the key legal doctrines and issues implicated by the Principles, as well as any notable exceptions. Some Comments include illustrations to assist in defining factual boundaries for the application of the Principles. The Commentaries to the Sedona Principles, Third Edition are divided into logical groupings, and are supported by select citations and references to key primary and secondary sources and authorities.

The Third Edition has been thoroughly updated to take into account evolving views on electronic discovery over the past decade, based upon the collective experiences of the WG1 membership in facing the myriad of practical issues that are influencing the development of the law in this area, the numerous important court decisions across the country, and, of course, the 2015 amendments to the Federal Rules Civil Procedure.

The Introduction, Principles, and Commentary are interrelated and intended to be interpreted as a cohesive document. Readers are urged to consider not only the written text of the Principles and the Comments, but also the interpretive guidance of generally applicable considerations provided in the Introduction that apply globally to all the Principles.

Seeking Public Comment

We present this work to the community for feedback prior to final publication later this year. We welcome comments from the public, which should be submitted in writing no later than **June 30, 2017**, to comments@sedonaconference.org.

We know this is not a perfect document; improvements can always be made to present the best work possible to benefit the bench, the bar, and those involved in the implementation of the preservation and production of electronic documents. With this in mind, we will read all comments that are timely submitted,³ endeavor to give them due consideration, and edits will be made where the WG1 Steering Committee can reach consensus on a proposed change prior to final publication.

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March 2017

³ If duplicated comments are submitted from multiple sources, one copy will be selected and considered as a single comment with multiple signatures.

⁴ *The Sedona Principles, Third Edition* represents the consensus view of The Sedona Conference Working Group 1, and does not necessarily represent the individual views, opinions, or positions of the undersigned, of their clients, or of any law firm, company, agency, or other entity of which they are a partner, shareholder, officer, director, or employee.

⁵ *See In Memoriam supra.*

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Introduction

Discovery in the World of Electronically Stored Information—A Decade Later

The Second Edition of *The Sedona Principles: Best Practices Recommendations & Principles for Addressing Electronic Document Production* was published in June 2007—the same month the first iPhone was available to the public and during what Thomas Friedman has suggested “may be seen as one of the greatest technological inflection points in history.”⁶ At the time, the Sedona Conference Working Group on Electronic Document Retention and Production (WG1) was focused on addressing and clarifying what now may be well-settled fundamental issues, setting the stage for the decade to come. Much has happened since, as the volume, variety, and complexity of electronically stored information (ESI), and the velocity with which technologies have proliferated, have increased dramatically.

In that context, by 2017, the issues surrounding the production of ESI have grown in number and complexity. While WG1 has continued to publish numerous in-depth papers analyzing issues pertaining to the management and discovery of ESI, protecting privilege, using cooperation to reduce total costs of discovery, and emergent related technologies, *The Sedona Principles* had not been updated—until now.

In the interim, some hot-button issues in 2004 and 2007 essentially have become moot (such as whether metadata is even discoverable), and others have diminished in importance due to technological advances (such as having to restore and produce from back-up tapes). New issues and technologies—some not even fathomed in June 2007—now command our attention. Updates to *The Sedona Principles* were needed. The challenge was to create a worthy successor to The Second Edition of *The Sedona Principles* that would continue to be useful to the bench and bar.

This Introduction is intended to provide interpretive guidance on reading the Principles and Comments in the Third Edition: (1) to explain the relationship between the Principles and the Federal Rules; (2) to point out the common themes and considerations of general applicability in the Third Edition; and (3) to highlight the significant changes made to *The Sedona Principles* between the Second and Third Editions, and the terminology employed throughout.

⁶ Thomas L. Friedman, *Dancing in a Hurricane*, N.Y. TIMES, Nov. 19, 2016, available at https://www.ny-times.com/2016/11/20/opinion/sunday/dancing-in-a-hurricane.html?_r=0 (noting that during the period in and around 2007, technological developments included the explosion of Facebook, Twitter, mobile apps, big data analytics, and cloud computing. The same period saw the emergence of search, retrieval, and review methods for discovery, now known as technology assisted review.).

1. The Relationship between *The Sedona Principles* and the Federal Rules of Civil Procedure

The Sedona Principles is not intended to serve as a Restatement of Law on electronic document preservation and production, nor is it intended simply to track and reflect the Federal Rules of Civil Procedure. From its inception, *The Sedona Principles* was intended to serve as best practice recommendations and principles for addressing ESI issues in disputes—whether in federal or state court, and whether during or before the commencement of litigation.

In many respects, *The Sedona Principles* aligns with many of the Federal Rules of Civil Procedure. However, that correlation does not necessarily reflect cause and effect. The core mission of The Sedona Conference is to advance the law in a reasoned and just way. In fulfilling that mission, WG1 at times has taken approaches to electronic discovery before the Federal Rules spoke to an issue, and, on other occasions, WG1 has charted a different path from the Advisory Committee on Civil Rules. There is no question that the Third Edition, like the 2007 Second Edition, is influenced by the same evolving trends in the demands for the preservation and discovery of ESI in the legal process as have been addressed by amendments to the Federal Rules.⁷ But the Third Edition differs from the Federal Rules in certain respects. For example, amended Rule 37(e) now is closer to positions WG1 historically has taken on sanctions and remedies for spoliation, as reflected in Principle 14 and the related Comments, but the two do not align fully. WG1 will continue to urge for further amendments to the Federal Rules of Civil Procedure that are more reflective of the consensus positions established in these Principles and Comments, as well as in WG1's other, more detailed, publications.

2. Common Themes and Considerations of General Applicability in *The Sedona Principles, Third Edition*

Three themes were dominant drivers leading to the 2015 Amendments to the Federal Rules of Civil Procedure: cooperation, proportionality, and increased judicial involvement. The first two also play a prominent role in *The Sedona Principles, Third Edition*.

A. Cooperation in Discovery

The Sedona Conference *Cooperation Proclamation*⁸ was first published in July 2008, slightly more than a year after publication of *The Sedona Principles, Second Edition*. The stated purpose of the *Cooperation Proclamation* was to launch “a coordinated effort to promote cooperation by all parties to the discovery process to achieve the goal of a ‘just, speedy, and inexpensive determination of every action.’”⁹

⁷ Notwithstanding the dynamism and scale of technological change, there are many differences between the discovery of ESI and traditional paper discovery that have remained constant, including the volume, duplicability, and persistence of ESI. See Appendix B, Discovery in a World of Electronic Documents and Data—2007, which addresses the constant characteristics of ESI that distinguish ESI from paper discovery.

⁸ The Sedona Conference, *Cooperation Proclamation*, 10 SEDONA CONF. J. 331 (2009 Supp.).

⁹ *Id.*

The Sedona Conference expressly sought to tie the value of cooperation in the discovery process to the stated purpose of the Federal Rules of Civil Procedure in Rule 1. The leadership of The Sedona Conference in this area contributed to the 2015 Amendment to Rule 1, establishing that parties jointly share with the court the responsibilities of securing “a just, speed, and inexpensive determination of every action.”¹⁰ The Advisory Committee Note to the 2015 amendment to Rule 1 expressly addresses the issue, stating:

Most lawyers and parties cooperate to achieve these ends. But discussions of ways to improve the administration of civil justice regularly include pleas to discourage overuse, misuse, and abuse of procedural tools that increase cost and result in delay. Effective advocacy is consistent with—and indeed depends upon—cooperative and proportional use of procedure.¹¹

WG1 has long promoted the *Cooperation Proclamation*, and the subject is addressed throughout the Third Edition, with numerous new references to cooperation. Through the drafting process of the Third Edition, WG1 has reached consensus that cooperation can, if practiced appropriately by knowledgeable and willing counsel, lead to significant efficiencies in the discovery process, and, for those reasons, cooperation between parties in addressing discovery should be encouraged.

B. Proportionality in Discovery

Like cooperation, proportionality is vitally important to *The Sedona Principles, Third Edition* as it is to the 2015 Rules amendments. Proportionality is addressed expressly and liberally throughout the Principles and Comments, as the concept applies to all aspects of discovery from preservation through production.

C. *Primum Noc Nocere* (First, Do No Harm)

In preparing *The Sedona Principles, Third Edition*, part of the original charter for the drafting team was *primum noc nocere*, literally translated as “first, do no harm.” This Latin phrase generally is used as a warning to doctors that sometimes it may be better to refrain from taking any quick action when doing so could worsen the patient’s situation. For the drafting team, the patient was *The Sedona Principles*, WG1’s foundational publication. But once the drafting team began its work in earnest, it became evident that substantive additions and changes to the Principles and Comments were essential if the Third Edition was to reflect appropriately: (1) the many new or revised WG1 publications since issuance of the Second Edition in June 2007; (2) changes in the Federal Rules and case law over that time; and (3) the impact of the rapid development and evolution of technology, processes, and methodologies. At the same time, the drafting team sought to avoid causing confusion and raising new, particularly larger, issues in the interpretation of the Principles (i.e., causing “harm”). This goal proved easier said than done.

¹⁰ FED. R. CIV. P. 1.

¹¹ 2015 Advisory Comm. Note to Rule 1.

The drafting team faced many unanticipated challenges in seeking to improve the Principles and Comments to address the world of discovery as it now exists, while abiding by the maxim of “first, do no harm.” First, as the drafting team, and then the Working Group, explored and carefully considered the Principles and Comments in the Second Edition, it became increasingly clear that some sections had not aged well in the face of the substantial evolution of the world of information technologies and discovery over the past decade. Second, while understanding that the Principles and Comments are interconnected, the drafting team might make clear improvements in one Comment, only to discover during WG1 meetings that those edits raised concerns for some members in other Comments. In the end, the Public Comment Version of the Third Edition of *The Sedona Principles* reflects The Sedona Conference’s best efforts to do no harm, while fulfilling its mission to move the law forward in a reasoned and just way.

D. Principles as Presumptions

The world of discovery, and the law for that matter, is filled with variables and uncertainty. Rules and presumptions exist to establish reasonable expectations and guidance on legal, business, and ethical decision-making. Sometimes presumptions are expressly stated; other times they are left unsaid. In drafting *The Sedona Principles, Third Edition* a decision was made not to attempt to state every underlying presumption. These presumptions fall into three categories.

First, every Principle reflects and incorporates at least some presumptions in the form of affirmative statements. The Principles and Comments cannot account for endless variations of factual scenarios across tens of thousands of cases and controversies presented before the federal and state courts, and should be interpreted as conveying presumptions, not absolute positions or truisms.

Second, the absence of a stated presumption in any Principle or Comment should not be interpreted as a rejection of any established legal presumption that a party is entitled to under existing rules and case law, or of any corollary right of another party to rebut that presumption.

Third, the Principles and Comments incorporate unstated societal, legal, and ethical norms. By way of example, the Principles presume that attorneys will act within the bounds of established legal and ethical rules to which they are subject, and fulfill the duties that they owe to, *inter alia*, their clients, opposing parties and counsel, third parties, and the court.

3. The Significant Changes from the Second Edition to the Third Edition, and Terminology Employed

A. Editorial Considerations

As noted in the Preface, four members of the drafting team volunteered to serve as a “Style Committee” to review the final draft of the Third Edition. A primary objective of the Style Committee was to implement a more consistent use of language than existed in the prior editions. For example, even though many of the concepts apply to paper documents and other evidence, the Principles and Comments specifically are written to address discovery of electronically stored information (ESI).

For that reason, the term “ESI” is now used uniformly in the Third Edition where prior editions used variously “ESI,” “data,” “evidence,” “documents,” “information,” etc.

Other changes in the Third Edition made for the purpose of uniformity include:

- the term “Rule” is used as a shorthand for the Federal Rules of Civil Procedure, unless otherwise specified;
- the term “responding party” is used rather than using interchangeably “responding party” and “producing party” as was done in the prior editions;
- the term “party” includes “counsel,” unless the action described is typically performed by legal counsel (e.g., meet and confer), in which case “counsel” is used;
- the term “relevant” is used to refer to information within the scope of discovery, rather than “responsive,” which is used as appropriate when referring to information requested in discovery; and
- “organization” is used instead of “corporation” or “entity,” because “organization” includes partnerships, government agencies, and other entities.

B. Overview of the Main Changes Between the Second and Third Editions

To assist the reader, the following is an overview of the changes between the Second and Third Editions.

Principle 1

No change was made to the Principle; however, the following changes were made to the Comments:

- Comment 1.a. has been updated to reference the 2015 Federal Rules amendments.
- Comment 1.b. has been updated to incorporate and address the developing concepts of Information Governance.
- Former Comment 1.c. regarding preservation has been moved to Principle 5.

Principle 2

The Principle has been simplified to emphasize the fundamental purpose and import of proportionality. The specific factors considered in applying proportionality are set forth in the Comments. Additionally, the word “balance” was selected to better reflect the application of the proportionality factors as set forth in the amendments to Rules 26(b)(1) and 26(b)(2)(C)(iii).

The Comments have been substantially revised and restructured:

- Former Comment 2.a. has been replaced with a new Comment 2.a. to describe the amendments to Rules 26(b)(1) and 26(b)(2)(C)(iii) with emphasis placed on proportionality.
- Comment 2.b. has been added and states that proportionality should apply to all steps in the discovery process, including preservation.
- Comment 2.c. has been added and states that proportionality should be addressed at the Rule 26(f) conference and Rule 16(b) scheduling conference. This Comment is consistent with the Advisory Committee Notes to amended Rule 26(b).
- Comment 2.d. is modified from former Comment 2.b., and the former Comment 2.d. has been deleted since it does not fit within the context of the Principle as revised.
- Comment 2.e. in the Third Edition is substantially new. The Comment cross-references other Comments addressing the accessibility of ESI. (Former Comment 2.e. has been moved under Principle 3.)

Principle 3

Principle 3 in the First Edition broke new ground in calling for early conferences between the parties to address discovery of ESI, and played a significant role in the 2006 adoption of the meet and confer obligation now in Rule 26(f)(3). The Principle itself has been shortened in the Third Edition, but should not be interpreted as indicating any substantive change in the meaning or objectives of the Principle.

Edits have been made throughout the Comments to Principle 3 to reflect changes to the Federal Rules in December 2015, as well as the evolution of information-generating technologies, and in the practice of electronic discovery generally over the past decade since publication of the Second Edition.

- Comment 3.a. has been modified to address discovery from non-parties, the possibility of discussions between parties about ESI issues even before litigation begins where counsel are known, and also the need for parties to discuss potential quirks about discovery from newer technologies.
- New Comment 3.b. contains the most significant change to Principle 3 from the Second Edition to the Third Edition, reflecting the impact of the 2008 Sedona *Cooperation Proclamation*.

- Comment 3.e. (regarding early discussion of search techniques) is derived from former Comment 4.c., as it more naturally relates to Principle 3 than Principle 4.
- Comment 3.g. (regarding communication with opposing counsel and the court) is derived from former Comment 2.e.

Principle 4

In the Principle, the word “clear” was replaced in the Third Edition with the word “specific” to reflect recent case law better, including more frequent invocation of Rule 26(g). The change also better conforms with the 2015 amendments to Rule 26(b) on the scope of discovery.

- Comment 4.a. has been enhanced with more specific guidance tracking the 2015 Federal Rule amendments, particularly the promotion of the proportionality principles. As with other Principles, Comment 4.a. includes discussion of how this Principle applies to subpoena requests to non-parties.
- Comment 4.b. has been modified to reflect the increased prominence of proportionality in amended Rule 26(b) and in practice, as well as the importance of Rule 26(g) and the amendment to Rule 34 regarding the specificity of objections.
- Former Comment 4.c. has been moved to Comment 3.e., as noted above.

Principle 5

The Principle has been revised in several important but non-controversial respects. First, in line with the 2015 amendment in Rule 26(b)(1) to the definition of the scope of discovery, the Principle emphasizes that the preservation duty should focus on information relevant to the claims and defenses in the matter. Second, the revised Principle reflects the clarification in case law and the 2010 Sedona Conference *Commentary on Legal Holds*¹² that the duty to preserve is triggered when a claim is reasonably anticipated or litigation is pending. Third, the Principle seeks to clarify that proportionality applies to preservation and that it is unreasonable to preserve each instance of relevant ESI.

While the basic structure of the Comments remains unchanged from the Second Edition, some headings have been revised to provide better signpost guidance to the reader, and the text has been modified to provide better clarity and reflect changes over the past decade.

- Comment 5.a. has been amplified to reflect the two-part nature of the preservation duty—a trigger, and then proper scoping of the legal hold. This Comment also reemphasizes that duplicative instances of identical ESI need not be preserved, and in keeping

¹² The Sedona Conference, *Commentary On Legal Holds: The Trigger & The Process*, 11 SEDONA CONF. J. 265 (2010).

with the *Commentary on Legal Holds* and recent case law, proportionality applies to preservation determinations. New paragraphs have been added to address preservation by non-parties in response to a Rule 45 subpoena, and the special preservation issues that may arise with social media sources and other newer information-generating technologies.

- Comment 5.b. has been updated to reference The Sedona Conference *Commentary on Information Governance*.¹³ While the concept that an organization may wish to prepare for electronic discovery to reduce costs and risk is carried over from the Second Edition, it is emphasized that information governance programs are discretionary, and the absence of such a program should not be considered in determining whether an organization has met its preservation obligation.
- Comment 5.b. also notes that advances in backup technologies mean that organizations may not be dependent on hard-to-access backup tapes. However, in light of strong support from the WG1 membership, illustrations from earlier editions about backup media have been carried forward to preserve guidance in those situations where it is appropriate.
- Comments 5.c. and 5.d. have been revised to reflect the teachings from The Sedona Conference *Commentary on Legal Holds*.

Principle 6

No change was made to the Principle itself. The Comments, however, have been rewritten substantially, and several Comments reordered.

- Comment 6.a. has been revised completely to explain the reasoning behind the Principle, i.e., why responding parties are best situated as opposed to how they should respond.
- Comment 6.b. has been replaced with new guidance addressing the logical extension of the Principle that responding parties should be permitted to proceed in fulfilling their obligations on their own, taking appropriate note of The Sedona Conference's position on supporting meaningful cooperation in discovery when considering the scope and application of this Principle.
- Comment 6.c. contains elements of former Comment 6.e. addressing documentation and validation, but has been expanded to address all discovery processes rather than just ESI collection. Former Comment 6.c has been moved to Comment 6.d.

¹³ The Sedona Conference, *Commentary on Information Governance*, 15 SEDONA CONF. J. 125 (2014).

- Comment 6.d. includes revisions to former Comment 6.c. addressing Rule 34 inspections. The title of the Comment has been updated to clarify intent, and the text has been updated and expanded.
- Comment 6.e. combines former Comment 6.d. and Comment 6.f., and has been updated substantially to reflect the development of the role of specialized counsel for electronic discovery, as well as the expanded use of consultants and vendors over the past decade. Former Comment 6.e. has been moved to and revised in Comment 6.c.

Principle 7

No changes have been made to Principle 7, and only minor changes have been made to the Comments.

- Comment 7.a. includes an expanded title description, and has been revised to clarify that the term “inadequate” means the failure to take reasonable steps to identify, collect, and produce the requested information.

Principle 8

Principle 8 has been updated substantially to reflect the changes over the last decade in how ESI is maintained—both inside and outside the organization, including the quickly diminishing role of backup tapes, and the growing role of cloud computing and multiple storage devices. The revised language of the Principle also reflects the blurring of the line previously drawn between active and inactive data. The changes acknowledge the expanding data mobility, and that there now may be multiple, readily accessible copies of relevant ESI within the possession, custody, or control of a party that exist along a continuum from ESI that is easily accessible from a variety of sources, to ESI that is nearly impossible to obtain, but can be produced using extreme means and resources.

The Principle and its Comments establish a new process for addressing the preservation and production of unique, relevant ESI, starting with the primary and most readily available sources, and only moving down the continuum to secondary and less readily available sources, as necessary, until it is no longer reasonable or proportionate to the needs of the case. The Principle thus shifts the focus from what is or is not “reasonably accessible” ESI to the primary and most *readily* accessible sources of relevant ESI, consistent with The Sedona Conference *Commentary on Proportionality in Electronic Discovery*.¹⁴ Principle 8 expressly applies these proportionality concepts to preservation of ESI.

The Comments have been revised to reflect the material change to the Principle.

¹⁴ The Sedona Conference, *Commentary On Proportionality in Electronic Discovery*, THE SEDONA CONFERENCE (Nov. 2016 Public Comment Version), <https://thesedonaconference.org/publication/The%20Sedona%20Conference%20Commentary%20on%20Proportionality>.

- Updated Comment 8.a. describes the new framework, considering potential sources of discoverable ESI as existing along a continuum starting with ESI that is “readily accessible” and used in the ordinary course.
- Comment 8.b. has been revised completely to address the operation of the “not reasonably accessible” exception under Rule 26(b)(2)(B), and how it is distinguished from the concept of “readily accessible” under this Principle, as well as the application of the proportionality factors under amended Rule 26(b)(1).
- Comment 8.c. continues to address the issue of forensic data collection, but has been updated significantly, with illustrations added to provide guidance on when forensic collections would or would not be necessary or appropriate.
- Comment 8.d. has been updated to discuss the challenges of determining possession, custody, or control in the preservation and production of ESI held by vendors and other non-parties, with reference to the Sedona Conference *Commentary on Rule 34 and Rule 45 “Possession, Custody, or Control.”*¹⁵

Principle 9

The Principle has not been changed; the Comments have been updated.

- Comment 9.a. is amended to incorporate additional categories of ESI that are not readily apparent. Comment 9.a. also includes a discussion of the need to consider proportionality factors in considering whether to preserve or produce such forms of ESI. Finally, the illustrations have been updated to include additional references to the form of production.
- Comment 9.b. has been amended to remove the cross-reference to Principle 8 and Comment 8.d. pertaining to forensic collection.

Principle 10

The Principle has been updated in three important respects: First, the Principle is directed to “parties” (rather than simply “responding parties”) because all parties—including parties who receive information in discovery—have obligations with respect to privileges and protective information. Second, the Principle has been modified to refer specifically to privacy obligations because of the increasing importance of privacy in the U.S. and abroad. Third, “other legally enforceable restrictions” has been added to account for ESI that may be subject to contractual non-disclosure agreements or other restrictions.

¹⁵ The Sedona Conference, *Commentary on Rule 34 and Rule 45 “Possession, Custody, or Control,”* 17 SEDONA CONF. J. 467 (2016).

The Comments have been revised substantially and enhanced (five Comments have become ten). Most important, Comments 10.a.—10.d. provide guidance with respect to Federal Rule of Evidence 502 (enacted in 2008), and the broad protections available under its subsection (d).

- New Comment 10.d. cautions that Rule 502 only applies to attorney-client privilege and work product protections, and should not be mistaken as a panacea for other protected or restricted information.
- Comment 10.e. replaces former Comment 10.b. and warns that direct access to ESI or systems should be allowed sparingly and only upon a showing of good cause.
- Comment 10.f. addresses issues partially covered in former Comment 10.d. (namely, the risks associated with “clawback” or “quick peek” agreements), notes that a Rule 502(d) order does not eliminate all risks associated with “quick peek” agreements, and cautions that a “quick peek” agreement should only be entered in limited circumstances and after assessing pertinent risks.
- New Comment 10.g. provides guidance on how newer technologies (including technology assisted review (TAR)) may be used to facilitate privilege reviews. Similarly, new Comment 10.h. urges that parties attempt to reach agreement on procedures for logging privileged or protected work product information in a manner that meets the needs of the case.
- New Comment 10.i. addresses counsel’s ethical duties to protect confidential and privileged information, which, as manifested by 2012 amendments to the ABA Model Rules of Professional Conduct, have become more acute with the evolution and explosion of ESI.
- Finally, new Comment 10.j. encourages parties to be aware of and identify ESI that is subject to personal privacy, trade secret, and confidentiality obligations.

Principle 11

The Principle has been revised to substitute this language “using technology and processes, such as sampling, searching, or the use of selection criteria,” for the prior “using electronic tools and processes, such as data sampling, searching, or the use of selection criteria, to identify data reasonably likely to contain relevant information.”

- Comments 11.a. and 11.b. have been updated to incorporate recent Sedona commentaries, including those on search and retrieval, and proportionality; to reflect the updates to Principle 6 and its related Comments; and to include references to recent case law and literature on search and retrieval methodology.

- Consistent with new Comment 10.i. on recent enhancements to ethical obligations, new Comment 11.c. explains that counsel should oversee the identification and collection processes, even if technologies or specialized vendors are used.

Principle 12

Principle 12 and its associated commentary have been revised substantially from the Second Edition. In 2007, the focus was on the possibility of having to produce certain metadata that would enable “the receiving party to have *the same ability* to access, search, and display the information as the producing party” where appropriate to the ESI and the needs of the case. (Emphasis added.) In the Third Edition, the Principle has been revised to eliminate the prefatory language about party agreement or court order, and to provide that ESI should be produced “in the form or forms in which it is ordinarily maintained or that is *reasonably usable* given the nature of the ESI and the proportional needs of the case.” (Emphasis added.) This change reflects the emphasis placed on proportionality in the 2015 amendments to the Federal Rules, and recognizes that some ESI relevant to a matter may reside in an enormously complex system, of which only some ESI and some metadata is relevant to the case or needed to render the ESI produced reasonably usable.

The Comments have been revised substantially as well, in part to reflect that the proper functioning of many search, retrieval, and review platforms developed since 2007 depend on various metadata fields being available, and the tactical disparity that can exist if a requesting party is deprived of metadata necessary to use sophisticated technologies in handling and reviewing large ESI productions.

- Comment 12.a. explains at length the different kinds of metadata and not readily apparent, user-created information that may be associated with ESI in its native format.
- Comment 12.b., like Comment 3.c., suggests that the form or forms for production be discussed and agreed upon early in a case, urges that parties not demand forms of production for which they have no practical need, notes that in a majority of instances so-called TIFF+ productions are “reasonably usable,” and provides guidance on factors parties and courts should consider in determining appropriate forms of production. The subparts within Comment 12.b. point out that “reasonably usable” is not synonymous with native format, that parties should understand and consider the pros and cons of native production, and that responding parties may be subject to repeat productions and added costs if they unilaterally choose a form of production later found to be not reasonably usable.
- New Comment 12.c. addresses an issue under Rule 34(b)(2)(E) that has arisen in several cases—namely whether ESI when produced must be labeled to correspond to the categories in requests—and explains why there should be no such requirement.

- Comment 12.d. addresses the same subject as in the Second Edition, but has been expanded to address the additional requirements for responses set forth in the 2015 amendments to Rule 34(b)(2)(C), and provides illustrations concerning how a party may avoid having to produce in more than one format.

Principle 13

Principle 13 has been simplified to recognize that the costs of “preserving and producing” (rather than “retrieving and reviewing”) “relevant and proportionate” ESI should be borne by the responding party.

The Comments have been revised substantially. Across all Comments, the term “cost allocation” is used, rather than “cost shifting,” consistent with amended Rule 26(c)(1)(B).

- Comment 13.a. is updated to reflect the amended Federal Rules’ treatment of cost allocation and its interplay with the proportionality analysis under amended Rule 26(b)(1).
- New Comment 13.b. explains that cost allocation may apply to preservation, but only in extraordinary circumstances.
- Comment 13.c. urges that cost allocation not be used as an excuse to permit discovery beyond that permitted under amended Rule 26(b)(1).
- Finally, as with Comments to other Principles, new Comment 13.d. addresses the need to focus non-party requests under Rule 45 narrowly to avoid mandatory cost allocation. This Comment also notes that relationships between parties and certain third-parties may cause a court to be less likely to allocate costs.

Principle 14

Principle 14 has been revised to reflect evolving case law and the 2015 amendment to Rule 37(e), and to state that remedial measures, sanctions, or both may be awarded for a breach of a duty to preserve relevant ESI—depending on the degree of prejudice and whether the spoliating party acted with intent to deprive another party of the use of relevant ESI. The revised Principle is not intended to reflect a substantial departure from the basic tenets of the Second Edition.

Because the Principle is intended to provide guidance in state as well as federal courts, and to move the law forward (rather than serve as a restatement), the Comments vary in certain respects from amended Rule 37(e). Key aspects of the Comments include the following:

- Comment 14.a. replaces prior Comment 14.a. and provides the historical context for changes to Rule 37(e) from the Second Edition to the 2015 Rule amendment.

- Comment 14.b. is revised to reflect the change in focus from degrees of culpability to the conditions for the imposition of either remedial measures or sanctions.
- Comment 14.c. has been updated. As one example, Comment 14.c. discusses prejudice required to warrant remedial measures and includes an illustration as to how the timeliness of a challenge may bear on prejudice.
- Comment 14.d., like amended Rule 37(e), states that sanctions may be appropriate where the court finds an intent to deprive, but, unlike the amended Rule, concludes that sanctions also may be appropriate for an “incompetent spoliator” —one who intends to deprive the other party of ESI, but fails to eliminate it completely.

The Sedona Principles, Third Edition

1. Electronically stored information is generally subject to the same preservation and discovery requirements as other relevant information.
2. When balancing the cost, burden, and need for electronically stored information, courts and parties should apply the proportionality standard embodied in Fed. R. Civ. P. 26(b)(1) and its state equivalents, which requires consideration of the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs its likely benefit.
3. As soon as practicable, parties should confer and seek to reach agreement regarding the preservation and production of electronically stored information.
4. Discovery requests for electronically stored information should be as specific as possible; responses and objections to discovery should disclose the scope and limits of the production.
5. The obligation to preserve electronically stored information requires reasonable and good faith efforts to retain information that is expected to be relevant to claims or defenses in reasonably anticipated or pending litigation. However, it is unreasonable to expect parties to take every conceivable step or disproportionate steps to preserve each instance of relevant electronically stored information.
6. Responding parties are best situated to evaluate the procedures, methodologies, and technologies appropriate for preserving and producing their own electronically stored information.
7. The requesting party has the burden on a motion to compel to show that the responding party's steps to preserve and produce relevant electronically stored information were inadequate.
8. The primary sources of electronically stored information to be preserved and produced should be those readily accessible in the ordinary course. Only when electronically stored information is not available through such primary sources should parties move down a continuum of less accessible sources until the information requested to be preserved or produced is no longer proportional.
9. Absent a showing of special need and relevance, a responding party should not be required to preserve, review, or produce deleted, shadowed, fragmented, or residual electronically stored information.

10. Parties should take reasonable steps to safeguard electronically stored information, the disclosure or dissemination of which is subject to privileges, work product protections, privacy obligations, or other legally enforceable restrictions.
11. A responding party may satisfy its good faith obligations to preserve and produce relevant electronically stored information by using technology and processes, such as sampling, searching, or the use of selection criteria.
12. The production of electronically stored information should be made in the form or forms in which it is ordinarily maintained or that is reasonably usable given the nature of the electronically stored information and the proportional needs of the case.
13. The costs of preserving and producing relevant and proportionate electronically stored information ordinarily should be borne by the responding party.
14. The breach of a duty to preserve electronically stored information may be addressed by remedial measures, sanctions, or both: remedial measures are appropriate to cure prejudice; sanctions are appropriate only if a party acted with intent to deprive another party of the use of relevant electronically stored information.

The Sedona Principles, Third Edition and the Federal Rules

Topic of Discussion	Sedona Principle	Federal Rules of Civil Procedure¹⁶ (Dec 2015)
Discovery Scope	Principles 1, 2, 5, 6, 8, 9, 11	Rule 26(b)(1); Rule 16(b)(3)(B)(ii)
Preservation Obligations	Principles 1, 3, 5, 6, 8, 9, 12	Rule 26(f)(2) & (3); Rule 16(b)(3)(B)(iii)
Form of Preservation	Principle 12	n/a
Metadata	Principle 12	n/a
Form of Production	Principles 3, 4, 12	Rule 26(f)(3); Rule 34(b)
Meet & Confer	Principle 3	Rule 26(f)
Initial Disclosures	Principle 3	Rule 26(a)(1)
Preservation Orders	Principle 5	n/a
Discovery Requests & Responses	Principles 4, 6	Rule 26(d)(2); Rule 34
Tiered Production	Principle 8	Rule 26(b)(2)(B)
Cost Shifting	Principle 13	Rule 26(b)(2)(B); Rule 26(c)
Proportionality Limits	Principle 2 & <i>passim</i>	Rule 26(b)(1)
Identity of Unsearched Sources	Principle 4	Rule 26(b)(2)(B); Rule 34(b)(2)(C)
Protecting Privilege & Avoiding Waiver	Principles 3, 10	Rule 26(b)(2)(5); Federal Rule of Evidence 502
Spoliation Remedial Measures & Sanctions	Principle 14	Rule 37(e)
Cooperation	Principles 3, 6 & <i>passim</i>	<i>See</i> Rule 1, 2015 Advisory Committee Note

¹⁶ Unless otherwise noted.

Topic of Discussion	Sedona Principle	Federal Rules of Civil Procedure¹⁶ (<i>Dec 2015</i>)
Non-party Discovery	Principles 3, 5, 7, 13	Rule 45
Search & Retrieval	Principles 3, 10, 11	n/a

Commentaries to The Sedona Principles, Third Edition

- 1. Electronically stored information is generally subject to the same preservation and discovery requirements as other relevant information.**

Introduction

Whether dealing with electronically stored information (ESI) or paper copies, the scope of discovery in federal court is non-privileged matter that is relevant to the claims and defenses in the case,¹⁷ and proportional to the needs of the case.¹⁸ But, as explained in the Introduction, ESI has become so pervasive that the volume of ESI involved in most cases dwarfs the volume of any paper records. This makes ESI the driving force behind the scope of preservation and discovery requirements in many cases, and behind the litigation-related aspects of many effective information governance programs.

Comment 1.a. The scope of discovery is generally the same for ESI as for other relevant information, but ESI can present unique preservation and discovery issues.

The Federal Rules of Civil Procedure were amended in 2006 “to confirm that discovery of electronically stored information stands on equal footing with discovery of paper documents.”¹⁹ This clarification ended the argument that discovery only applied to information that had been intentionally created or viewed by human users—to the exclusion of metadata and other system information generated automatically by computers. Thus, ESI is generally subject to the same “relevant to the claims and defenses” scope of discovery that governs paper records. But ESI presents special issues in at least three areas, as explained below.

First, some court rules are expressly limited to ESI. For example, Rule 26(b)(2)(B) provides “specific limitations” on ESI “that the party identifies as not reasonably accessible because of undue burden or cost.” *See* Comment 8.b. Another example is Rule 34, which governs the form of production for ESI. *See* Principle 12. Other Rules that specifically refer to ESI include 16(b)(3)(B)(iii) (scheduling

¹⁷ The 2015 amendments to Rule 26(b)(1) address the common misperception that the scope of discovery extends beyond relevance if the requested discovery is likely to “lead to the discovery of admissible evidence.” *See* COMM. ON RULES OF PRACTICE AND PROCEDURE, REPORT OF JUDICIAL CONF. TO CHIEF JUSTICE, app. B-10 (Sept. 2014) (“that phrase was never intended to have that purpose”); 1946 Advisory Comm. Note to Rule 26 (“admissibility at trial should not be the test as to whether the information sought is within the scope of proper [deposition] examination”). Some state court rules broaden the scope of discovery from “claims and defenses” to “the subject matter involved in the pending litigation.” *E.g.*, ALASKA CIV. R. 26(b)(1).

¹⁸ Rule 26(b)(1). *See* Principle 2 regarding proportionality.

¹⁹ 2006 Advisory Comm. Note to Rule 34. The Note also points out that references in the Rules to “documents” “should be interpreted to include electronically stored information as circumstances warrant.” *Id.*

conferences), 26(a)(1) (initial disclosures), 26(f) (pretrial conference), 37 (sanctions), and 45 (subpoenas).²⁰ Some state rules also are expressly limited to ESI.²¹

Second, some court rules are not expressly limited to ESI, but are more significant for ESI than for paper records. For example, Rule 26(b)(1) now explicitly limits the scope of discovery to information that is both relevant and “proportional to the needs of the case.” The Rule specifies the factors to determine proportionality: “the importance of the issues at stake in the action, the amount in controversy, the parties’ relative access to relevant information, the parties’ resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery out-weighs its likely benefit.”²² Although this “proportionality” analysis applies to both paper records and ESI, the volume and complexity of ESI, along with the various burdens and technical implications of different ESI formats, generally makes these limitations on scope of discovery much more significant for ESI than for paper records. Many state rules, local rules, and pilot projects also adopt these and further limitations to the scope of discovery.²³ Similarly, the rules regarding privilege and work product do not expressly differentiate between paper records and ESI, but as explained in Principle 10, ESI presents unique risks and opportunities for dealing with these issues. The duty to preserve ESI implicates special considerations, as explained in Principle 5. And pretrial conferences are “particularly important with respect to ESI.”²⁴ See Principle 3 regarding early preservation and production conferences.

Third, the volume of ESI that is created and distributed within and among organizations is growing exponentially. As explained in Comment 1.b., the discoverability and proliferation of ESI means that organizations can benefit even more from effective information governance programs that reduce the cost and risk of meeting discovery obligations.

²⁰ Rule 45(a)(1)(A)(iii) explicitly includes ESI within the types of information that may be demanded.

²¹ *E.g.*, TEX. R. CIV. P. 196.4.

²² The 2015 amendments to Rule 26 moved these proportionality concepts from 26(b)(2)(C) to 26(b)(1), to restore proportionality “to [its] original place in defining the scope of discovery,” specifically “as an express component of the scope of discovery,” and “again reflect[] the need for continuing and close judicial involvement in the cases that do not yield readily to the ideal of effective party management.” In doing so, the Advisory Committee also noted that, in 2000, Rule 26(b)(1) had been amended to add a specific cross-reference to the proportionality provisions then in subdivision (b)(2), because “the Committee ha[d] been told repeatedly that courts have not implemented these limitations with the vigor that was contemplated.” 2015 Advisory Comm. Note to Rule 26(b)(1).

²³ See, *e.g.*, Seventh Circuit Electronic Discovery Pilot Program, *Model Standing Order* (Rev. May 11, 2011), available at http://www.discoverypilot.com/sites/default/files/StandingOrde8_10.pdf. Seventh Circuit Electronic Discovery Pilot Program, *Principles Relating to the Discovery of Electronically Stored Information*, Principle 2.04(d) (Rev. Aug. 1, 2010), available at http://www.discoverypilot.com/sites/default/files/Principles8_10.pdf.

²⁴ 2006 Advisory Comm. Note to Rule 26(f).

Comment 1.b. The discoverability and proliferation of ESI has increased the importance of effective information governance programs.

“Information Governance” means “an organization’s coordinated, inter-disciplinary approach to satisfying information compliance requirements and managing information risks while optimizing value.”²⁵ As such, Information Governance (“IG”) encompasses and seeks to reconcile the various legal and compliance requirements and risks addressed by different information-focused disciplines, such as records and information management, data privacy, information security and protection, compliance, data governance, data storage and archiving, and electronic discovery. Legal and compliance requirements include the “retention” requirements of statutes or regulations, the “privacy” requirements (e.g., HIPAA or HiTech), and the “preservation” requirements once litigation is reasonably anticipated.²⁶ Ideally, IG programs should help meet regulatory retention requirements (e.g., Sarbanes Oxley), meet preservation requirements once litigation is reasonably anticipated, and meet the business needs of the organization.

There is often a direct correlation between an organization’s IG program and the ease with which it can search for, identify, and produce information. A well-executed IG program can improve efficiency at all levels in an organization by assuring the right information is readily available to the people who need it when they need it. IG programs are also the keystone of information security and privacy. The Sedona Conference *Commentary on Information Governance* (the “Sedona IG Commentary”)²⁷ includes a comprehensive description of these major components of IG programs. This Comment is focused on the importance of IG to an organization’s ability to meet its discovery obligations.

To find ESI, protect it, and access and produce it, an organization must know (or be able to readily find out) what relevant ESI it has and where it keeps it. Ideally, the organization can determine who has access to the ESI and be confident that the ESI is “clean” and not corrupted. To do this, an organization should strive toward managing or governing its ESI from creation to disposition.

The scope and vigor of an organization’s IG program can directly affect its ability to find and produce ESI relevant to the claims and defenses in litigation. However, attaining “perfect” IG over all of an organization’s ESI is extremely difficult—if not impossible—to achieve, given the sheer amount of ESI at issue, its exponential rate of growth, and the ever expanding means and locations for the storage and transmission of ESI. Moreover, despite the compelling logic of IG for many organizations, adopting such a program is neither a legal nor a business imperative. Accordingly, an organization’s compliance with discovery obligations cannot be judged by the state or lack of its IG program. Rather, the point is simply that—all things being equal—an organization with a comprehensive IG program will manage its litigation more easily and less expensively than an organization with a less comprehensive program.

²⁵ See The Sedona Conference, *Commentary on Information Governance*, 15 SEDONA CONF. J. 125 (2014).

²⁶ See The Sedona Conference, *Commentary On Legal Holds: The Trigger & The Process*, 11 SEDONA CONF. J. 265 (2010).

²⁷ 15 SEDONA CONF. J. 125 (2014).

In many organizations, retention is still frequently accomplished through the use of detailed records retention schedules tailored to records series created by employees in specific business units. Because these schedules were created when hard-copy records were the norm, they tended to be extremely granular; today, with ESI being the predominant form of organizational information, organizations are increasingly willing to consider alternative approaches for managing ESI, including collapsing and simplifying categories of ESI records into larger retention buckets, tailoring retention schedules to fit specific business units, and adopting automated approaches to categorizing and disposing of ESI, all in order to mitigate organizational risk and increase efficiency. As emphasized in the Sedona IG Commentary, IG programs should encourage not only retention of ESI, but also the effective, timely, and consistent disposal of ESI that no longer needs to be retained or preserved.²⁸ The requirements, benefits, and risks should be balanced. For example, the rotation cycle for backups²⁹ should balance the likelihood and business value of restoring the data for business purposes against the potential cost and risk of preservation and review if the tapes contain unique information that is both relevant and proportional in some later-filed litigation.³⁰ Further, it may be appropriate to use technology to limit the size of email accounts,³¹ or limit how long email can be retained without some action by the record owner. As explained in Principle 5, issuing legal holds and taking other reasonable steps may be required to prevent deletion of relevant ESI once a duty to preserve is created by pending or anticipated litigation, or by some regulatory investigations. An effective IG program may also include audits to determine whether the policies are being followed.

An IG program is more effective if it addresses ESI created by all of the information technologies used by employees of the organization. New technologies that represent novel preservation and discovery challenges are always being developed and adopted,³² which means that effective IG programs must continually adapt.

Ideally, before allowing or adopting new technology, in addition to addressing the typical privacy and security issues, organizations should ask: (1) what is the business value of the technology; (2) what are the costs and risks created by the technology; and (3) how can the costs and risks be mitigated?

²⁸ *Arthur Andersen LLP v. United States*, 544 U.S. 696, 704 (2005) (“‘Document retention policies,’ which are created in part to keep certain information from getting into the hands of others, including the Government, are common in business. It is, of course, not wrongful for a manager to instruct his employees to comply with a valid document retention policy under ordinary circumstances.”).

²⁹ Similar issues can be presented by “versioning,” “recycle bins,” and “trash.”

³⁰ This balancing may result in organizations keeping backups only as long as it would reasonably take the organization to interrupt the rotation period in response to a disaster. *See* Comment 5.h.

³¹ Mailbox limitations can lead to more problems than solutions; for example, if employees subvert the purpose of the limitations by moving emails to storage locations that are even more difficult to manage (e.g., PSTs). This is an example of why organizations must not only communicate what the IG policy is, but why it is important to follow the policy.

³² Just as email was once “new,” more recent entrants include instant messaging, cloud computing, mobile devices, social media, and text messages.

Costs and risks may increase if the technology makes it more difficult to preserve or collect relevant ESI for litigation. For example, mobile devices that are not synchronized with the organization's servers may require physical collection of the mobile device to meet preservation or discovery obligations if there is unique, relevant ESI on the device that the IT or legal group cannot collect from the organization's servers. This may be even more of a problem for texts, which can "roll off" the phone as memory is used up.³³ Review cost for texts can also be exponentially higher because the texts are more difficult to sort by subject or author, and because of the shorthand that is frequently used in text messages. Notwithstanding the presence of such ESI on the device, it may not be necessary to image the device if the costs, burdens, and other issues associated with imaging the device outweigh the benefits of retrieving unique, relevant ESI from the device. Indeed, wholesale text message retention is regularly disproportionate for both sides of the litigation, e.g., in a wage and hour class action where employees use text messaging on their personal devices for work. Content management and collaboration applications can result in unmanaged ESI because there may not be any clear "data-owner" who is responsible for managing and deleting the ESI at the appropriate time. Similarly, consumer-oriented file sharing and synchronization services may result in over-retention (and lack of a "data-owner") of the transferred data that remains in the service after the transfer—even if the organization otherwise properly manages the ESI in its possession. Simply knowing where employees are able to store ESI can reduce the time and expense of meeting preservation and discovery obligations. *See* Principle 5 regarding legal holds.

³³ In addition to storage constraints, how a user or an organization has configured the device settings also may determine how long texts are retained. As such, further (and potentially manual) steps may need to be taken to modify the settings to avoid automated deletion. Additionally, organizations should consider the risks attendant to losing, replacing, and upgrading mobile devices.

2. **When balancing the cost, burden, and need for electronically stored information, courts and parties should apply the proportionality standard embodied in Fed. R. Civ. P. 26(b)(1) and its state equivalents, which requires consideration of the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs its likely benefit.**

Comment 2.a. Rule 26(b)(1) demands the application of the proportionality standard and makes proportionality an element of the scope of discovery.

Although commentators, including many jurists, have emphasized the use of the proportionality standard—embodied in the Federal Rules of Civil Procedure since 1983—to manage the costs and burdens of the preservation and discovery of ESI while concurrently meeting the requirements of the litigation, parties have not consistently applied the standard to evaluate and manage discovery. This inconsistency led to the 2015 amendment to Rule 26(b), specifically, moving the proportionality factors from Rule 26(b)(2) (“Limitations on Frequency and Extent”) to Rule 26(b)(1) (“Scope of Discovery”). By moving proportionality into the definition of the scope of discovery, the Rule reinforces that proportionality is on a par with relevance when negotiating and formulating preservation and discovery plans, propounding and responding to discovery requests, staging and scheduling productions, and negotiating and adjudicating discovery disputes. As explained by the Advisory Committee: “This change reinforces the Rule 26(g) obligation of the parties to consider these factors in making discovery requests, responses, or objections.”³⁴

Rule 26(b)(1) specifies the factors to determine proportionality:

Parties may obtain discovery regarding any non-privileged matter that is relevant to any party's claim or defense and proportional to the needs of the case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs the benefit.

The proportionality standard is a balancing test that requires consideration of more than just “the amount in controversy.”³⁵ Instead, all of the factors should be weighed to determine whether the burden or expense of the proposed discovery outweighs the benefit. For example, the “importance of the issues at stake in the action” not only applies to the import of the issues to the immediate parties, but also may require addressing broader issues related to legal, statutory, regulatory, and public policy issues embodied in legislation or regulations. As another example, if the proposed discovery is

³⁴ 2015 Advisory Comm. Note to Rule 26(b)(1).

³⁵ See 2015 Advisory Comm. Note to Rule 26(b)(1) (“It also is important to repeat the caution that the monetary stakes are only one factor, to be balanced against other factors.”).

not likely to be important in resolving the issues, the scope of discovery may be narrower, even if the monetary amount in controversy is significant. Thus, weighing all of the factors may result in discovery that is broader or narrower than the scope would be if the amount in controversy were the only consideration. Accordingly, parties should consider all of the proportionality factors when propounding and responding to discovery requests, negotiating the scope and form of the production of ESI, and moving to compel and responding to motions to compel discovery.³⁶

Comment 2.b. Proportionality should apply to all aspects of the discovery of ESI.

Proportionality should be considered and applied by the court and parties to all aspects of the discovery and production of ESI including: preservation; searches for likely relevant ESI; reviews for relevancy, privilege, and confidentiality; preparation of privilege logs; the staging, form(s), and scheduling of production; and data delivery specifications. The proportionality factors may also impact cost allocation. *See* Principle 13.

Comment 2.c. Proportionality of discovery of ESI should be addressed by the parties and counsel at the Rule 26(f) meet and confer, and with the court at the Rule 16(b) scheduling conference.

Issues regarding proportionality should be addressed at the Rule 26(f) conference. Parties should be prepared to provide accurate information regarding the anticipated burdens and benefits of preserving, retrieving, processing, reviewing, and producing ESI that is likely to be or contain information relevant to the claims and defenses in the case, to the extent they assert that these steps are disproportionate. Because the “importance of the discovery in resolving the issues” can be a key factor in the balancing of burden and benefit, a fruitful discussion also requires a clear statement of the claims and defenses. Similarly, because notice pleading does not require plaintiffs to specify their damage claim, parties should be prepared to discuss and explain the likely range of damages, and any non-monetary stakes, to the extent they claim these factors are important to the proportionality analysis.

The parties and the court should be aware that discussions held early in the action are limited by the information available to the parties, and that proportionality may be revisited as the action evolves. The parties should summarize their discussions of proportionality and, where different, their respective analyses of the proportionality considerations in the parties’ report to the court, and be prepared to discuss any significant proportionality issues at the Rule 16(b) conference with the court.

³⁶ *See* Hon. Elizabeth J. Laporte & Jonathan M. Redgrave, *A Practical Guide for Achieving Proportionality Under New Federal Rule of Civil Procedure 26*, 9 FED. CTS. L. REV. 19 (2015) (proposing a “proportionality matrix” to analyze and apply proportionality).

Comment 2.d. Parties should address the full range of costs of preserving, collecting, processing, reviewing, and producing ESI.

Evaluating the need to produce ESI requires that a balance be struck between the burdens and need for ESI, taking into account the technological feasibility and realistic costs involved.

Discovery burdens should be proportional to the amount in controversy and the nature of the case, including consideration of the importance of issues at stake in the litigation. *See* Comment 2.a. In fact, Rule 26(g)(1)(B)(iii) requires counsel to certify that discovery requests are proportional. If proportionality is not observed, discovery costs may prevent the just, speedy, and inexpensive determination of litigation as Rule 1 contemplates.

Costs cannot be calculated solely in terms of the expense of computer technicians to retrieve the ESI, but must factor in other litigation costs, including the accessibility of the ESI, the interruption and disruption of routine business processes and IG practices, and the costs of reviewing the ESI. These burdens on information technology personnel and the resources required to review ESI for relevance, privilege, confidentiality, and privacy should be considered in any calculus of whether to allow discovery, and, if so, under what terms. In addition, the non-monetary costs (such as the invasion of privacy rights, risks to business and legal confidences, and risks to privileges) should be considered.

Comment 2.e. Parties objecting to the production of ESI on proportionality grounds should state the basis for the objection with reasonable specificity.

Moving the proportionality requirement to the scope of discovery provisions in Rule 26(b)(1) emphasizes that discovery that is not proportional to the needs of the case is objectionable as outside the permitted scope of discovery. Further, a “proportionality” objection under Rule 26(b)(1) is different from a “not reasonably accessible” objection under Rule 26(b)(2)(B), even though some of the same cost and burden considerations apply. In the latter case, the court may order the discovery to go forward, notwithstanding the costs and burdens; in the former, if the balance of factors tips against the discovery being proportional to the needs of the case, the discovery requested is impermissible because it is beyond the scope of discovery. *See* Comment 2.a.³⁷ Also, proportionality is not limited to the burden of *accessing* ESI—it may include the burden of collecting, reviewing, hosting, and producing the ESI.

Rule 34(b)(2)(B) requires that objections should state “with specificity the grounds for objecting.” A balance should be struck between a summary, “boilerplate” proportionality objection and an unreasonably detailed and overly burdensome description of why the requested discovery is disproportionate. The objecting party should state the grounds for asserting that the request lacks proportionality based on the applicable proportionality considerations, and why the costs and burdens of the

³⁷ *See* Comment 8.b. for a full discussion of the Rule 26(b)(2)(B) limitation and not reasonably accessible sources of ESI.

requested discovery outweigh the likely benefits of the discovery sought, with sufficient specificity to permit the requesting party to understand the basis of the objection. *See* Comment 4.b. The court and the requesting party should recognize that a highly detailed articulation of the objection and each of the proportionality standard considerations is not necessary to provide reasonable notice of the assertion of, and the basis for, the objection.

For a discussion of the limits of preservation efforts, including those for ESI that is not reasonably accessible, but is reasonably likely to contain relevant information, see Principle 5. For a discussion of backup tapes, see Principle 8. For a discussion of cost allocation in discovery, see Principle 13.

3. As soon as practicable, parties should confer and seek to reach agreement regarding the preservation and production of electronically stored information.

Comment 3.a. Parties should attempt to resolve discovery issues early.

Early discussion of all discovery issues, including the overall scope of discovery, preservation, and production of ESI, should reduce misunderstandings, disputes, and the need for court intervention. Doing so is consistent with Rule 1, which states that the Rules “should be construed, administered, and employed by the court and the parties to secure the just, speedy, and inexpensive determination of every action and proceeding.” This Principle applies to party discovery, as well as requests under Rule 45 to obtain information from non-parties.

Moreover, the Federal Rules (since 2006), most district courts, and an increasing number of state court rules require that at the outset of a matter parties consider, discuss, and attempt to agree upon what ESI, if any, will be the subject of discovery, and issues that may attend such discovery.

In particular, Rule 26(f) requires parties to discuss issues about discovery of ESI and to develop a proposed discovery plan. The 2006 Advisory Committee Notes to Rule 26(f) observe that the particular ESI issues to be discussed depend on the circumstances of the case, and that early identification of issues about preservation and production of ESI may lead to creative solutions that avoid unnecessary delay and expense on matters unrelated to the merits of the litigation. Issues the Advisory Committee specifically suggested for possible discussion included the sources of relevant ESI, preservation issues, whether any relevant ESI is not reasonably accessible, issues relating to the assertions of privilege or of protection as trial preparation materials, and the form or forms in which ESI should be produced.

Experience with Rule 26(f) since the 2006 amendment has led counsel to consider an expanded list of topics to discuss during the meet and confer to develop a discovery plan. Thus, some of the issues that parties may seek to resolve early in an action include: (i) the scope of relevance as defined by the claims and defenses; (ii) the identification of data sources that will be subject to preservation and discovery; (iii) the relevant time period; (iv) the identities of particular individuals likely to have relevant ESI; (v) the form or forms of preservation and production (*see* Comment 3.c.); (vi) the types of metadata to be preserved and/or produced; (vii) the identification of any sources of information that are not reasonably accessible because of undue burden or cost, such as backup media and legacy data; (viii) the potential use of search technology and other methods of reducing the volume of ESI to be preserved or produced; (ix) issues related to assertions of privilege and inadvertent production of privileged documents (*see* Comment 3.d. and Principle 10); and (x) issues related to confidential or privacy information that may require special treatment or protection during and after production.

In 2015, the Federal Rules were further amended to provide that a request to produce documents may be delivered more than 21 days after the summons and complaint are served, a change that was expressly designed to facilitate early discussions even prior to the Rule 26(f) conference, and possibly

produce requests that are more focused and tied to the claims, defenses, and realities of available information. (Delivery does not count as service, which is considered to occur at the 26(f) conference.)³⁸

The 2006 Advisory Committee Note to Rule 26(f) stated that the parties' discussion should pay particular attention to achieving a balance between competing needs to preserve relevant information and to continue critical routine operations, "with the goal of agreeing on reasonable preservation steps." Practice under Rule 26(f) and the 2015 Advisory Committee Notes about the proportionality amendments (discussed elsewhere; *see* Principle 2 and related commentary above) strongly suggest that a meaningful meet and confer is not a single event—much less a simple exchange of emails—but rather an iterative process that may involve multiple sessions, particularly in a complex case. For example, the 2015 Advisory Committee Notes point out that "parties may begin discovery without a full appreciation of the factors that bear on proportionality"; the requesting party may have little information about the complexity of the responding party's systems, or the burdens and expense imposed by the request. Conversely, the responding party may have little information about the importance of the discovery to the issues in the case, or inadequate information about where relevant information may be located. These uncertainties should be addressed in the Rule 26(f) context, and remaining disputes brought to the attention of the court for resolution.

Best practices include agreements in writing to guide the parties and, as necessary, inform the court.

Illustration i. In the circumstance of an ongoing preservation obligation and in light of the complexity of decisions that must be made regarding the overall preservation obligation, the parties should discuss maintaining select data on a live server or other device and agree upon a process for later review and production. For example, parties should discuss whether all drafts and versions of relevant documents must be preserved in addition to a final version. Additionally, parties should discuss how to manage dynamic databases where data is routinely overwritten.

Illustration ii. Plaintiffs in a lawsuit involving allegations of securities fraud against multiple defendants seeking extensive damages request preservation of ESI from all defendants. The defendants, most of whom are large investment banks and other financial institutions, respond that preservation obligations need to be tailored so that they are defined, manageable, and cost-effective while also preserving evidence that is truly needed for the resolution of the dispute. The parties meet and confer upon a protocol for preserving existing data, including preserving select (not all) backup tapes, certain archived data, and select legacy systems; distributing retention notices (and updates); creating a limited number of mirror images of select computer hard drives; undertaking measures to collect relevant data; and distributing a questionnaire regarding electronic data systems. The defendants assess the costs and burdens involved in the various proposed steps and reach agreement on the scope and limitations of the obligations. The protocol averts disputes regarding the scope of

³⁸ Rule 26(d)(2) and 2015 Advisory Comm. Note.

preservation and production, avoids motion practice, and provides assurance as to the expected preservation efforts.

Discovery from Non-parties: An obligation to discuss ESI issues as early as practicable and in good faith also applies to non-parties from whom information is sought under Rule 45. Parties considering seeking discovery from non-parties should be mindful of their duty to take reasonable steps to avoid undue burden or expense on the person subpoenaed, and the court's concomitant duty to impose appropriate sanctions for failure to do so.³⁹ Accordingly, the party seeking non-party discovery should endeavor to enter discussions as soon as reasonably feasible to address the scope of preservation, to reduce the burden on non-parties as well as uncertainty, and to prevent wasteful and expensive over-preservation.

Pre-litigation discussions about ESI issues: Independent of any requirement imposed by court rule, if litigation involving identifiable adversaries is reasonably anticipated, practitioners should consider engaging in early discussions regarding the preservation of potentially relevant ESI even before litigation is filed. While doing so is not a requirement, parties may find significant value in reaching early agreement delineating the potential scope of preservation, thus reducing the volume and variety of ESI to be preserved. That said, until claims are filed, it may be difficult to assess the scope of relevant material to be preserved.⁴⁰

Newer and evolving technologies: In preparing for meaningful early discussions about data sources that should be subject to preservation and discovery, counsel should be mindful of the ever-evolving number and variety of information-generating technologies and repositories (e.g., instant messaging, text messaging, social media, smartphones, tablets, mobile applications, and the emerging Internet of Things). The sources of ESI relevant in a particular case will vary depending on the circumstances of the case and technologies the parties have used. Counsel should be cognizant of reasonableness and proportionality considerations, and not indulge in speculative assumptions about where relevant information could be found. In this regard, counsel may consider eliminating from preservation and discovery certain data sources.

³⁹ Rule 45(d)(1).

⁴⁰ See Rule 26(b)(1); The Sedona Conference, *Commentary on Legal Holds: The Trigger & The Process*, 11 SEDONA CONF. J. 265 (2010).

Comment 3.b. Cooperation among counsel can enhance the meet and confer process, reduce unnecessary delay and expense associated with non-merit issues, and foster the overriding objectives of Rule 1.

In 2008, one year after the publication of the Second Edition of *The Sedona Principles*, The Sedona Conference *Cooperation Proclamation* was released.⁴¹ In the *Cooperation Proclamation*, The Sedona Conference set forth its position that: (1) “Cooperation in Discovery is Consistent with Zealous Advocacy,” and (2) “Cooperative Discovery is Required by the Civil Rules.”

Some practitioners originally questioned whether cooperation was required by the Rules, but, shortly after issuance of the *Cooperation Proclamation*, courts and rule-makers began to call on parties and counsel to address electronic discovery issues in a cooperative or collaborative manner.⁴² To date, more than 200 judges have endorsed the *Cooperation Proclamation*, and several courts have issued guidelines that incorporate cooperation principles.⁴³ Indeed, some courts have urged that parties cooperatively discuss the full range of potential ESI issues, including metadata that may be relevant and should be preserved and produced, and the selection and implementation of procedures, methodologies, and technologies used in fulfilling discovery obligations.

This position, that parties should address discovery issues cooperatively, has been given greater force with the December 2015 amendment to Rule 1, which now emphasizes the role of “the court and parties” to construe, administer, and employ the Rules “to secure the just, speedy, and inexpensive determination of every action and proceeding.”⁴⁴

This concept of cooperation, however, does not mean that attorneys should not be advocates in the discovery process. Rather, they should advocate their client’s positions within the parameters of the

⁴¹ The Sedona Conference, *Cooperation Proclamation*, 10 SEDONA CONF. J. 331 (2009 Supp.).

⁴² See, e.g., *Mancia v. Mayflower Textile Servs. Co.*, 253 F.R.D. 354, 363 (D. Md. 2008) (endorsing The Sedona Conference *Cooperation Proclamation* and explaining how cooperation is consistent with the attorney’s obligation to the courts).

⁴³ See, e.g., Seventh Circuit Electronic Discovery Pilot Program, *Principles Relating to the Discovery of Electronically Stored Information*, Principle 1.02 (Rev. Aug. 1, 2010), available at http://www.discoverypilot.com/sites/default/files/Principles8_10.pdf; United States District Court for the Northern District of California, *Guidelines for the Discovery of Electronic Information*, Guideline 1.02 (Rev. Dec. 1, 2015), available at http://cand.uscourts.gov/filelibrary/1117/ESI_Guidelines-12-1-2015.pdf.

⁴⁴ See also 2015 Advisory Comm. Note to Rule 1 (“[D]iscussions of ways to improve the administration of civil justice regularly include pleas to discourage over-use, misuse, and abuse of procedural tools that increase cost and result in delay.”).

applicable rules.⁴⁵ If the parties are unable to reach a full agreement, they may present their remaining dispute to the court for resolution at a scheduling or pretrial conference, or by motion.⁴⁶ In advocating ESI issues and choosing issues to take to the court, counsel should always attempt to resolve potential disputes where feasible, recognizing the risks of asserting a non-meritorious position—including sanctions under Rule 26(g) and potentially losing credibility with the court.

Finally, cooperation is fundamentally a voluntary endeavor that requires the development and maintenance of trust between two or more parties, and a relatively equal and balanced exchange of non-protected information. If both requesting and responding parties voluntarily cooperate to evaluate the appropriate procedures, methodologies, and technologies to be employed in a case, both may potentially achieve significant monetary savings and non-monetary efficiencies. Moreover, in some circumstances a party may effectively immunize itself from the risk of facing “discovery on discovery” by cooperatively working to reach agreement on key ESI issues. Conversely, the failure to engage in meaningful discussions about ESI discovery can lead to expensive motion practice, which may lead to undesirable court orders.⁴⁷

Comment 3.c. The early discussions should include procedural issues relating to form of production.

Rule 26(f) calls for an early discussion of form of production issues. Rule 34 sets forth a more detailed explanation of the ways in which parties should request and respond to requests seeking production or inspection of ESI (*see* Principle 4), and, as noted above, Rule 26(d)(2) was added in 2015 to permit the delivery of early requests to produce, which can then be discussed in the Rule 26(f) context.

At the outset, requesting parties should have sufficient technical knowledge of production options so that they can make an educated and reasonable request. These should be discussed at the Rule 26(f) conference and included in any Rule 34(a) requests. Likewise, responding parties should be

⁴⁵ *See* 2015 Advisory Comm. Note to Rule 1 (“Effective advocacy is consistent with—and indeed depends upon—cooperative and proportional use of procedure.”).

⁴⁶ *See* The Sedona Conference, *The Case for Cooperation*, 10 SEDONA CONF. J. 339, 346–48 (2009 Supp.).

⁴⁷ *See, e.g.,* Burnett v. Ford Motor Co., No. 3:13-cv-14207, 2015 WL 4137847, at *8 (S.D.W. Va. July 8, 2015) (discussing the *Cooperation Proclamation*, stating that “cooperation in a transparent discovery process is the path to efficient, cost-effective litigation,” and ordering Rule 30(b)(6) deposition on, among other topics, details regarding the document search defendant had performed); Ruiz-Bueno v. Scott, No. 2:12-cv-0809, 2013 WL 6055402 (S.D. Ohio Nov. 15, 2013) (ordering answers to interrogatories about search methods and noting that, where information is shared (which had not happened in the case), it changes the nature of the dispute from whether the requesting party is entitled to find out how the producing party went about retrieving information to whether that effort was reasonable); Romero v. Allstate Ins., 271 F.R.D. 96, 109–10 (E.D. Pa. 2010) (relying upon The Sedona Conference, *The Case for Cooperation*, 10 SEDONA CONF. J. 339 (2009 Supp.), and ordering the parties to confer and come to agreement on future search terms, custodians, date ranges, and other essentials to a search methodology, but not requiring disclosure of procedures used during the prior 8 ½ years); *cf.* DeGeer v. Gillis, 755 F. Supp. 2d 909 (N.D. Ill. 2010) (failure to cooperate considered in third-party, cost-shifting context).

prepared to address form of production issues at the Rule 26(f) conference. All parties should inform themselves as to the forms in which their own data is stored, and, for complex systems, the export options available. Additionally, parties should discuss the related issue of data delivery specifications in relation to the form of production, e.g., necessary and appropriate metadata fields, load files, text extraction, redactions, de-duplication, and exception handling. These discussions can result in an agreed upon protocol governing the production of ESI and avoid downstream misunderstandings or disputes.

With respect to requests and responses, Rule 34(b) provides that a request may specify the form or forms in which ESI is to be produced. If objection is made to the requested form or forms, both parties should discuss and attempt to agree on a form that is reasonably usable for the requesting party, yet not unduly burdensome to the producing party. *See* Principle 12. If no form was specified in the request, the responding party must state the form or forms it intends to use.

If a request does not specify the form or forms for producing ESI, and absent agreement of the parties or court order, a responding party must produce the information in a form or forms in which it is ordinarily maintained or in a form or forms that are reasonably usable. A party need not produce the same ESI in more than one form. However, parties should account for the fact that different types or categories of data may be stored in different forms, thus allowing for the production of different types of data in different forms. In particular, special consideration should be given to the manner in which relevant structured data (e.g., databases), information on social media, or information stored with cloud service providers or on mobile devices may be produced.

Significantly, the 2006 Committee Note to Rule 34 makes clear that the option to produce in a “reasonably usable form” does not mean that a responding party, once the duty to preserve attaches (*see* Principle 5), is free to convert ESI from the form in which it is ordinarily maintained to a different form that makes it more difficult or burdensome for the requesting party to use the information efficiently in the litigation. More particularly, a producing party may not remove or significantly degrade the electronic searching features of information as it is usually maintained. Parties will need to carefully consider the ways in which they preserve and produce documents to ensure that they will be able to realize Rule 34’s goal of a fair and reasonable approach to the form of production.

For a more detailed discussion of the metadata issue, see Principle 12.

Comment 3.d. The early discussion should include issues relating to privilege claims, and privilege logs for voluminous ESI.

In litigations or investigations with a large volume of relevant, non-duplicative paper documents and ESI, the volume of privileged information may be correspondingly large. The applicable Rule states the following:

When a party withholds information otherwise discoverable by claiming that information is privileged or subject to protection as trial preparation material, the party must:

- i. expressly make the claim; and
- ii. describe the nature of the documents, communications, or tangible things not produced or disclosed—and do so in a manner that, without revealing information itself privileged or protected, will enable other parties to assess the claim.⁴⁸

Traditionally, parties have complied with this Rule by producing a privilege log with separate entries for each document, containing objective information about the document (such as author, addressee, and Bates number) as well as a field that describes the basis for the privilege claim. Even if there are relatively few privileged documents, preparing and reviewing a privilege log can be extremely time-consuming. Often, the privilege log is of marginal utility. The immense volume of ESI now subject to discovery exacerbates the problem.

One solution that parties may consider is to agree at the outset to accept privilege logs that will initially classify categories or groups of withheld documents, while providing that any ultimate adjudication of privilege claims, if challenged, may be made on the basis of a document-by-document review if review by category proves insufficient. The basis for this approach is the 1993 Advisory Committee Note to Rule 26(b), which states the following:

The rule does not attempt to define for each case what information must be provided when a party asserts a claim of privilege or work product protection. Details concerning time, persons, general subject matter, etc., may be appropriate if only a few items are withheld, but may be unduly burdensome when voluminous documents are claimed to be privileged or protected, particularly if the items can be described by categories.⁴⁹

An agreement at the outset of litigation to log privileged documents by category, and which provides for a full and fair defense of individual privilege claims if challenged, will reduce motion practice regarding log deficiencies and other procedural challenges that are becoming more common given the huge volume of ESI at issue. A categorical log may provide sufficient information for the requesting party (and perhaps the court or a third party) to assess the validity of the privilege claims asserted as to each category of documents.⁵⁰

In addition, the parties may wish to consider stipulating that certain categories of documents are presumptively privileged (such as documents prepared, sent, or received by attorneys who represent a party for specific purposes). Such documents would be withheld preliminarily subject to requests for further analysis or review to ensure that the privilege applies and has not been waived. Further, parties should consider agreeing to classes of privileged documents that do not need to be preserved or

⁴⁸ Rule 26(b)(5)(A).

⁴⁹ 1993 Advisory Comm. Note to Rule 26(b); *see also* FED. R. EVID. 502.

⁵⁰ *See* John M. Facciola & Jonathan M. Redgrave, *Asserting and Challenging Privilege Claims in Modern Litigation: The Facciola-Redgrave Framework*, 4 FED. CTS. L. REV. 19 (2009).

listed on a log because there is no expectation that they would be discoverable. One example of such a category would be communications among a trial team after the litigation begins.

Last, and as discussed in greater detail in Principle 10, to reduce the burdens associated with potential inadvertent disclosure of privileged materials, the parties should consider asking the court to enter an order as contemplated by Federal Rule of Evidence 502(d).

For a more detailed discussion of privilege issues including Federal Rule of Evidence 502, see Principle 10.

Comment 3.e. Search and retrieval parameters and techniques are appropriate topics for discussion at an early meet and confer session.

It usually is not feasible, and may not even be possible, for most litigants to collect and review all relevant data from their computer systems. The extraordinary effort required to do so could cripple many organizations. Yet, without appropriate guidelines, if any data is omitted from a production, an organization may be accused of withholding data that should have been produced and, if that data is not preserved, of spoliation.

Unnecessary controversy over peripheral discovery issues often can be avoided if the parties discuss early the scope of relevance, the costs of preserving and collecting relevant data from various sources, and approaches that may be used to assist in the search or retrieval of relevant information. Accordingly, and consistent with the Federal Rules and best practices, parties should be prepared to discuss the sources of ESI that have been identified as containing relevant information as well as the steps that have been taken to search for, retrieve, and produce such information.

For a more detailed discussion of these issues, see Comment 5.b., and Principles 6, 8, and 11.

Comment 3.f. Preservation of facts and data considered by expert witnesses is a topic appropriate for discussion at an early meet and confer session.

The obligation to preserve and produce may apply to some expert witness materials.

An earlier version of *The Sedona Principles* suggested that the duty to preserve and produce might extend to drafts of expert witness reports, and that the early discussions therefore should address expert witness issues.⁵¹ A 2010 rule amendment reduced some of those concerns, but the subject of experts is still appropriate for early discussion.

The 1993 amendments to Rule 26(a)(2)(B) required the disclosure of all “information considered by the [expert] in forming the [expert’s] opinion.” Under this standard, the failure to preserve information could lead to sanctions and the exclusion of testimony.

⁵¹ See *The Sedona Principles: Best Practices Recommendations & Principles for Addressing Electronic Document Production*, Comment 3.d., THE SEDONA CONFERENCE (2d ed. 2007), <https://thesedonaconference.org/publication/The%20Sedona%20Principles>.

In 2010, Rule 26(a)(2) and Rule 26(b)(4) were amended to eliminate what the Advisory Committee described as repeatedly reported undesirable effects, including inquiry into communications between counsel and expert, retention of dual experts—one consultative and the other to testify, and additional costs. In particular, Rule 26(a)(2) was amended to provide that disclosure include all “facts or data considered by the witness in forming” opinions, the intent being to avoid inquiry into communications between counsel and the expert. At the same time, the Advisory Committee emphasized that “facts or data” should be interpreted broadly to include all material of a factual nature considered by the expert, regardless of its source. A corollary amendment was made to Rule 26(b)(4) providing work product protection to draft reports of experts disclosed under Rule 26(a)(2)(A), the intent being to allow counsel to interact with experts without fear of exposing those drafts and communications to searching discovery.⁵² To avoid the potential for dispute, and recognizing that the issue usually will affect both parties, the best course is for the parties to confer about what expert witness materials need to be preserved and exchanged in accordance with Rule 26(a)(2)(B). If an agreement cannot be reached, counsel should propose a sensible solution to the court early, rather than risk later accusations of evidence spoliation or failure to produce.

Comment 3.g. Communications with opposing counsel and the court regarding ESI should be informed and candid.

The efficacy of “meet and confers,” or other types of communications, depends upon the parties’ candor, diligence, and reasonableness. A party should accurately represent the complexities and attendant costs and burdens of preservation and production as well as relevance and need for production. Unsubstantiated or excessive cost estimates will reduce the party’s credibility, as will vague statements regarding relevance. Further, a responding party should be prepared to present opposing counsel and the court with a reasonable plan for the preservation and production of relevant ESI. In the face of a credible and specific concern that relevant ESI is not being preserved, parties who do not present the court with a reasonable plan for preservation may cause the court to err on the side of protecting the integrity of the data collection process and require unnecessary preservation.

Often, neither counsel nor the court will have sufficient technical knowledge to understand the systems at issue. In preparing for court conferences or meet and confer conferences, counsel may need to consult with their clients’ information technology departments or consultants regarding the technical issues involved in data preservation. Indeed, because of the continuing evolution, proliferation, and complexity of information generating and storage systems, several courts encourage counsel to bring their client’s technical experts to Rule 16(b) and Rule 26(f) conferences, so that erroneous assumptions and understandings about ESI functionality, including export options, costs, and time estimates, can be dealt with intelligently and early, rather than sidetracking the discovery plan or, worse, leading to costly motion practice. In turn, as appropriate or as deemed necessary, organizations should devote sufficient resources to make complex technical issues comprehensible to their counsel. Similarly, counsel representing individuals should devote sufficient resources to understand and make comprehensible any complex technical issues regarding the systems or applications that

⁵² See 2010 Advisory Comm. Note to Rule 26(b)(4).

contain relevant ESI, e.g., text messages on mobile devices. When providing affidavits or testimony to opposing counsel or the court on these issues, counsel should be careful to ensure that the presentations, affidavits, or testimony are not only accurate but also comprehensible to lay individuals with less technical knowledge.

4. Discovery requests for electronically stored information should be as specific as possible; responses and objections to discovery should disclose the scope and limits of the production.

Comment 4.a. Requests for production should clearly specify what ESI is being sought.

A requesting party that seeks production of ESI should, to the greatest extent practicable, clearly and specifically indicate each item or category of electronic information it seeks. Discovery requests should avoid boilerplate definitions, definitions of common words, or demands for all email, databases, word processing files, or whatever other ESI the requesting party can generally describe. Instead, the request should target particular ESI that the requesting party contends is relevant to the claims or defenses and proportionate to the needs of the case.⁵³ In many cases, a requesting party may not know the details of another party's systems and applications, but to the extent a requesting party knows about specific ESI it seeks, it should request that information. Towards this end, counsel for a requesting party may find that the client has knowledge of the opposing party's information systems, and can help specify target sources of relevant information.

By tailoring requests to identified relevant individuals and topics, requesting parties can avoid blanket, burdensome requests for ESI that invite blanket objections and judicial intervention. Courts recognize that Rule 26(g) makes the imposition of an appropriate sanction mandatory if a discovery request is interposed for an improper purpose.⁵⁴

Rule 26(d)(2) was amended in 2015 to provide that, more than 21 days after the summons and complaint are served, a request to produce documents under Rule 34 may be delivered. *See* Comment 3a. This is intended to allow a more meaningful Rule 26(f) conference.

The requesting party should also identify the specific form or forms in which the ESI should be produced, recognizing that different types or categories of information may be stored in different forms, thus allowing for the preservation and/or production of one set of data in a particular form and a distinct set of data in a different form. *See* Principle 12 for considerations in assessing ESI forms. The requesting party also should specify technical details, such as particular fields or types of metadata sought, and be prepared to explain its preferences in a meet and confer. In federal cases, the subject of form of production must be discussed at the Rule 26(f) conference, and the parties'

⁵³ *See* *Mancia v. Mayflower Textile Servs.*, 253 F.R.D. 354, 364 (D. Md. 2008).

⁵⁴ *See* *Heller v. City of Dallas*, 303 F.R.D. 466 (N.D. Tex. 2014); The Sedona Conference, *Commentary on Achieving Quality in the E-Discovery Process*, 15 SEDONA CONF. J. 265 (2013); FED. R. CIV. P. 26(g)(1)(B) (an attorney or unrepresented party who signs a discovery request or response thereby "certifies that to the best of that person's knowledge, information, and belief formed after a reasonable inquiry," the request is not interposed for an improper purpose and is neither unreasonable nor unduly burdensome); *see also* *Mancia*, 253 F.R.D. at 360 (Rule 26(g) requires "approaching the process properly . . . in accordance with the letter and spirit of the discovery rules.").

views and proposals must be included in the parties' discovery plan or in an ESI protocol or stipulation.⁵⁵ An early discussion of the potential form or forms of production (including the types of metadata to be produced) will facilitate planning for preservation and identify any disputes that a court may have to resolve. If agreement is reached, it should be embodied in a Rule 16(b) scheduling order. If agreement is not reached, the parties' respective positions can be presented to the court. *See* Principle 12, and Comments 3.a. and 4.b.

For non-party discovery, the party issuing the subpoena may indicate the form or forms in which production is to be made, and the non-party subject to the subpoena has the same rights and obligations in regard to form of production as parties.⁵⁶ Similar to the duty that Rule 26(g) imposes on parties when they serve Rule 34 requests for production, the party issuing a subpoena "must take reasonable steps to avoid imposing undue burden or expense" on the subpoenaed party, and the court is required to enforce this duty and impose an appropriate sanction on a party or attorney who fails to comply.⁵⁷

For a more detailed discussion of the process and advantages related to a particular form of production, including a discussion of the role of metadata, see Principle 12 and its Comments, and Comment 3.d.

Comment 4.b. Responses and objections should clearly identify the scope and limits of the production.

A response to a request to produce ESI must state for each item or category requested whether the inspection will be permitted as requested. If a responding party has objections to part or the whole of a request, it must state clearly and specifically the grounds for each objection, state whether any ESI is being withheld as to any part or the whole of each request, and permit inspection of the rest. Specifically, the 2015 amendments to Rule 34(b)(2)(B) added requirements that objections must "state with specificity the grounds for objecting to the request, including the reasons." Rule 34(b)(2)(C) now states that "[a]n objection must state whether any responsive materials are being withheld on the basis of that objection."⁵⁸ If a responding party contends that a request is overbroad in part but appropriate in other parts, the response should comply with the parts that are not overbroad. The response should also indicate the extent to which production of relevant ESI will be limited because of undue burden or cost of production efforts, or restricted. But, "[t]he producing party does not need to provide a detailed description or log of all documents withheld, but does need to alert other parties to the fact that documents have been withheld and thereby facilitate an informed discussion of the objection."⁵⁹

⁵⁵ Rule 26(f)(3)(C).

⁵⁶ Rules 45(a)(1)(C) and 45(e)(1)(B)–(C).

⁵⁷ Rule 45(d)(1).

⁵⁸ *See also* 2015 Advisory Comm. Note to Rule 34.

⁵⁹ 2015 Advisory Comm. Note to Rule 34.

If the responding party objects to the form or forms of ESI production requested, it should state the form or forms it proposes for production, and be prepared to discuss at a meet and confer session. As one example, in the case of a proprietary database, it may not be necessary to produce in native format, as the requesting party may not have the software necessary to use or review the information; in such instances, a discussion at a meet and confer of extraction and production options (including relevant metadata fields) would be appropriate. The 2006 Advisory Committee Note to Rule 34(b) warns that a responding party that

responds to a discovery request by simply producing electronically stored information in a form of its choice, without identifying that form in advance of the production in the response required by Rule 34(b), runs a risk that the requesting party can show that the produced form is not reasonably usable and that it is entitled to production of some or all of the information in an additional form.

That Note also makes it clear that, where the responding party objects to the form specified in a discovery request or the requesting party is not satisfied with the form of production specified in the discovery response, the parties “must meet and confer . . . before the responding party can file a motion to compel.” *See* Principle 12 regarding appropriate forms of production.

As with requests, courts recognize that Rule 26(g) makes the imposition of an appropriate sanction mandatory if a discovery response or objection is interposed for an improper purpose. In the *Mancia* case, discussed in Comment 4.a., the court also instructed that the responding party would bear the burden of demonstrating “a particularized factual basis to support any claim of excessive burden or expense,” and also noted that the process of negotiating requests for production should be engaged in cooperatively by counsel, which did not mean a party needed to abandon a meritorious position.⁶⁰

It is neither reasonable nor feasible for a party to search or produce information from every electronic source that might contain information relevant to every issue in the litigation, nor is a party required to do so. In many cases, by applying the concept that discovery should be proportionate to the needs of the case, it may be reasonable to limit initial searches to sources such as email messages and other information from the accounts of key witnesses in the litigation, for the same reasons that it has been regarded as reasonable to limit searches for paper documents to the files of key individuals. Likewise, it should be appropriate, absent unusual circumstances, to limit review for production to those sources most likely to contain non-duplicative relevant information (such as active files used by key employees). *See* Principle 8. Responding parties are best situated to evaluate the appropriate procedures, methodologies, and technologies for reviewing their own ESI. *See* Principle 6.

In cases governed by the Federal Rules, a producing party that does not intend to produce relevant ESI from sources identified as not reasonably accessible because of undue burden or cost must identify those sources to the requesting party.⁶¹ Absent local rule or a court order, this Rule does not

⁶⁰ *Mancia v. Mayflower Textile Servs.*, 253 F.R.D. 354, 364–65 (D. Md. 2008).

⁶¹ *See* FED. R. CIV. P. 26(b)(2)(B) and 34(b)(2)(C).

require the specificity of a traditional privilege log, nor does it require the listing of electronic information systems or storage devices that have not been identified as a source of non-duplicative, relevant information. If the parties do not reach agreement during a meet and confer process on whether ESI is not reasonably accessible, the requesting party may move to compel;⁶² the responding party then must establish the burdens associated with producing the ESI; and the court for good cause may order the production, subject to proportionality principles and the possibility of cost allocation.⁶³

⁶² The 2006 Advisory Committee Note to Rule 26(b)(2)(B) instructs that the parties must meet and confer before bringing a motion.

⁶³ See The Sedona Conference, *Cooperation Proclamation: Resources for the Judiciary*, at Sect. IV.8.1.1, THE SEDONA CONFERENCE (Dec. 2014 Public Comment Version), <https://thesedonaconference.org/publication/The%20Sedona%20Conference%20Cooperation%20Proclamation%3A%20Resources%20for%20the%20Judiciary>.

- 5. The obligation to preserve electronically stored information requires reasonable and good faith efforts to retain information that is expected to be relevant to claims or defenses in reasonably anticipated or pending litigation. However, it is unreasonable to expect parties to take every conceivable step or disproportionate steps to preserve each instance of relevant electronically stored information.**

Comment 5.a. The preservation analysis includes two aspects: When the duty arises, and the scope of ESI that should be preserved.

The common law duty to preserve evidence clearly extends to ESI. Indeed, the vast majority of information upon which businesses and individuals operate today is generated electronically, and much of this information is never printed to paper. Therefore, parties must take reasonable steps to preserve ESI when litigation or government investigation is pending or reasonably anticipated.

The preservation obligation necessarily involves two related questions: (1) when does the duty to preserve attach, and (2) what information, including relevant ESI, must be preserved.⁶⁴

The first inquiry remains unchanged from prior practice—the duty arises when litigation is commenced or earlier, when there is a reasonable anticipation of litigation or an investigation, e.g., where there is a credible threat of litigation.⁶⁵ Parties should exercise good faith in evaluating the facts and circumstances known to them, and a party who is considering bringing a claim should realize that the duty may be triggered earlier for it than for the opposing party.⁶⁶

The need to recognize when the duty to preserve has been triggered may be more important with respect to those electronic information systems that quickly delete or overwrite data in the ordinary course of operations.

The second inquiry presents a much greater challenge with respect to ESI than with paper documents. The obligation to preserve relevant evidence is generally understood to require that the producing party make reasonable and good faith efforts to identify and preserve the information that is identified as relevant to the claims or defenses in the matter. Consistent with the generally applicable principles of proportionality, a party need only preserve unique instances of such relevant ESI. That is, a party need not preserve multiple or duplicative copies of the same relevant ESI.

⁶⁴ See generally The Sedona Conference, *Commentary on Legal Holds: The Trigger & The Process*, 11 SEDONA CONF. J. 265 (2010).

⁶⁵ See *id.* at 271 (“[T]here are circumstances when the threat of litigation is not credible, and it would be unreasonable to anticipate litigation based on that threat.”); see also 18 U.S.C. § 1519 (destruction, alteration, or falsification of records with the intent to obstruct a federal investigation of any matter, or in relation to the contemplation of any such matter, shall be fined, imprisoned not more than 20 years, or both).

⁶⁶ See, e.g., *Micron Tech., Inc. v. Rambus Inc.*, 645 F.3d 1311 (Fed. Cir. 2011); *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336 (Fed. Cir. 2011).

Satisfying this obligation must be balanced against the right of an organization to continue to manage its ESI in the organization's best interest, even though some ESI is necessarily overwritten on a routine basis by various computer systems. If such overwriting is incidental to the operation of the systems—as opposed to a deliberate attempt to destroy evidence in anticipation of or in connection with an investigation or litigation—it should generally be permitted to continue after the commencement of litigation, unless the overwriting destroys discoverable ESI that is not available from other sources.

Just as organizations need not preserve every shred of paper, they also need not preserve every email or electronic document. To require such broad preservation would cripple organizations that almost always are involved in litigation, and make discovery even more costly and time-consuming. A reasonable balance must be struck between (1) an organization's duty to preserve relevant and discoverable evidence, and (2) an organization's need, in good faith, to continue operations.⁶⁷

Earlier editions of *The Sedona Principles* stated “it is unreasonable to expect parties to take every conceivable step to preserve all potentially relevant ESI.” That statement was intended in part to address some early cases that put in question whether parties were obligated to preserve and produce information on backup tapes. In recent years, business continuation and disaster recovery technologies have advanced, and some organizations address these important needs with dual, mirrored live systems on which information may be readily available, thereby reducing concerns about backup tapes. The change in this edition is intended to emphasize two things: As before, at most, unique instances of relevant information should be preserved—not each and every duplicative instance—and, as the 2015 amendments to the Federal Rules emphasize, all discovery must be proportional to the needs of the case. Accordingly, principles of proportionality should be applied when the costs and burdens of preserving large amounts of ESI may be disproportionate to the needs of the case, and even the sole copy of an ESI item need not be preserved if doing so would be disproportionate to the needs of the case.

Illustration i. L Corporation (“L Corp.”) routinely backs up its email system to tape every day and recycles the backup tapes after two weeks. L Corp. receives a discovery request relating to a product liability claim against L Corp. arising out of the design of products sold one year ago. L Corp. promptly and appropriately notifies all employees involved in the design, manufacture, and sale of the product to save all ESI relating to the issues in the litigation, and the legal department takes reasonable steps to ensure that all relevant ESI in fact has been preserved. L Corp. continues its policy of recycling backup tapes while the litigation is pending. Absent awareness of a reasonable likelihood that specific unique and relevant ESI is contained only on a backup tape, there is no violation of preservation obligations because the

⁶⁷ See 2015 Advisory Comm. Note to Rule 37(e) (“As under the current rule, the routine, good-faith operation of an electronic information system would be a relevant factor for the court to consider in evaluating whether a party failed to take reasonable steps to preserve lost information”); see also The Sedona Conference, *Commentary on Legal Holds: The Trigger & The Process*, Guideline 7, 11 SEDONA CONF. J. 265 (2010).

corporation has an appropriate policy in place and the backup tapes are reasonably considered to be redundant of the data saved by other means.

Preservation obligations may expand, or contract, as the contours of claims and defenses are clarified during the pendency of a matter.⁶⁸ If the scope of the claims or defenses expands, parties may need to increase their preservation efforts, which may require them to amend their preservation notices. Conversely, when the scope of claims or defenses contracts, the party preserving the information will have an interest in modifying its preservation efforts and notices so that it may resume normal information management procedures for information that is no longer relevant to the claims or defenses. It may choose to do so unilaterally, but doing so may carry some risk, as several courts have faulted parties that make unilateral electronic discovery decisions. A safer course of action is for the parties to engage in a meaningful discussion consistent with the cooperation principles (discussed under Principle 3), recognize the competing needs to preserve relevant information and to continue routine operations for managing information that is not needed for litigation or investigation,⁶⁹ and agree how the preservation efforts and notices may be scaled back.⁷⁰

Preservation by non-party in response to Rule 45 subpoena: Case law concerning the preservation obligations of a subpoenaed non-party in litigation is not well defined. Some courts have noted that the issuance of a subpoena creates a duty to preserve.⁷¹ However, since Rule 45 imposes duties on the requesting party and the court to shield a non-party from undue burden and expense,⁷² there may be some question whether an overbroad subpoena creates a duty to preserve. A good practice for a requesting party that receives an objection to the breadth of a subpoena is to engage the non-party in good faith discussions about the scope of the subpoena, sources of potentially responsive ESI, and the costs of preserving and producing relevant ESI. *See* Principle 3.

Preservation of social media and other newer ESI sources: Preservation of social media and other newer ESI sources may present technical challenges and raise evidentiary issues. For example, social media data is often hosted remotely with third parties, is dynamic and collaborative by nature, may include several different data types, and is often accessed through unique interfaces. Due to these characteristics and because some social media may be subject to the restrictions of the Stored Communications Act,⁷³ traditional preservation and collection protocols may be a poor fit. Moreover, social media

⁶⁸ *See, e.g.,* Boeynaems v. LA Fitness Int'l, LLC, 285 F.R.D. 331 (E.D. Pa. 2012).

⁶⁹ *See* 2006 Advisory Comm. Note to Rule 26.

⁷⁰ *See* Rule 1 and 2015 Advisory Comm. Note.

⁷¹ *See, e.g.,* The Sedona Conference, *Commentary on Non-Party Production & Rule 45 Subpoenas*, 9 SEDONA CONF. J. 197, 199 (2008) (referencing *In re Napster, Inc. Copyright Litig.*, 462 F. Supp. 2d 1060 (N.D. Cal. 2006)).

⁷² Rule 45(d)(1).

⁷³ *See* 18 U.S.C. §§ 2701–2712 (1986). For example, an individual may participate in a group social media account, but not “own it,” and therefore may not be in a position to tell the cloud service provider to save it, even though it may be relevant to claims and defenses.

sites and other mobile applications can shut down, terminate an account, and delete content. Similarly, mobile devices can present special preservation challenges. For these reasons, to the extent that these ESI sources are relevant to the claims and defenses in an action, parties should address and seek to reach agreement early in the case about preservation and collection of social media and other newer ESI sources.⁷⁴

*For a discussion of the duty to preserve ESI on sources identified as not reasonably accessible because of undue burden or cost, see The Sedona Conference Commentary on Preservation, Management and Identification of Sources of Information that are Not Reasonably Accessible.*⁷⁵

Comment 5.b. Organizations must prepare for electronic discovery if they are to reduce cost and risk.

While the main purpose of computer systems is to assist the organization in its business activities, the need to respond to discovery in litigation is a fact of life for many organizations.

Preparing in advance for electronic discovery demands can greatly ease the burdens and risk of inaccuracy inherent in efforts to prepare for initial disclosures and meet and confer sessions once litigation begins. Depending on the size, sophistication, and litigation profile, as discussed in Comment 1.b, an effective information governance (IG) program can substantially enhance an organization's ability to address electronic discovery issues.⁷⁶ For example, an organization with a modestly mature IG program will be better prepared to identify sources of potentially relevant information, because it likely will have developed indices of its core information generating systems and applications, including key metadata fields, system stewards, output options, and metrics for preserving and producing that can aid the meet and confer discussion. The organization may also know what information is subject to regulatory or contractual obligations and constraints, and how it is stored, as well as information that is subject to confidentiality or privacy demands and security requirements. The organization may also have an inventory of existing legal holds and know whether information relevant to the claims and defenses in a new matter is already being preserved for another. There is no obligation for an organization to adopt an IG program, however compelling the arguments in favor may be, and the absence of such a program should not be considered in determining whether an organization has met its preservation obligations.

In addition, the accessibility of information and the costs of responding to requests for discovery of information contained in computer systems can best be controlled if the organization takes steps to prepare and educate personnel of pertinent disciplines including legal and IT staff, records management personnel, managers, and users of information systems about the potential demands of litigation. This is not to suggest that every organization should invest in litigation support technologies,

⁷⁴ See The Sedona Conference, *Primer on Social Media*, 14 SEDONA CONF. J. 191, 226 (2013).

⁷⁵ 10 SEDONA CONF. J. 281 (2009).

⁷⁶ See The Sedona Conference, *Commentary on Information Governance*, 15 SEDONA CONF. J. 125, 140–42 (2014).

although some may choose to do so; however, organizations with an extensive litigation docket and sufficient financial means may wish to consider a mix of personnel, processes, and technology that may be appropriate to manage projected litigation and discovery needs.

Such steps include instituting defined policies and procedures for issuing and monitoring legal hold notices where appropriate, preserving and producing information relevant to the claims and defenses, and establishing processes to preserve, collect, review, and produce information that may be relevant or required for initial mandatory disclosures. To the extent such policies and procedures are adopted, organizations should provide training regarding them.

Illustration i. Med Corporation manufactures pharmaceutical products. Med has established a three-week rotation for system backups. One of Med's products, LIT, is observed to cause serious adverse reactions in a number of patients, and the FDA orders it withdrawn from the market. Anticipating the potential for claims relating to LIT, Med's legal department collects all potentially relevant information from employees. The litigation response system helps Med identify and quickly move to preserve all potentially relevant data, including email, user files, corporate and clinical trial databases, shared network areas, public folders, and other repositories. Med also puts in place processes to capture newly created potentially relevant data. The process results in relevant data being collected on a special litigation database server that is independent of normal system operations and backups.

Eight months later, a class action is filed against Med for LIT injuries. Plaintiff's counsel obtains an ex parte order requiring Med to save all of its backup tapes, to refrain from using any auto-deletion functions on email and other data pending discovery, and to refrain from reformatting hard drives of—or reassigning hard drives from—employees involved in any way with LIT. Med's Information Systems department estimates that complying with the order will cost at least \$150,000 per month, including the cost of new tapes, reconfiguration of backup procedures and tape storage, purchase and installation of additional hard drive space for accumulating email and file data, and special processing of hard drives when computers are upgraded or employees leave the company or are transferred.

Med promptly moves for relief from the order, demonstrating through its documented data collection process that the relevant data has been preserved, and that the requested modifications of its systems are unnecessary due to the preservation efforts already in place. The court withdraws its order and Med is able to defend the litigation without impact on normal operations of its computer systems or excessive electronic discovery costs.

Comment 5.c. In assessing the scope of a preservation duty as soon as practicable, parties should consider persons likely to have relevant ESI, as well as non-custodial sources of relevant ESI.

Parties should define the scope of their preservation obligations as soon as practicable after the duty to preserve arises. The duties of preservation apply equally to plaintiffs as to defendants in litigation.⁷⁷

For organizations, identifying and preserving relevant ESI will normally require input from legal staff who understand the claims and defenses in the case, from employees involved in the transaction or event that caused the lawsuit, and from information technology or records management personnel with a good understanding of where and how the organization stores relevant ESI. Failure to initiate reasonable preservation protocols as soon as practicable may increase the risk of arguments that relevant information was not preserved.

The duty to comply with a preservation obligation is an affirmative duty. The scope of what is necessary will vary widely between and even within organizations depending upon the nature of the claims and defenses, and the information at issue. The law requires reasonable and good faith steps to preserve once the duty is triggered, not perfection.⁷⁸

Based on the information available to the organization about the credible threat of litigation or investigation, the organization should assess the persons likely to have relevant information, and the sources of non-custodial relevant information (such as structured systems and databases, and other non-custodial sources such as collaboration tools, social media, and those referenced in Comment 5.i.). In making the preservation decisions, organizations should carefully consider likely future discovery demands for relevant ESI to avoid needless repetitive steps to capture data again in the future.⁷⁹

⁷⁷ See, e.g., *Micron Tech., Inc. v. Rambus Inc.*, 645 F.3d 1311 (Fed. Cir. 2011); *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336 (Fed. Cir. 2011).

⁷⁸ See *Federal Housing Finance Agency v. HSBC North America Holdings Inc.*, No. 11 Civ., 2014 WL 584300, at *2 (S.D.N.Y. Feb. 14, 2014) (“Parties in litigation are required to be diligent and to act in good faith in producing documents in discovery. The production of documents in litigation such as this is a herculean undertaking, requiring an army of personnel and the production of an extraordinary volume of documents. Clients pay counsel vast sums of money in the course of this undertaking, both to produce documents and to review documents received from others. Despite the commitment of these resources, no one could or should expect perfection from this process. All that can be legitimately expected is a good faith, diligent commitment to produce all responsive documents uncovered when following the protocols to which the parties have agreed, or which a court has ordered.”); *Pension Comm. of Univ. of Montreal Pension Plan v. Banc of Am. Sec.*, 685 F. Supp. 2d 456, 461 (S.D.N.Y. 2010) (“Courts cannot and do not expect that any party can meet a standard of perfection” regarding electronic discovery.).

⁷⁹ See The Sedona Conference, *Commentary on Legal Holds: The Trigger & The Process*, 11 SEDONA CONF. J. 265, 280–82 (2010); The Sedona Conference, *Database Principles Addressing the Preservation and Production of Databases and Database Information in Civil Litigation*, 15 SEDONA CONF. J. 171 (2014).

Organizations should consider documenting the key decisions made in the preservation process, and the reasons for any exceptions to an organization's standard protocols for preservation.

Necessarily, initial decisions may have to be made on the basis of imperfect knowledge about the claims and defenses. For that reason, so long as the preservation decisions are made on the basis of reasonable belief and good faith, a party should not be faulted with the benefit of hindsight if claims are modified or expanded, requiring an adjustment of the preservation obligations.

Comment 5.d. Parties should, in most circumstances, send notices to preserve relevant information to persons having relevant ESI or responsible for maintaining systems containing relevant ESI.

Once a preservation obligation is triggered, as discussed in Comment 5.a., a party should take reasonable steps to communicate to appropriate persons the need to preserve information that is relevant to the claims and defenses and proportional to the needs of the case.⁸⁰

Usually this communication will take the form of a "legal hold notice." The legal hold notice should be sent to persons responsible for preserving information relevant to claims or defenses in that litigation or investigation. This usually includes persons with knowledge of the underlying facts of the matter, since they are likely to generate, receive, and maintain relevant information. The list also may include the persons responsible for maintaining and operating relevant computer systems, files, or databases, including application teams or administrators, as well as those who can assist with certain steps such as suspending auto-deletion policies for certain custodians, backup, or archiving systems that may fall within the scope of the preservation obligation.

The legal hold notice does not need to reach all employees; however, it should be reasonable and reach those individuals likely to maintain information relevant to the claims or defenses in the litigation or to the investigation and which will be needed in discovery.⁸¹

In some circumstances sending a legal hold notice will not be necessary, e.g., where all potentially relevant information is already secured. In other, rare circumstances, sending a legal hold notice may be inadvisable, e.g., where a notice might tip a potential target and cause him to delete the only instances of relevant information.⁸²

While the form and content of the notice may vary widely depending upon the circumstances, the notice need not provide a detailed list of all information to retain. Instead, it should describe the

⁸⁰ See Rule 26(b)(1); The Sedona Conference, *Commentary on Legal Holds: The Trigger & The Process*, 11 SEDONA CONF. J. 265, 271–74 (2010).

⁸¹ See *id.* at 279–80.

⁸² See *id.* at 283–84.

types of information that must be preserved, with enough detail to allow the recipient to implement the hold. The notice should state that ESI, as well as paper, is subject to preservation.⁸³

In circumstances where issuing a legal hold notice is appropriate, such a notice is most effective when the organization focuses on identifying and notifying key custodians and data stewards most likely to have relevant ESI⁸⁴ that the ESI must be preserved, and when the notice:

- a) communicates in a manner that assists persons in taking actions that are, in good faith, intended to be effective;
- b) is in an appropriate form, which may be written, and may be sent by email;
- c) provides information on how preservation is to be undertaken, and/or identifies individual(s) who can answer questions about preservation;
- d) includes a mechanism for the recipient to acknowledge that the notice had been received, read, and understood;
- e) addresses features of relevant information systems that may make preservation of potentially discoverable information more complex (e.g., auto delete functionality that should be suspended, or small sections of elaborate accounting or operational databases);
- f) is periodically reviewed and amended when necessary; and
- g) is followed up by periodic reminder notices, so the legal hold stays fresh in the minds of the recipients.

The notice need not demand preservation of all ESI, only the ESI that falls within the preservation obligation. When a notice to preserve is overbroad, it may cause added information management costs and lead to confusion later on, but an overbroad notice should not be treated by courts or opposing counsel as expanding the scope of the preservation obligation; it is the claims and defenses that define the scope of the preservation obligation, not the notice that may be issued.

Illustration i. In response to a product liability claim, alleging that injuries resulted due to a design defect in a safety mechanism part of the new product, a company issues a hold instructing those responsible for the design and production of the new product to preserve all information about it. Even if the hold is broader than necessary to the claims concerning the

⁸³ See *id.* at 282–83 (Guideline 8).

⁸⁴ See *id.* at 270, 277.

safety mechanism, it would be inappropriate to fault the organization later for failing to preserve all information about all aspects of the new product, its design, and production.⁸⁵

Additionally, the preservation obligation, except in extreme circumstances, should not require the complete suspension of normal document management policies, including the routine destruction and deletion of records. Rather, normal document management policies may continue with respect to non-relevant information.

Communications should be accomplished in a manner reasonably designed to provide prominent notice to the recipients. Depending on the scope and duration of the litigation, it may be advisable to send reminders on some regular basis (e.g., quarterly), and it may be necessary to amend the hold if the claims and defenses change. Defensibility also can be increased if the legal team meets with the recipients of the legal hold to confirm that the proper individuals are subject to the hold, and to make sure that those individuals understand and can comply with the preservation obligations. When preservation obligations apply to documents and ESI spanning a significant or continuing time period, organizations should analyze whether special steps are needed to preserve unique, relevant ESI stored on outdated or retired systems.

Illustration ii. Pursuant to its procedures for litigation response, upon receipt of notice of the claim, the organization identifies the departments and employees involved in the dispute. Those individuals who are reasonably likely to control or manage relevant ESI are notified via email of the dispute and are asked to take steps to preserve that ESI, as described in the notice. The notice identifies a contact person in legal who can address questions regarding preservation duties. The notice is also distributed to information technology and records management liaisons, who work with legal counsel to identify other relevant ESI, if any. The organization has taken reasonable steps to implement the legal hold.

Parties should also consider whether some preservation notice should be sent to third parties, such as contractors or vendors, including those that provide information technology services. This concern arises out of Rule 34, which frames a party's obligation in terms of its possession, custody, or control of documents. For example, many lawsuits involve work done by contractors that are hired by the organization, and that maintain relevant ESI outside the organization's IT systems. Depending on the jurisdiction, the organization's preservation obligations may extend to that ESI that is outside the organization's possession. In recent years, the trend to store electronic information with offsite cloud service providers has resulted in court decisions holding that a party contracting with a cloud service provider still has control over its data stored in the cloud. In most of these arrangements, the organization can preserve relevant ESI just as if the ESI was still on its own servers. But if the arrangement requires some assistance from the cloud service provider to preserve ESI, the organization should establish in the original contracting documents or service level agreement clear lines of communication and procedures for instituting a timely legal hold over information relevant

⁸⁵ See *Blue Sky Travel & Tours v. Al Tayyar*, 606 Fed. App'x. 689 (4th Cir. 2015).

to claims and defenses.⁸⁶ The fact that some cloud service providers have their own tools for preserving ESI does not mean that organizations should abandon their own tried and tested preservation methods in favor of the method marketed by the cloud service provider.

Comment 5.e. Preservation efforts need not be heroic or unduly burdensome.

The preservation obligation for ESI does not impose heroic or unduly burdensome requirements on parties. Rather, the obligation to preserve normally requires reasonable and good faith efforts. As discussed in Comment 3.a., the identification of data sources that may be subject to preservation and production should be discussed among the parties early in the case. If the parties are unable to agree on the scope of preservation, they should raise the issue with the court at the Rule 16(b) conference. *See also* Comment 4.b.

An obligation to undertake extraordinary efforts should be imposed only when a court, after consideration of proportionality principles, determines that there is a substantial likelihood that the ESI exists; that it is directly relevant to a claim or defense and would not remain in existence absent intervention; that the ESI (or its substantial equivalent) cannot be found in another, more accessible data source; and that its preservation is likely to materially advance the resolution of the litigation in a just, efficient, and relatively inexpensive manner.⁸⁷

Illustration i. A requesting party seeks an order, over objection, that backup tapes created during a relevant period should be preserved and restored, and information from them produced. It develops sufficient proof to raise the likelihood that substantial amounts of deleted information directly relevant to the claims in the action existed in the time frame covered by the backup tapes. Before ruling on the merits of the request, the court should consider having the producing party restore and search a sample of the tapes to determine the likelihood that relevant and discoverable ESI, not otherwise available, can be recovered and that doing so is proportional to the needs of the case. If recovery of information from the backup tapes is ordered, the court should consider whether further use of sampling techniques would minimize the burdens on the producing party, and whether any of the costs of the recovery should be allocated among the parties.

Comment 5.f. Ex parte preservation orders are disfavored absent showing of necessity and, when issued, should be tailored to require only preservation of ESI relevant to the claims and defenses.

In general, courts should not issue a preservation order over objection unless the party requesting such an order demonstrates its necessity, which may require an evidentiary hearing in some circum-

⁸⁶ *See generally* The Sedona Conference, *Commentary on Rule 34 and Rule 45 “Possession, Custody, or Control,”* 17 SEDONA CONF. J. 467 (2016).

⁸⁷ *See* Rule 1; Comment 5.f.

stances. Because all litigants are obligated to preserve relevant information in their possession, custody, or control, a party seeking a preservation order must first demonstrate a real danger of evidence destruction, the lack of any other available remedy, and that a preservation order is an appropriate exercise of the court's discretion and is tailored to require only preservation of information relevant to the claims and defenses. Such orders violate the principle that responding parties are responsible for preserving and producing their own ESI. *See* Principle 6. More generally, preservation orders should rarely be issued over objection, and only after a full and fair opportunity to present evidence and argument. This is particularly important when dealing with ESI that may be transitory, not reasonably accessible, or not susceptible to reasonable preservation measures. The 2006 Advisory Committee Note to Rule 26(f) instructs that “the requirement that the parties discuss preservation does not imply that courts should routinely enter preservation orders. A preservation order entered over objections should be narrowly tailored. Ex parte preservation orders should issue only in exceptional circumstances.”

Usually, neither the party seeking a preservation order nor the court will have a thorough understanding of the other party's computer systems, the ESI that is available, or the mechanisms in place to preserve that ESI. For example, in the early years of electronic discovery, courts sometimes believed that backup tapes were inexpensive and that preservation of tapes was not burdensome. However, restoration from backup tapes could be expensive; in recent years, backup systems and technologies vary greatly, and have evolved significantly. In addition, unnecessary retention of backup tapes can undermine an organization's IG programs by creating a cache of unknown data that complicates the organization's discovery obligations in later cases. Without information about the specifics of the backup system in use, it is difficult to determine what steps are reasonable and proportional to meet the needs of the case.

That said, jointly stipulated preservation orders may aid the discovery process and reduce costs by defining the specific contours of the parties' preservation obligations—i.e., both information sources that are to be preserved, and information sources that need not be preserved. Before any preservation order is issued, the parties should meet and confer to discuss the scope and parameters of the preservation obligation. Whether agreed to or ordered over objection, preservation orders should be narrowly tailored to require preservation of ESI that is non-duplicative, proportional, and relevant to the claims or defenses in the case, without unduly interfering with the normal functioning of the affected party's operations and activities, including the operation of electronic information systems.

Comment 5.g. All ESI does not need to be “frozen.”

A party's preservation obligation does not require “freezing” of all ESI, including all email. Parties need not preserve “every shred of paper, every e-mail or electronic document, and every backup tape,”⁸⁸ nor do they have to go to extraordinary measures to preserve “all” potentially relevant ESI. *See* Comment 5.e.

⁸⁸ *Zubulake v. UBS Warburg LLC*, 220 F.R.D. 212, 217 (S.D.N.Y. 2003).

Civil litigation should not be approached as if information systems were crime scenes that justify forensic investigation at every opportunity to identify and preserve every detail. Theoretically, a party could preserve the contents of wastebaskets and trash bins for evidence of statements or conduct. Yet, the burdens and costs of those acts are apparent and no one would argue that this is required. There should be a similar application of reasonableness to preservation of ESI.

Even though it may technically be possible to capture vast amounts of ESI during preservation efforts, usually this can be done only at great cost. ESI is maintained in a wide variety of formats, locations, and structures. Many copies of the same ESI may exist in active storage, backup, or archives. Computer systems manage data dynamically, meaning that the ESI is constantly being cached, rewritten, moved, and copied. For example, a word processing program usually will save a backup copy of an open document into a temporary file every few minutes, overwriting the previous backup copy. In this context, imposing an absolute requirement to preserve all ESI would require shutting down computer systems and making copies of data on each fixed disk drive, as well as other media that normally are used by the system. Costs of litigation would routinely approach or exceed the amount in controversy. In the ordinary course, therefore, the preservation obligation should be limited to those steps reasonably necessary to secure ESI for the fair and just resolution of the matter in dispute.

Comment 5.h. Absent good cause, preservation obligations should not extend to disaster recovery storage systems.

Several early cases addressing electronic discovery issues involved whether or not parties were obligated to produce ESI on backup tapes, and if so, which side should bear the cost. In recent years, business continuation and disaster recovery technologies have advanced. Today, some organizations address these important needs with dual, mirrored live systems on which ESI may be readily available. The Comments that follow address those situations where backup tapes still are used, but many of the concepts apply to other disaster recovery technologies as well.

Absent good cause, preservation obligations should not extend to disaster recovery backup tapes created in the ordinary course of business. In many organizations backup tapes exist so that ESI that is lost due to system failures or through disasters such as fires or tornadoes can be restored. Thus, by definition, their contents are duplicative of the contents of active computer systems at a specific point in time, and employing proper preservation procedures with respect to the active system should render preservation of backup tapes on a going-forward basis redundant and unnecessary. Moreover, when utilized pursuant to a backup policy, backup tapes generally are not retained for substantial periods of time, but periodically rotated and overwritten every 15 or 30 days. For that reason, requiring that information on backup tapes be preserved would require the time-consuming and costly process of altering backup systems, exchanging backup tapes, purchasing new tapes or hardware, and storing the tapes removed from the normal rotation.

In some organizations, however, the concepts of backup and archive are not clearly separated; in such an organization, backup tapes may be retained for a relatively long time period, and files on them may be accessed routinely for retrieval. Backup tapes also may be retained for long periods out

of concern for compliance with record retention laws. While such practices are not considered a best practice,⁸⁹ under these circumstances, the stored backup tapes may be deemed “reasonably accessible,” or may contain the only remaining copy of relevant ESI. In such circumstances, whether the ESI on the backups is subject to discovery should be determined by the usual proportionality principles. Parties that use backup tapes for archival purposes should be aware that these practices may lead to substantially higher costs for evidence preservation and production in connection with litigation. Parties seeking to preserve ESI for organizational purposes or litigation should consider employing means other than traditional disaster recovery backup tapes.

Illustration i. Pursuant to an information technology management plan, once each day a party routinely copies all ESI on its systems and retains, for a short period of time, the resulting backup tape for the purpose of reconstruction in the event of an accidental erasure, disaster, or system malfunction. A requesting party seeks an order requiring the responding party to preserve, and to cease reuse of, all existing backup tapes pending discovery in the case. Complying would impose significant expenses and burdens on the responding party, which are documented in factual submissions. No credible evidence is shown establishing the likelihood that, absent the requested order, the responding party will not produce all relevant ESI during discovery. The responding party should be permitted to continue the routine recycling of backup tapes in light of the expense, burden, and potential complexity of restoration and search of the backup tapes.

Finally, if it is unclear whether there is a reasonable likelihood that non-duplicative, relevant ESI is contained on backup tapes, as part of the proportionality analysis, the parties and/or the court may consider the use of sampling to better understand the nature and relevance of the ESI at issue. Depending on the circumstances of the case, sampling may establish that there is very little, if any, unique, relevant information on the tapes, and that there is no need for the tapes to be preserved or restored. Similarly, sampling may establish that it is reasonable to preserve and restore only certain intervals of available tapes to satisfy the party’s good faith compliance with its preservation and production obligations.

Illustration ii. A requesting party seeks an order, over objection, that backup tapes created during a relevant period should be preserved and restored. It develops sufficient proof to raise the likelihood that substantial amounts of deleted but relevant ESI existed in the time frame covered by the backup tapes. Before ruling on the merits of the request, the court should consider having the responding party restore and search a sample of the tapes to determine the likelihood that relevant and discoverable ESI, not otherwise available, can be recovered and that it is worthwhile to do so. If recovery of ESI from the backup tapes is ordered, the court should consider whether further use of sampling techniques would

⁸⁹ See *The Sedona Guidelines: Best Practice Guidelines & Commentary for Managing Information & Records in the Electronic Age*, at 20–22, THE SEDONA CONFERENCE (2d ed. 2007), <https://thesedonaconference.org/publication/Managing%20Information%20%2526%20Records>.

minimize the burdens on the responding party, and whether any of the costs of the recovery should be allocated among the parties.

According to the Report of the Civil Rules Advisory Committee presenting the 2006 amendments to the Federal Rules, disaster recovery tapes, which are “intended for disaster recovery purposes that are often not indexed, organized, or susceptible to electronic searching,” are identified as sources that may not reasonably be accessible and therefore are not subject to initial production absent a court order.⁹⁰ However, a party will need to disclose backup tapes that it determines are not reasonably accessible if it has a reasonable, good faith belief that relevant, non-duplicative data reside on those tapes; and, therefore, absent proportionality considerations, the Rule assumes the preservation of such backup tapes.

Comment 5.i. Preservation efforts should include consideration of ESI that is not specific to individual custodians, including shared or orphaned data.

An organization’s networks or intranet may contain shared areas (such as public folders, discussion databases, and shared network folders) that are not regarded as belonging to any specific employee. Similarly, there may be no one “owner” of the ESI for collaborative workspace areas within the organization. Such areas should be considered in the preservation analysis to determine if they contain relevant ESI proportional to the needs of the case and, if so, reasonable steps should be taken to preserve the relevant ESI. *See* Comment 5.d.⁹¹

If an organization maintains archival data on tapes or other offline media not accessible to end users of computer systems, steps should be taken promptly to determine whether those archival media are reasonably likely to contain relevant ESI not also present as active data on the organization’s systems. These steps may include notifying persons responsible for managing archival systems to retain tapes or other media as appropriate.

⁹⁰ *See* SUMMARY OF THE REPORT OF THE JUDICIAL CONFERENCE, COMMITTEE ON RULES OF PRACTICE AND PROCEDURE, app. C-42 (Sept. 2005), available at <http://www.uscourts.gov/rules-policies/archives/committee-reports/reports-judicial-conference-september-2005>.

⁹¹ *See generally* The Sedona Conference, *Commentary on Inactive Information Sources*, THE SEDONA CONFERENCE (July 2009 Public Comment Version), <https://thesedonaconference.org/publication/The%20Sedona%20Conference%20Commentary%20on%20Inactive%20Information%20Sources>.

6. Responding parties are best situated to evaluate the procedures, methodologies, and technologies appropriate for preserving and producing their own electronically stored information.

Introduction

Principle 6 recognizes that a responding party is best situated to preserve, search, and produce its own ESI. Principle 6 is grounded in reason, common sense, procedural rules, and common law, and is premised on each party fulfilling its discovery obligations without direction from the court or opposing counsel, and eschewing “discovery on discovery,” unless a specific deficiency is shown in a party’s production.

Comment 6.a. A responding party should determine how to meet its own preservation and production obligations.

There are at least four bases for this Principle.

First, the case law and the procedural court rules provide that discovery should take place without court intervention, with each party fulfilling its discovery obligations without direction from the court or opposing counsel.⁹² These obligations include the duty of the party who has possession, custody, or control⁹³ of ESI that is relevant to the claims and defenses in the case to take reasonable steps to preserve ESI that is within the scope of discovery. *See* Principle 5. Those discovery obligations also include the duty to use reasonable efforts to locate and produce ESI responsive to the opposing party’s requests and within the scope of discovery. To enforce these responsibilities, the attorney’s signature on a discovery response “certifies that the lawyer has made a reasonable effort to assure that the client has provided all the information . . . responsive to the discovery demand” and has made “reasonable inquiry into the factual basis of his response.”⁹⁴

⁹² *See* Rule 26(a) (mandatory initial disclosures), Rule 34(b)(2) (parties directed to respond to requests for documents or ESI), Rule 33(b)(1)(A) (parties directed to respond to interrogatories), and Rule 36(a)(3) (parties directed to respond to requests for admissions); *Dynamo Holdings Ltd. P’ship v. Comm’r*, No. 2685-11, 2014 WL 4636526, at *3 (U.S. Tax Ct. Sept. 17, 2014) (“And although it is a proper role of the Court to supervise the discovery process and intervene when it is abused by the parties, the Court is not normally in the business of dictating to parties the process that they should use when responding to discovery.”); *Diepenhorst v. City of Battle Creek*, No. 1:05-CV-734, 2006 WL 1851243, at *3 (W.D. Mich. June 30, 2006) (The “discovery process is designed to be extrajudicial, and relies upon the responding party to search his records to produce the requested data.”); *see also* Hon. James C. Francis IV, *Judicial Modesty: The Case for Jurist Restraint in the New Electronic Age*, LAW TECH. NEWS (Feb. 2013) (No Federal Rule “has given judges the authority . . . to dictate to the parties how or where to search for documents.”).

⁹³ *See* The Sedona Conference, *Commentary on Rule 34 and 45 “Possession, Custody, Or Control,”* 17 SEDONA CONF. J. 467 (2016).

⁹⁴ 1983 Advisory Comm. Note to Rule 26(g); *see id.* (“If primary responsibility for conducting discovery is to continue to rest with the litigants, they must be obliged to act responsibly and avoid abuse.”).

To meet its preservation and production obligations, the responding party must make a myriad of determinations necessary to identify, preserve, collect, process, analyze, review, and produce relevant and discoverable ESI for each case. The lack of uniformity and varying degrees of complexity in organizations and their information systems often require a very specific, in-depth understanding of how that party handles its own information. Additionally, determining what is relevant and proportional under the circumstances for each matter often requires a highly fact-specific inquiry.⁹⁵ Thus, the responding party—not the court or requesting party—is both tasked with making those determinations and generally in a better position to make those decisions.

Because of the dynamic nature of litigation, the analysis cannot be reduced to a generalized checklist of reasonable steps for every party to take in every action.⁹⁶ Instead, the responding party must make decisions on what is required to meet its preservation and production obligations based on direct input from those inside the organization who create, receive, and store their own information (i.e., individual custodians), and those who implement and maintain the organization’s information systems (e.g., applications administrators). Rarely will a court or opposing party have direct access to the specific knowledge required to make those decisions. Moreover, some of these decisions, especially those relating to preservation, often must be made before a responding party can confer with the opposing party or seek court guidance. Thus, a responding party, not the court or requesting party, is generally best situated to determine and implement appropriate procedures, methodologies, and technologies.

Second, courts have affirmed that a responding party is best situated to determine which procedures, methodologies, and technologies are appropriate for preserving and producing its own ESI, often specifically citing this Principle with approval. This has become even more clear in the years since the original publication of *The Sedona Principles*.⁹⁷

⁹⁵ See, e.g., *Chin v. Port Auth.*, 685 F.3d 135, 162 (2d Cir. 2012).

⁹⁶ *Id.*

⁹⁷ See, e.g., *Hyles v. New York City*, 10 Civ. 3119, 2016 WL 4077114 (S.D.N.Y. Aug. 1, 2016)(Peck, M.J.); *Rio Tinto PLC v. Vale S.A.*, 2015 WL 872294 (S.D.N.Y. Mar. 2, 2015)(Peck, M.J.); *Dynamo Holdings Ltd. P’Ship v. Comm’r*, No. 2685-11, 2014 WL 4636526 (Tax Ct. Sept. 17, 2014) (“[T]he Court is not normally in the business of dictating to parties the process that they should use when responding to discovery.”); *Kleen Prods, LLC v. Packaging Corp. of Am.*, No. 10 C 5711, 2012 WL 4498465, at *5 (N.D. Ill. Sept. 28, 2012) (observing that under Sedona Principle 6 “[r]esponding parties are best situated to evaluate the procedures, methodologies, and techniques appropriate for preserving and producing their own electronically stored information”); *Ford Motor Co. v. Edgewood Props., Inc.*, 257 F.R.D. 418, 427 (D.N.J. 2009) (“The Sedona Principles wisely state that it is, in fact, the producing party who is [in] the best position to determine the method by which they will collect documents. . . . [A]bsent an agreement or timely objection, the choice is clearly within the producing party’s sound discretion.”) (citing *The Sedona Conference, Best Practices Commentary on the Use of Search and Information Retrieval Methods in E-Discovery*, 8 SEDONA CONF. J. 189, 204 (2007)); *Little Hocking Water Assn., Inc. v. E.I. DuPont de Nemours & Co.*, No. 2:09-cv-1081, 2013 WL 608154, at *9 (S.D. Ohio Feb. 19, 2013) (responding party “is in the best position to identify . . . potentially responsive information”); *Cache La Poudre Feeds, LLC v. Land O’Lakes, Inc.*, 244 F.R.D. 614, 628 (D. Colo. 2007) (“[I]n the typical case, [r]esponding parties are best situated to evaluate the procedures, methodologies, and technologies appropriate for preserving and producing their own electronic data and documents.”).

Third, deference regarding the selection and implementation of the discovery process should be given to the party that will incur the costs. In the vast majority of cases, each party bears the costs associated with preservation and production of its own ESI, and the risks (including potential curative measures or sanctions) for failing to comply with those obligations. *See* Principle 13 regarding costs, and Principle 14 regarding remedial measures and sanctions. As one court stated: “[T]he people who are producing the records, producing the documents are in a better position to know, since they have to do the work, spend the money, spend the time, they know their people, they know their material.”⁹⁸ There are many options available to a responding party in evaluating and selecting how best to meet its preservation and discovery obligations, and it should be permitted to elect how best to allocate its resources and incur the costs required to comply with its obligations.

Fourth, the explosive proliferation of ESI, and regulations for some specific types of ESI, have led many organizations to develop information governance (IG) programs that often include customized, proprietary structured-data, document management, and archiving systems.⁹⁹ Those systems and applications are often expansive, include extremely complex and dynamic structured-data systems, and are focused on the mission of running the day-to-day business.¹⁰⁰ Additionally, larger organizations and frequent litigants, regardless of size, are developing or expanding their IG programs to include litigation readiness planning to minimize the impact on the business while still permitting the organization to meet its preservation and discovery obligations. Because litigation readiness often focuses on an entire portfolio of litigation, demands to use specific procedures, methodologies, or technologies for preserving and producing ESI in individual cases may impose an unreasonable burden on the organization’s IG program that outweighs any resulting benefit for those cases. In short, those organizations have better knowledge of, access to, and control of the information at issue in a particular litigation, as well as the potential impact to their information systems and governance.

Comment 6.b. Responding parties should be permitted to fulfill their preservation and discovery obligations without preemptive restraint.

There are many ways to manage ESI, and many ways in which the responding party may comply with its discovery obligations. Because the responding party generally is best situated to evaluate, select, and implement the procedures, methodologies, and technologies appropriate to meet its preservation and discovery obligations, there should be no preemptive restraint¹⁰¹ placed on a responding

⁹⁸ Kleen Prods. LLC v. Packaging Corp. of Am., Inc., Civ. No. 10-cv-05711, Tr. Of Proceedings Before the Hon. Nan Nolan, Docket No. 319-1, at 297–98 (N.D. Ill. May 17, 2012).

⁹⁹ *See* Comment 1.b.; *see also* The Sedona Conference, *Commentary on Information Governance*, 15 SEDONA CONF. J. 125 (2014).

¹⁰⁰ *See* The Sedona Conference, *Database Principles Addressing the Preservation and Production of Databases and Database Information in Civil Litigation*, 15 SEDONA CONF. J. 171 (2014).

¹⁰¹ This is analogous to the First Amendment precept of no “prior restraint,” i.e., just as speech cannot normally be restrained in advance, a requesting party should not normally be able to restrain the responding party’s discovery process to prevent an anticipated, but uncertain, future harm.

party that chooses to proceed on its own with determining how best to fulfill its preservation and discovery obligations. Thus, as a general matter, neither a requesting party nor the court should prescribe or detail the steps that a responding party must take to meet its discovery obligations, and there should be no discovery on discovery, absent an agreement between the parties, or specific, tangible, evidence-based indicia (versus general allegations of deficiencies or mere “speculation”) of a material failure by the responding party to meet its obligations.¹⁰² A requesting party has the burden of proving a specific discovery deficiency in the responding party’s production. *See* Principle 7 (“The requesting party has the burden on a motion to compel to show that the responding party’s steps to preserve and produce relevant electronically stored information were inadequate.”). *See also* discussion *infra* regarding potential benefits of cooperation.

Just as a requesting party does not have a right to dictate the processes, methodologies, or technologies to be used by a responding party in fulfilling its preservation or discovery obligations under the Federal Rules or these Principles, the corollary is that a responding party has no right to demand a requesting party actively assist the responding party with evaluating and selecting the procedures, methodologies, and technologies for meeting the responding party’s preservation and production obligations. For example, a responding party cannot unilaterally demand the requesting party submit proposed search terms and a list of custodians against which to run the search terms, or use the requesting party’s reluctance to provide search terms as a shield to defend its own inadequate search terms.

Rule 1 requires parties to employ the Rules “to secure the just, speedy, and inexpensive determination of every action and proceeding.” Additionally, requesting and responding parties share the mutual obligation to meet and confer in good faith to discuss the preservation and production of ESI, as required by Rule 26 and its state equivalents.¹⁰³

¹⁰² *See, e.g., In re Ford Motor Co.*, 345 F.3d 1315, 1317 (11th Cir. 2003) (vacating order for discovery of certain databases where no finding of “some non-compliance with discovery rules by Ford”); *Koninklijke Philips N.V. v. Hunt Control Sys., Inc.*, No. 11-cv-03684, 2014 WL 1494517, at *4 (D.N.J. Apr. 16, 2014) (moving party failed to show a “material deficiency” in the responding party’s electronic discovery process); *Freedman v. Weatherford Int’l*, No. 12 Civ. 2121, 2014 WL 4547039 (S.D.N.Y. Sept. 12, 2014) (request for “discovery on discovery” denied for failure in absence of factual basis to find original production deficient); *Larsen v. Coldwell Banker Real Estate Corp.*, No. SACV 10-00401, 2012 WL 359466, at *7 (C.D. Cal. Feb. 2, 2012) (denying discovery on discovery where plaintiff’s “isolated examples cited” of alleged deficiencies “fail[ed] to demonstrate that Defendants have not reasonably and in good faith produced the documents required.”); *Orillaneda v. French Culinary Inst.*, No. 07 Civ. 3206, 2011 WL 4375365, at *7–8 (S.D.N.Y. Sept. 19, 2011) (plaintiff not entitled to conduct discovery about defendant’s document production without “specific statements” to prove deficiency instead of relying on “generalities”); *Steuben Foods, Inc. v. Country Gourmet Foods, LLC*, No. 08-CV-561S, 2011 WL 1549450 (W.D.N.Y. 2011); *Hubbard v. Potter*, 247 F.R.D. 27, 31 (D.D.C. 2008) (denying discovery on discovery because of only a “theoretical possibility” that additional electronic documents may exist); *Memory Corp. v. Kent. Oil Tech.*, No. C04-03843, 2007 WL 832937 (N.D. Cal. Mar. 19, 2007); *In re Honeywell Int’l. Inc. Sec. Litig.*, 230 F.R.D. 293 (S.D.N.Y. 2003).

¹⁰³ Rule 26(f)(3)(C) requires the parties to confer on and prepare a discovery plan that addresses “any issues about disclosure, discovery, or preservation of electronically stored information, including the form or forms in which it

In addition to what is required by those Rules, it is generally in the best interests of the responding party to engage in meaningful cooperation with opposing parties to attempt to reduce the costs and risk associated with the preservation and production of ESI. If both requesting and responding parties voluntarily elect to cooperatively evaluate and agree upon the appropriate procedures, methodologies, and technologies to be employed in the case, both may potentially achieve significant monetary savings and non-monetary efficiencies.¹⁰⁴ *See also* Principle 3.

In addition, there may be circumstances where a requesting party may legitimately claim to have relevant, equal, or superior knowledge of certain aspects of the responding party's business operations, information systems, or potential procedures for preserving and producing relevant ESI within the scope of discovery from the responding party's systems.¹⁰⁵ In those situations, if the requesting party is engaging in meaningful cooperation by providing specific information on such issues, the responding party should consider the information the requesting party provides in evaluating the preservation steps and production that is proportional and relevant.

If the parties reach agreement on preservation and production after thorough dialogue about the ESI likely to be proportional and relevant, the responding party has greatly reduced or even eliminated the risk of satellite motion practice or sanctions. But, short of actual agreement, the responding party bears the ultimate responsibility for the adequacy of meeting its preservation obligations. A responding party's obligations under Rule 26(f) to meet and confer in good faith does not trump its right to evaluate unilaterally and select the procedures, methodologies, and technologies appropriate for preserving and producing its own ESI. Those rights should be challenged only where a requesting party demonstrates to the court a specific deficiency in the responding party's discovery productions.

Comment 6.c. Documentation and validation of discovery processes.

Responding parties and their counsel should consider what documentation and validation of their discovery process (i.e., preservation, collection, review, and production) is appropriate to the needs of the particular case. For example, since *The Sedona Principles* was first published, applications have been developed to automate the legal hold issuance, tracking, and documentation processes, as well as some collections. Having documentation can help respond to legitimate challenges (*see* Comment 6.b.)—even those made years later—to the processes employed, avoid overlooking ESI that should be collected, and avoid collecting ESI that is neither relevant nor responsive to the matter at issue. Such documentation may include a description of what is being preserved, the processes and validation procedures employed to preserve and prepare the materials for production, and the steps taken

should be produced.” *See also* Principle 12. While the 2015 Advisory Committee Note to Rule 1 encourages “cooperative and proportional use of procedure,” it also specifically states that “[t]his amendment does not create a new or independent source of sanctions.”

¹⁰⁴ *See* The Sedona Conference, *Cooperation Proclamation*, 10 SEDONA CONF. J. 331 (2009 Supp.).

¹⁰⁵ For example, a former employee may be highly knowledgeable about the organization's information systems or an employer may have a greater understanding of the technology behind an individual plaintiff's social media accounts.

to ensure the integrity of the information throughout the process. Organizations should endeavor to revise their standardized documentation and validation procedures as appropriate, e.g., when the organization introduces new technologies to store or create ESI, including some technologies that create new types of ESI.

Documentation of discovery processes may be privileged and therefore not subject to discovery, and should be shared with the requesting party only by agreement (after due consideration of privilege issues—*see* Principle 10) or after court order based upon a showing of a specific deficiency in a responding party's production (*see* Comment 6.b.).

Comment 6.d. Rule 34 inspections of electronic information systems are disfavored.

Courts have repeatedly found that Rule 34 does not create a routine right of direct access to an opposing party's electronic information system.¹⁰⁶ Inspection of an opposing party's computer system under Rule 34 and state equivalents is the exception and not the rule for discovery of ESI. In the majority of cases, the issues in litigation relate to the informational content of the data stored on computer systems, not the actual operations of the systems; and, as noted above, the obligation to produce relevant content lies with the responding party. Unless the requesting party can prove that the actual operation of a particular system is at issue in the litigation, if the responding party provides the informational content of the data, there is no need or justification for direct inspection of the responding party's computer systems.

Direct access to an opposing party's computer systems under a Rule 34 inspection also presents possible concerns such as:

- a) revealing trade secrets;
- b) revealing other highly confidential or private information, such as personnel evaluations and payroll information, properly private to individual employees;
- c) revealing confidential attorney-client or work-product communications;
- d) unreasonably disrupting the ongoing business;
- e) endangering the stability of operating systems, software applications, and electronic files if certain procedures or software are used inappropriately; and

¹⁰⁶ *See, e.g.*, SEC v. Strauss, No. 09 Civ. 4150, 2009 WL 3459204, at *12 n.8 (S.D.N.Y. Oct. 28, 2009) (“There is a general reluctance to allow a party to access its adversary's *own* database directly. The Advisory Committee Notes to the 2006 amendments to Rule 34 explain that Rule 34(a) is not meant to ‘create a routine right of direct access to a party's electronic information system’ and advises that courts ‘guard against undue intrusiveness resulting from inspecting or testing such systems.’ Thus, courts have declined to find an automatic entitlement to access an adversary's database.” (citing cases) (emphasis in original)).

- f) placing a responding party's computing systems at risk of a data security breach.

Further, Rule 34 inspections of ESI are likely to be particularly ineffective. The typical production, in which the responding party identifies and produces responsive information, allows the party with the greatest knowledge of the computer systems to search and utilize the systems to produce responsive information. A Rule 34 inspection, in contrast, requires persons unfamiliar with the party's recordkeeping systems, hardware, and software to attempt to manipulate the systems. Not only is such a process disruptive, it is less likely to be fruitful. In most cases, responding parties will be able to argue persuasively that its production of relevant ESI from computer systems and databases was sufficient to discharge its discovery obligations.

To justify the onsite inspection of a responding party's computer systems, a requesting party must demonstrate that there is a substantial need to discover information about the computer system and programs used (as opposed to the data stored on that system) and that there is no reasonable alternative to an onsite inspection. Any inspection procedure should: (1) be documented in an agreed-upon (and/or court-ordered) protocol; (2) recognize the rights of non-parties, such as employees, patients, and other entities; and (3) be narrowly restricted to protect confidential and personally identifiable information and system integrity as well as to avoid giving the discovering party access to information unrelated to the litigation. Further, courts that have allowed access generally have required that the inspection be performed by a qualified consultant or vendor, and that no information obtained through the inspection be produced until the responding party has had a fair opportunity to review that information.

Comment 6.e. Use and role of discovery counsel, consultants, and vendors.

Responding parties may consider retaining specialized discovery counsel, consultants, and/or vendors to assist in preserving and producing ESI. Due to the complexity of electronic discovery, many organizations rely on discovery counsel, consultants, and vendors to provide a variety of services, including discovery planning, data collection, specialized data processing, and forensic analysis. The use of specialized discovery counsel has increased significantly in recent years, and such specialized counsel and non-attorney consultants can be of great assistance to parties and courts in providing technical expertise and experience with the preservation, collection, review, and production of ESI. Parties should carefully consider the experience and expertise of potential consultants or vendors before their selection, as standards for non-attorney experts and consultants in this field still have not been fully developed. Discovery counsel, consultants, and vendors offer a variety of software and services to assist with the electronic discovery process; and a party's evaluation of software and services should include the defensibility of the process in the litigation context, the cost, and the experience of the discovery counsel, consultant or vendor, including its project management and pro-

cess controls, as applicable. Ultimate responsibility for ensuring the preservation, collection, processing, review, and production of ESI rests with the responding party and its counsel, not with any non-party consultant or vendor.¹⁰⁷

¹⁰⁷ See ABA MODEL RULES OF PROF'L CONDUCT R. 5.1 and R. 5.3; Cal. St. Bar Standing Comm. On Prof'l Resp. & Cond., Formal Op. No. 2015-193, at 5–6 (June 30, 2015), *available at* [http://ethics.calbar.ca.gov/Portals/9/documents/Opinions/CAL%202015-193%20%5B11-0004%5D%20\(06-30-15\)%20-%20FINAL.pdf](http://ethics.calbar.ca.gov/Portals/9/documents/Opinions/CAL%202015-193%20%5B11-0004%5D%20(06-30-15)%20-%20FINAL.pdf); Comment 10.k.

7. The requesting party has the burden on a motion to compel to show that the responding party's steps to preserve and produce relevant electronically stored information were inadequate.

Comment 7.a. Process and burden of proof for resolving discovery disputes between parties.

A party that receives a request for production of ESI may object to some or all of the request, or may produce information that the requesting party deems inadequate or non-responsive. This may prompt the requesting party to consider filing a motion to compel production. In cases governed by the Federal Rules of Civil Procedure, such a motion would be filed under Rule 37(a), which requires the moving party to certify that good faith efforts have been made to resolve the dispute before resorting to the court.¹⁰⁸

On a motion to compel, the moving party must demonstrate that the discovery response was inadequate and that additional steps are warranted. On such a motion, a court should consider: Sedona Principle 2 and the proportionality limits of Rule 26(b)(1); how the moving party can meet its burden without the need for extensive discovery about the responding party's efforts to respond to the discovery request; and that, consistent with Principle 6, the responding party is in the best position to determine the appropriate methods for preserving, retrieving, reviewing, and producing ESI.

Further, Rule 26(b)(2)(B) establishes a procedure to resolve disputes regarding discovery from sources the responding party has identified as "not reasonably accessible" because of "undue burden or cost." *See* Comment 2.c. So, too, Rule 26(c) establishes a procedure for obtaining a protective order to relieve a responding party from "undue burden or expense," or, as amended in 2015, to allocate costs. Under either Rule, the burden is on the responding party to establish the grounds for limiting discovery.

Comment 7.b. Process for discovering ESI from non-parties.

ESI also may be secured from non-parties by service of a subpoena or other process authorized by the relevant court procedures. Requesting parties must be sensitive to the burdens that such discovery places on non-parties. A party issuing the subpoena may indicate the form or forms in which production is to be made, and the non-party subject to the subpoena generally has the same rights and obligations in regard to production as parties. One major exception is that there is no requirement to meet and discuss preservation or other key topics. Parties issuing and responding to subpoenas can avail themselves of such an opportunity informally, a best practice that should be followed in most cases. *See* Comment 3.a.

Rule 45(d)(1) provides that the issuing party must "take reasonable steps to avoid imposing undue burden or expense on a person subject to the subpoena," and requires the court to protect persons

¹⁰⁸ Rule 37(a)(1).

from undue burden and expense associated with subpoena compliance.¹⁰⁹ Excessively broad ESI production requests on non-parties can also lead to sanctions and liability under federal statutes protecting the privacy of electronic communications.¹¹⁰

Equally important, Rule 45(d)(2)(B)(ii) provides that, if objection is made to a subpoena, an order to compel production “must protect a person who is neither a party nor a party’s officer from significant expense resulting from compliance.” Courts balance the cost, burden, and need for discovery from non-parties when considering whether to quash or modify the discovery sought, or to shift some or all of the costs associated with requests for production of ESI.¹¹¹ For cost-shifting standards on non-party subpoenas, *see* Comment 13.c.

¹⁰⁹ 1991 Advisory Comm. Note to Rule 45.

¹¹⁰ *See* Theofel v. Farey-Jones, 359 F.3d 1066 (9th Cir. 2003) (service of an overbroad, “patently unlawful” subpoena on a party’s ISP, which led to the disclosure of private and privileged communications, violated the Stored Communications Act, 18 U.S.C. § 2701 *et seq.*, and the Computer Fraud and Abuse Act, 18 U.S.C. § 1030).

¹¹¹ *See* Braxton v. Farmer’s Ins. Group, 209 F.R.D. 651, 653 (N.D. Ala. 2002) (court quashed non-party subpoena for documents and ESI from insurance agents where the requesting party could not show that production by the insurance company that employed the agents would be inadequate).

- 8. The primary sources of electronically stored information to be preserved and produced should be those readily accessible in the ordinary course. Only when electronically stored information is not available through such primary sources should parties move down a continuum of less accessible sources until the information requested to be preserved or produced is no longer proportional.**

Comment 8.a. Scope of search for and preservation of readily accessible data.

The scope of the sources a responding party must search for relevant ESI to be preserved and ultimately produced need only be reasonable and proportional. Depending on the case and the parties involved, relevant ESI may be on a wide variety of sources, such as local and network computers, laptop and desktop computers, servers, mobile devices, portable storage devices, database systems, document management systems, business intelligence platforms, network attached storage, cloud-based storage and information sharing systems and services, archives, backup systems, voicemail systems, video monitoring systems, etc. In considering where to search for and preserve relevant ESI, *The Sedona Principles* first and second editions focused on the delineation of “active” data sources as opposed to disaster recovery backup tapes and other sources of ESI that were not reasonably accessible. However, the continually evolving landscape of information technology has made this distinction less important.

This revised Principle addresses a new framework, considering potential sources of discoverable information as existing along a continuum: starting with ESI that is readily accessible (that is, easily and quickly available and used in the ordinary course); then continuing through a variety of sources that are less accessible because of increasing burden or cost, or that are largely duplicative of more accessible sources; and ending with sources that clearly are not readily accessible and for which the cost of preservation and production is not proportional to the matter at hand.¹¹²

The 2015 amendments to Rule 26 elevate proportionality analysis, requiring parties to apply proportionality when considering data sources other than primary sources. The primary sources of information for the responding party should be those that are routinely accessed in the ordinary course through ordinary means. Once those primary sources are exhausted, the responding party arrives at a “phase gate” or “decision gate,” where it must consider whether additional, unique, and discoverable ESI exists within less readily accessible sources and, if so, whether the preservation and potential production of that information through extraordinary means is consistent with the proportionality requirement of Rule 26(b)(1).¹¹³ The responding party then continues through a series of phase gates

¹¹² The “readily accessible” continuum is intended to comprehend both the increased emphasis on proportionality under amended Rule 26(b)(1) and the deeper analyses of data sources that are claimed to be not reasonably accessible under Rule 26(b)(2)(B).

¹¹³ See also Principle 2; The Sedona Conference, *Commentary On Proportionality in Electronic Discovery*, THE SEDONA CONFERENCE (Nov. 2016 Public Comment Version), <https://thesedonaconference.org/publication/The%20Sedona%20Conference%20Commentary%20on%20Proportionality>.

until such time as it concludes that it has reasonably met its obligations with respect to preservation or production, or that further efforts are not proportional to the matter.¹¹⁴

In considering the preservation and production of ESI (including all necessary steps in between) along the continuum, it is neither feasible nor reasonable to require litigants to canvas all potential sources of ESI in discharging their preservation obligations and responding to discovery requests. Many locations or sources will contain duplicative or redundant information, and others may contain ephemeral data or massive and disproportionate volumes of information clearly not relevant to the claims and defenses in the case.

Parties and courts must exercise judgment, made upon reasonable inquiry and in good faith, about the potential sources of discoverable information subject to preservation and production obligations. The appropriate standard should be to search sources that are most likely to contain relevant ESI and take reasonable steps to preserve such information. If the responding party is aware (or reasonably should be aware) that specific discoverable ESI can be obtained only from a single source, that ESI, or the source on which it is located, should be preserved for possible review and production, absent agreement of the parties or court order. On the other hand, mere suspicion that a source may contain discoverable, but duplicative ESI is not sufficient to require preservation of that source “just in case.”

Preservation or production from sources that are asserted to be not readily accessible should be required only on a showing of good cause (including a demonstration that the discovery is proportional), with the requesting party bearing the burden to show good cause on an appropriate motion. However, a party may not deliberately make information less accessible for the primary purpose of avoiding responding to proper discovery requests in general. Such actions, particularly when undertaken specifically for a known case, cannot be countenanced, and should be subject to appropriate deterrent and/or remedial measures by the court.¹¹⁵

For a discussion on locating and recovering deleted, shadowed, fragmented, or residual ESI, see Principle 9.

Illustration i. A party seeking relevant emails demands a search of backup tapes (used for disaster recovery purposes) for any relevant materials. No showing of special need or justification is made for the search, and the responding party took reasonable steps to preserve

¹¹⁴ See *id.*; Rules 26(b)(2)(B) and 26(c).

¹¹⁵ See, e.g., *Orbit One Commc'ns, Inc. v. Numerex Corp.*, 271 F.R.D. 429, 437 (S.D.N.Y. 2010); *Scalera v. Electrograph Sys., Inc.*, 262 F.R.D. 162, 175 (E.D.N.Y. 2009); *Treppel v. Biovail Corp.*, 233 F.R.D. 363, 372 n. 4 (S.D.N.Y. 2006) (“[P]ermitting the downgrading of data to a less accessible form—which systematically hinders future discovery by making the recovery of information more costly and burdensome—is a violation of the preservation obligation.”); *Quinby v. WestLB AG*, 245 F.R.D. 94, 111 (S.D.N.Y. 2006) (holding the responding party should bear the greater costs of production caused by its downgrading of data); Kara A. Schiermeyer, *The Artful Dodger: Responding Parties’ Ability to Avoid Electronic Discovery Costs Under 26(b)(2)(b) and 26(b)(2)(c) and the Preservation Obligation*, 42 CREIGHTON L. REV. 227 (2009) (discussing *Treppel* and *Quinby* and arguing that downgrading form of ESI should be considered spoliation).

relevant emails in primary systems, including Exchange or Domino servers and active archives by timely implementing a legal hold. The request should be denied.

Illustration ii. A party seeking relevant emails demands a search of backup tapes (used for disaster recovery purposes). A showing is made that the emails sought are highly relevant, were removed from primary sources after the duty to preserve attached, and are now only available on disaster recovery media. Absent exceptional circumstances, the request should be granted, at least for a sample of the backup tapes.

Illustration iii. After interviewing key custodians and searching its primary email systems, a responding party concludes that a large volume of discoverable emails is available in near-line email archives, as well as on individual custodian hard drives, and on older, legacy backup tapes. While the near-line email archive system is not technically “active data,” relevant emails can be obtained through ordinary means with little additional burden or expense. The responding party should consider either searching the email archives to locate and preserve the discoverable information or, alternatively, searching custodian hard drives or removable media for the discoverable information. Only after completing the preservation of materials in one of these manners should the responding party consider the proportionality of obtaining any additional discoverable information from the other source or backup tape system.

Comment 8.b. Preservation and production of ESI from sources that are “not reasonably accessible” under the Federal Rules of Civil Procedure.

The Federal Rules of Civil Procedure limit the obligation to search and produce from sources of relevant ESI that are not reasonably accessible due to undue burden or cost. This limitation in Rule 26(b)(2)(B) is related to, but distinct from, the concept of proportionality. ESI that is not proportional to the needs of the case is not within the scope of discovery under Rule 26(b)(1). Even for ESI that *is* proportional to the needs of the case, a party may assert that the ESI is “not reasonably accessible.”

“Not reasonably accessible” was founded on a paradigm where there was “active data” and “inactive data,” and special technology and resources were required to access “inactive data.” Active Data, for example, is information residing on the direct access storage media (disk drives or servers) that is readily visible to the operating system and/or application software with which it was created, and is immediately accessible to users without restoration or reconstruction.

The 2006 Advisory Committee Notes give as examples of ESI that are not reasonably accessible: “backup tapes” intended for disaster recovery purposes that are often not indexed, organized, or susceptible to electronic searching; legacy data that remains from obsolete systems and is unintelligible on the successor systems; data that was “deleted” but remains in fragmented form requiring a modern version of computer forensics to restore and retrieve; and databases that were designed to create certain information in certain ways and that cannot readily create very different kinds or forms of information. But as information technology has evolved, the concept of “not reasonably

accessible” must evolve. The cost and effort to attain what is asserted to be “not reasonably accessible” will depend on a particular party’s existing technologies and resources—not the best available in the market. In 2016, fewer enterprises rely upon backup tapes and other such “inactive data” systems that were more prevalent in 2006. Moreover, multiple copies of ESI may exist in multiple systems, many of which are both reasonably and readily accessible.

Rule 26(b)(2)(B) requires the responding party to identify by category or type any sources of relevant ESI that it has identified as “not reasonably accessible.” Specifically, under Rule 26(b)(2), if a party has determined that the only source of some proportional and relevant ESI is one that is not reasonably accessible, then it may be required to preserve that source,¹¹⁶ disclose it (with enough information so the other side can understand what is at issue), be ready to demonstrate why production of information is unduly burdensome or costly, and, if possible, discuss these issues at the initial Rule 26(f) meet and confer sessions. This provision should not be read to require a list of all sources of ESI that are not searched, nor does it require a listing of sources a party has reasonably determined, in good faith, are inaccessible and do not contain non-duplicative relevant ESI.

If the parties are unable to reach agreement as to the accessibility of specific sources of ESI or the need to restore those sources for purposes of the dispute at issue, a motion to compel or for a protective order may be brought. *See* Comment 2.c. Proportionality may also dictate that costs are allocated to the requesting party when the burden to preserve or produce ESI is disproportionate to the needs of the case.

For discussion of the use of cost shifting in electronic discovery, see Principle 13.

Comment 8.c. Forensic data collection.

“Forensic” data collection, also known as creating a “forensic copy,” “bit-stream image,” or “mirror image,” refers to the creation of an exact copy of an entire physical storage media (hard drive, CD-ROM, DVD-ROM, tape, etc.), including all active and residual data and unallocated or slack space on the media.¹¹⁷

Forensic data collection requires intrusive access to desktop, server, laptop, or other hard drives or media storage devices, and is sometimes appropriate when key employees leave employment under suspicious circumstances, or if theft or misappropriation of trade secrets or confidential information may be involved. However, making a forensic copy of computers is only the first step of an expen-

¹¹⁶ *See* 2006 Advisory Comm. Note to Rule 26(b)(2) (“A party’s identification of sources of electronically stored information as not reasonably accessible does not relieve the party of its common-law or statutory duties to preserve evidence. Whether a responding party is required to preserve unsearched sources of potentially responsive information that it believes are not reasonably accessible depends on the circumstances of each case.”).

¹¹⁷ *See The Sedona Conference Glossary: E-Discovery & Digital Information Management (Fourth Edition)*, 15 SEDONA CONF. J. 305, 328 (2014) (defining “Forensic Copy”).

sive, complex, and difficult process of data analysis that can divert litigation into side issues and satellite disputes involving the interpretation of potentially ambiguous forensic evidence. While creating a forensic copy clearly is appropriate in some circumstances, particularly when there is unique ESI that only can be found or an issue that can be resolved through a forensic examination of the system, including logs, registry keys, and tables, it should not be required unless circumstances specifically warrant the additional cost and burden and there is no less burdensome option available. When ordered, it should be accompanied by an appropriate protocol or other protective measures that take into account any applicable privacy rights and privileges, as well as the need to avoid copying ESI that is not relevant. *See* Comment 6.d. In some cases, it may be necessary, as an anticipatory matter, to meet certain preservation obligations by making or retaining copies of archival media or taking such steps as imaging the computer hard drives of departing employees. Such copies may best preserve all relevant ESI. If the parties anticipate such a need, the topic of forensic-level preservation and review should be addressed at the initial meet and confer sessions.

Illustration i. After a key employee leaves X Company (“X Co.”) to work for a competitor, a suspiciously similar competitive product suddenly emerges from the new company. X Co. produces credible testimony that the former employee bragged about sending confidential design specifications to his new company computer, copying the data to a thumb drive, and deleting the data from the original source so that the evidence of mischief would never be found. The court properly orders that, given the circumstances of the case, the requesting party has demonstrated the need to obtain a mirror image of the computer’s hard drive. If the defendant is not willing to undertake the expense of hiring its own reputable data recovery expert to produce all available relevant data, inspection of the computer’s contents by an expert appointed by the court or working on behalf of X Co. may be justified, subject to appropriate orders to preserve privacy, to protect data, and to prevent production of unrelated or privileged material. Under a showing of special need, with appropriate orders of protection, efforts to restore ESI also could be ordered.

Illustration ii. A small group of staff employees of Y Company (“Y Co.”) file a proposed wage and hour class action asserting that Y Co. failed to pay overtime. The employees demand that Y Co. make forensic mirror image copies of their hard drives, as well as the hard drives of all proposed class members, to ensure that system metadata can be extracted to prove the hours that employees were logged into their computers. Y Co. can demonstrate that it maintains readily accessible system logs that record the same information, and it is willing to produce some or all of such logs to the plaintiffs. The employees’ demand for a preservation order should be rejected.

Comment 8.d. Accessibility of ESI held by vendors and other non-parties.

The scope of discovery and the duty to preserve and produce information extends to relevant and proportional ESI under the custody or control of a party, including information that a non-party such as a cloud service provider, an information technology service provider, or a data processing

contractor may possess. Many parties store large volumes of data with cloud service providers, out-source all or part of their information technology systems, or share data with third parties for processing or for other business purposes. In contracting for such services, parties should consider how they will comply with their obligations to preserve and collect ESI for litigation. If such provisions are not within the scope of contractual agreements, costs may escalate and necessary services, including access to relevant data, may be unavailable when needed. Consistent with the notion that a party should not convert ESI into a less useable format (*see* Principle 12), parties should not move ESI to vendors for the purpose of making the ESI less accessible for litigation. Parties also need to consider whether preservation notices should be sent to non-parties, such as cloud providers, contractors, and vendors, when litigation commences, particularly because such non-parties otherwise may not be aware of litigation or attendant preservation obligations.

For a discussion of the challenges facing responding parties regarding potential obligations to preserve and produce ESI not in their physical possession, see The Sedona Conference Commentary on Rule 34 and 45 “Possession, Custody, or Control.”¹¹⁸

¹¹⁸ 17 SEDONA CONF. J. 467 (2016).

9. Absent a showing of special need and relevance, a responding party should not be required to preserve, review, or produce deleted, shadowed, fragmented, or residual electronically stored information.

Comment 9.a. The scope of discovery of ESI that is deleted or otherwise not readily apparent.

This Principle recognizes that the burden of preserving, reviewing, or producing deleted, shadowed, fragmented, or residual ESI, or ESI that is otherwise not readily apparent, is normally outweighed by any resulting benefit. This ESI can include system data, transient and ephemeral data, unique computer artifacts (e.g., registry entries and log files), or data from emerging technologies. However, where there is some special need for this ESI, parties should be prepared to discuss how that need can be met without unnecessarily increasing costs. In those matters, the requesting party should articulate good cause for preservation and production, including the importance of the ESI in resolving the claims and defenses in the case, or in making other relevant ESI usable. The responding party should understand what ESI is available and the burden or expense of preserving, collecting, and producing that ESI. Both parties should consider and apply all of the pertinent proportionality factors. *See* Principles 2 and 5.

Illustration i. Plaintiff claims that she is entitled to a commission on a transaction based upon an email allegedly sent by the defendant's president. Defendant asserts that there is no record of the email being sent in its email system or the logs of its internet activity, and that plaintiff's copy of the email is not authentic. In these circumstances, it is appropriate to require preservation, review, and production not only of the content of the questioned email, but also of the email itself in its native or near native form, containing the header information and application metadata, which can play a crucial role in determining whether the questioned message is authentic.

Illustration ii. Plaintiff alleges that the defendant engaged in billing fraud by overcharging for hourly work done, some of which allegedly was for another client. The plaintiff presents two materially different versions of the same invoice, indicating that the invoice has been altered. In this case, discovery of overwritten drafts, edits, and deleted versions of the invoices may be appropriate, and production in native format also may be appropriate.

Comment 9.b. The preservation and production of deleted ESI.

Deleted data may at one time have been a "useful" document generated in the ordinary course of business that had value to the organization, although that value may have expired. However, this historic fact alone does not justify the retrieval and review of deleted data. Case law indicates that only exceptional cases turn on "deleted" or "discarded" information (whether paper or electronic). Employees and organizations properly and routinely delete or destroy documents and ESI that no longer have business value, so long as the information was not subject to regulatory, investigatory, or litigation preservation obligations when deleted or destroyed.

Accordingly, as a general rule and absent special circumstances, organizations should not be required to preserve deleted ESI in connection with litigation. While most computer systems will have a plethora of deleted data that in theory could be “mined,” there should not be a routine obligation for preservation and discovery of deleted data. If deleted data is not accessed by employees in the ordinary course of business, presumptively there is no reason to require the routine preservation of such data. The relevance, at best, will be marginal in most cases, while the burdens involved usually will be great. In exceptional cases, however, there may be good cause for targeted preservation of deleted and residual data. Examples of such exceptional cases may include a failure to preserve by a custodian, or cases resulting from a data breach or malware infection.

Parties should communicate early about the possible relevance of deleted ESI in order to avoid costly and unnecessary preservation on the one hand, or claims of spoliation on the other.

10. Parties should take reasonable steps to safeguard electronically stored information, the disclosure or dissemination of which is subject to privileges, work product protections, privacy obligations, or other legally enforceable restrictions.

Comment 10.a. Parties should employ the provisions of Federal Rule of Evidence 502 or state analogues to mitigate the risks of inadvertent production of attorney-client privileged and work product protected ESI.

The volume and form of ESI productions have substantially increased the burdens and costs of privilege and confidentiality reviews and the risks of inadvertent production of privileged and work product protected information. Examples abound of the burdens of reviewing massive quantities of text files, metadata, and email strings for potentially privileged and protected information, and the burdens of preparing privilege logs that meet varying judicial requirements. Moreover, the risk of waiver from inadvertent productions of privileged and protected information has led many parties to employ very costly, attorney-intensive privilege review procedures. The adoption of Federal Rule of Evidence 502 and state law equivalents provide parties and counsel with opportunities to manage costs and burdens creatively and responsibly, and concurrently reduce the risks that inadvertent disclosures of attorney-client written communications and work product will result in waiving the privilege or protection for the disclosed ESI or in broader subject matter waiver.¹¹⁹

Comment 10.b. Parties should be informed fully of the protections afforded by Fed. R. Evid. 502.

Rule 502 provides: a standard approach in federal courts for adjudicating inadvertent waiver of attorney-client privilege and work-product protection; and specific protections against waiver in a federal proceeding or before a federal office or agency and, where specific conditions are met, in other federal and state proceedings. In addition to agreements the parties can reach to protect privilege, parties should encourage the court to enter a Rule 502 order to benefit from the significant protections offered by the Rule.

Rule 502 provides the following protections:

- Rule 502(a) limits waiver by inadvertent disclosure of the information actually disclosed, and restricts broader subject matter waiver to instances where the disclosure is intentional, the disclosed and undisclosed information concern the same subject matter, and the disclosed and undisclosed information ought in fairness be considered together.
- Rule 502(b) precludes waiver for inadvertent disclosures where the privilege holder takes “reasonable steps” to prevent disclosure and promptly takes “reasonable steps” to avoid

¹¹⁹ See The Sedona Conference, *Commentary on Protection of Privileged ESI*, at Appendix F, Federal Rule 502—State Law Analogues, 17 SEDONA CONF. J. 95 (2016).

or remedy the inadvertent disclosure including, where applicable, following the procedures in Fed. R. Civ. P. 26(b)(5)(B).¹²⁰

- Rule 502(c) provides that a disclosure made in state proceedings does not constitute a waiver in federal proceedings if either the disclosure (i) would not be a waiver under Rule 502 in a federal proceeding, or (ii) is not a waiver in the state in which the disclosure occurred.
- Rule 502(d) provides that non-waiver provisions in an order entered in a federal proceeding preclude waiver of the disclosed information in any other federal or state proceeding.
- Rule 502(e) states that parties' confidentiality agreements that preclude or limit waiver are binding only upon the parties unless incorporated in a court order under Rule 502(d).
- Rule 502(f) provides that Rule 502 is binding in state court proceedings even where, pursuant to Fed. R. Evid. 501, state law governs substantive privileges and work product protection.

Parties must also be informed fully about applicable laws and rules in state court actions and administrative proceedings that do not provide the same protections against waiver as Rule 502. In states where analogues have not been adopted, parties nonetheless may seek to enter agreements and move the court to incorporate the agreements into a court order to reduce the risk of waiver.

Comment 10.c. Parties should protect against waiver by inadvertent production through agreements incorporated in a Fed. R. Evid. 502(d) order.

Rule 502(b) establishes a uniform approach in the federal courts to determine whether an inadvertent production results in waiver, and if so, the scope of the waiver. However, the burden of asserting

¹²⁰ The Advisory Committee Note to Evidence Rule 502(b) lists a non-exclusive set of “reasonable steps” that may be considered by the court when deciding whether the production was inadvertent: the reasonableness of precautions taken; time taken to rectify the error; scope of discovery and extent of the disclosure; number of documents reviewed and produced; time constraints for the production; depending on the circumstances, the use of advanced analytical software applications and linguistic tools in screening for privilege and work product; and whether prior to the litigation, the responding party had implemented an efficient system of records management, including the use of privilege designations. The Advisory Committee Note further instructs that the steps taken must be evaluated in the context of “the overriding issue of fairness.”

Rule 502(b) adopts the “intermediate” approach to addressing waiver and supplants the “strict” approach (disclosure always results in waiver of protection of the disclosed materials and subject matter waiver) and the “lenient” approach (disclosure never results in waiver). For discussions of approaches to waiver in federal courts prior to Rule 502(b), see, e.g., *Hopson v. Mayor of Baltimore*, 232 F.R.D. 228, 235–36 (D. Md. 2005) and *Victor Stanley, Inc. v. Creative Pipe, Inc.*, 250 F.R.D. 251, 257–58 (D. Md. 2008) (“Victor Stanley I”).

and proving inadvertence lies with the responding party and that burden can require substantial effort and documentation. Moreover, given the multiple factors to be considered and the discretion of courts in weighing the factors and the evidence presented, both waiver and its scope remain uncertain.

Parties can reduce the burdens and eliminate many of these uncertainties by asking the court to enter a Rule 502(d) order. An effective Rule 502(d) order need not be complex and can simply provide that: (a) the production of privileged or work-product protected documents, including ESI, is not a waiver, whether the production is inadvertent or otherwise, in the particular case or in any other federal or state proceeding, and (b) nothing contained in the order limits a party's right to conduct a review for relevance and the segregation of privileged information and work product material prior to production.¹²¹

An agreement can be reached at the parties' Fed. R. Civ. P. 26(f) conference, incorporated into the parties' discovery plan, and presented to the court to be entered as part of the Fed. R. Civ. P. 16(b) scheduling order. Pursuant to Rule 502(d), the incorporation of the agreement in a court order ensures that non-waiver provisions apply in all other federal and state proceedings. To the extent that an agreement is not reached, a proposed agreement and either opposition or alternatives can be presented to the court at the Rule 16(b) conference. The court may enter the order in its proposed or a modified form or enter a Rule 502(d) order on its own.

Comment 10.d. Fed. R. Evid. 502 does not protect all privileges or address all privacy concerns.

Rule 502 is not a panacea; its protections are limited in scope and effect. First, Rule 502 limits itself to “disclosure of a communication or information covered by the attorney-client privilege or work-product protection”—it does not apply to other privileges and protections that might be waived by inadvertent disclosure. Second, Rule 502 is limited to “a federal proceeding or to a federal office or agency.” With approximately ninety percent of cases in state rather than federal court, Rule 502's protections are of little value to the vast majority of litigants appearing before a state court without an equivalent rule or a Rule 502(d) order in an earlier federal matter. Third, despite Rule 502(c) and (f), the power of a state court to bind other state courts or federal courts has not been addressed by the United States Supreme Court. Fourth, Rule 502 does not protect a party from the negative impact of the disclosure of information that is subject to privacy and data protection obligations. Fifth, Rule 502 cannot erase inadvertently disclosed information from the mind of the requesting party.

Thus, while a Rule 502(d) order can be valuable—and should be obtained when and where available—parties cannot rely solely upon Rule 502 to protect all their interests in maintaining client confidentiality (*see* Comment 10.i.), other privileged communications (e.g., marital, priest-penitent, or psychiatrist), or personal information subject to privacy and data protection rights (e.g., personally

¹²¹ *See* The Sedona Conference, *Commentary on Protection of Privileged ESI*, Appendix E, 17 SEDONA CONF. J. 95 (2016) (Model Rule 502(d) Order).

identifiable information, personal health information, financial information, and student information).

Comment 10.e. Direct access to ESI or systems should be sparingly allowed and only upon a showing of good cause.

Special issues may arise with any request for direct access to ESI or to computer devices or systems on which it resides. Protective orders should be in place to guard against any release of proprietary, confidential, or personally identifiable ESI accessible to the adversary or its expert. Indeed, the widespread adoption of state and federal privacy laws (as well as the application of foreign data protection laws) demands protective orders and procedures that provide adequate personal privacy safeguards and meet applicable statutory and common law legal standards. Similar concerns exist regarding the potential disclosure of attorney-client privileged or work product information that may occur during such an inspection, notwithstanding Rule 502. *See* Comments 6.d. and 10.b. Thus, even with a protective order in place, court-ordered inspections of computer systems should be used sparingly. Such orders should be narrowly tailored to the circumstances, accompanied by a sufficient protective order, and usually should provide that either a special master or a neutral forensic examiner undertake the inspection. *See* Comment 6.d.

Comment 10.f. Parties should be informed fully of the risks of “clawback” or “quick peek” agreements and enter such agreements only in exceptional circumstances.

The volume of ESI productions and the burdens and costs of privilege reviews have increased interest in production subject to “clawback” or “quick peek” agreements. In a “quick peek” arrangement, ESI is produced to the opposing party before or without a full review for privilege, confidentiality, or privacy. The key element in entering a “quick peek” agreement is for the parties to establish stringent guidelines and restrictions to prevent waiver of privilege and confidentiality, including the ability to “claw back.” The intended effect of the agreement is that, if the requesting party finds ESI that appears to be privileged or protected, the responding party can “claw back” the ESI without having waived privilege or protection.¹²²

“Quick peek” agreements should not be entered lightly and should have the voluntary consent of the producing party. Courts should not compel or indirectly leverage a party to enter a “quick peek” agreement.¹²³ Parties, in all circumstances, should undertake an independent evaluation of the risks and benefits of entering a “quick peek” agreement.

¹²² If the agreement is entered by the court in a federal proceeding and comports with the provisions of Rule 502(d), the non-waiver provisions are enforceable in other federal and state proceedings.

¹²³ *See In re Dow Corning Corp.*, 261 F.3d 280, 284 (2d Cir. 2001) (“[C]ompelled disclosure of privileged attorney-client communications absent waiver or an applicable exception, is contrary to well-established precedent” and “we have found no authority . . . that holds that imposition of a protective order . . . permits a court to order disclosure of privileged attorney-client communications.”); *Murphy Oil USA, Inc. v. Fluor Daniel, Inc.*, No. Civ. A. 99-3564, 2002 WL 246439, at *7 (E.D. La. Feb. 19, 2002) (noting that the court cannot compel the disclosure of privileged communications in clawback arrangements).

A Rule 502(d) order, or its state equivalent, provides substantial protection against a finding of privilege waiver in another proceeding but does eliminate all risks associated with a “quick peek” agreement.¹²⁴ Notwithstanding those protections and potential efficiencies and cost-savings, risks and limitations make “quick peek” agreements and productions ill-advised for most cases. First, once privileged or work product protected information is disclosed to an opposing party, the knowledge obtained cannot be erased from their minds. Second, the disclosure of privileged and work product protected information is contrary to fundamental tenets of the privilege pertaining to the scrupulous protection of the confidentiality of the information. Third, disclosure to an opposing party may increase the possibility that the opposing party will move to compel the production of claimed privileged or work product protected information on the grounds that the privilege does not apply. Fourth, if the proceeding is in a state court without a Rule 502(d) equivalent, the “quick peek” agreement will be enforceable only between the parties in that proceeding. Accordingly, a finding of waiver, regardless of whether the “quick peek” agreement was an entered order, is more likely in proceedings in another state or in a federal proceeding in which the privileged information may be relevant. Fifth, if the production encompasses personal privacy information subject to domestic or foreign statutory regulatory protection, the disclosure of information to an opposing party may result in liability or penalties, whether or not a protective order is entered and the “quick peek” agreement permits withholding the information prior to final production.¹²⁵ Sixth, Rule 502(d) does not protect trade secrets and other commercially or personally sensitive information. A protective order may reduce the risk of unauthorized disclosures by opposing counsel but cannot eliminate the risk. Furthermore, “quick peek” productions may include confidential information that is not relevant and not otherwise subject to production, and the disclosure of the information could cause commercial or personal harm to the responding party.

If a party and its counsel conclude that a “quick peek” production is necessary or preferred on the grounds of cost, burden, or time, the following steps should be followed. First, counsel should ensure that the party is fully aware of the risks of disclosure of privileged, personal, and confidential information; the potential of waiver; the importance of the entry of a Rule 502(d) order; and the heightened risks absent a Rule 502(d) order or its state equivalent. Second, the party must approve the agreement prior to its entry. Third, a Rule 502(d) order or its state equivalent should be entered and should incorporate or reference the provisions of the agreement. Fourth, to the extent feasible, parties should assess the likelihood of the disclosure of privileged and work product protected information, the potential significance of the disclosed information in the proceeding, whether personal

¹²⁴ If the action is pending in a state jurisdiction without a Rule 502(d) equivalent, the party must be aware that another jurisdiction might determine that the disclosure of privileged information was voluntary and the privilege waived. Moreover, subject matter waiver might be found if another court finds that fairness requires the disclosure of other privileged or work product protected documents pertaining to the same subject matter. Incorporating the “quick peek” agreement in a court order might reduce, but cannot eliminate, these risks.

¹²⁵ For further information, see The Sedona Conference, *Practical In-House Approaches for Cross-Border Discovery & Data Protection*, 17 SEDONA CONF. J. 397 (2016); The Sedona Conference, *Commentary on Privacy and Information Security: Principles and Guidelines for Lawyers, Law Firms, and Other Legal Service Providers*, 17 SEDONA CONF. J. 1 (2016).

privacy information subject to domestic or foreign statutory or regulatory protection might be disclosed,¹²⁶ and whether trade secret and commercially or personally sensitive information might be disclosed.¹²⁷

It is inadvisable for a fully-informed party to enter a “quick peek” agreement unless either the risks of disclosure of privileged and work-product protected information, as well as commercially and personally sensitive information, are non-existent or minimal, or the discovery deadline cannot otherwise be met—thereby risking sanctions for non-compliance—and alternative methods to protect against disclosure are not available.

Comment 10.g. Parties should consider using search terms and technology assisted review (TAR) for privilege reviews, along with other alternatives that may reduce privilege review burdens.

Search terms or TAR may be used in the privilege review process to identify probable privileged ESI and, in some instances, to withhold that ESI without further privilege review, either because an agreement with opposing counsel so provides or because the confidence level in the process is sufficient to minimize inadvertent production. In addition, search terms or TAR may be used to help create privilege logs or, where agreements can be reached, avoid logging the privileged ESI. *See* Comment 10.h.

If search terms or TAR are used, particularly in proceedings where agreements either have not been reached or are not incorporated in a Rule 502(d) court order or a state equivalent, parties should consider the following procedures to avoid inadvertent disclosure:

- engage persons or entities with appropriate skill and experience in developing search terms or applying TAR;
- test and re-test samples to verify that the search terms used or TAR protocol has a reasonably acceptable degree of probability of identifying privileged or protected information;
- to the extent that manual reviews of identified potentially privileged or protected information are employed, ensure that junior or contract attorneys or paralegals are properly trained and that closer or questionable calls are referred to more senior attorneys for final determination;
- develop and apply quality assurance protocols;

¹²⁶ To the extent that personal privacy information might be disclosed, specific protocols should be adopted to search for and withhold or redact the information.

¹²⁷ Parties should negotiate and enter protective orders and cross-reference the order in the “quick peek” agreement.

- fully document the procedures, protocols, and material decisions, actions, and results (preferably in a non-privileged form), and the development, sampling, testing, and quality assurance to support the reasonableness of the review; and
- enter protective orders to ensure non-waiver and return of privileged information, and to prevent the inappropriate dissemination of personally identifiable information and trade secret and highly confidential commercial information.

Parties should also consider alternative methods and protections that reduce privilege review burdens and expedite production, such as:

- whether a staged production or the use of sampling, including limiting the scope of logging privileged or protected ESI to the staged or sample set, can be used to meet the production demands and schedule;
- whether to propose categories of information that are highly likely to be privileged or protected and can be excluded from production;
- whether to move for a protective order to secure additional time to conduct a reasonable privilege review of the entire production set or subsets identified as probable sources of privileged and protected information; and
- whether to prepare a list of in-house and outside attorneys who communicated on legal issues that are relevant to the claims and defenses in the case, and the employees that interacted with those attorneys.

Comment 10.h. Parties should address and attempt to reach agreement on procedures for logging privileged and protected work product information that meet the needs of the case.

Fed. R. Civ. P. 26(b)(5)(A)(ii) provides that where a party has withheld otherwise discoverable information on the grounds of privilege or work-product protection, the party must:

describe the nature of the documents, communications, or tangible things not produced or disclosed—and do so in a manner that, without revealing information itself privileged or protected, will enable other parties to assess the claim.

Logging large volumes of withheld ESI is often costly, burdensome, time-consuming, and disproportionate to the needs of the case.¹²⁸ In addition, logging ESI such as email strings and attachments

¹²⁸ See 1993 Advisory Comm. Note to Rule 26(b)(5) (detailed privilege logs “may be appropriate if only a few items are withheld, but may be unduly burdensome when voluminous documents are claimed to be privileged or protected, particularly if the items can be described by categories”).

is difficult and lacks any uniform standard. Reviewing, redacting, and logging metadata or embedded information similarly can be a significant and undue burden. Moreover, the precise type and amount of information required to meet the general standard set forth in Rule 26(b)(5)(A)(ii) varies among courts, and frequently fails to provide sufficient information for a requesting party to assess the claimed privilege.

Parties should reduce these burdens by addressing privilege logging procedures and the scope and content of privilege logs at the Rule 26(f) conference, and seek to reach an agreement that may be incorporated in a Rule 16(b) scheduling order. If agreement is not reached, the parties may present their respective positions to the court at the Rule 16(b) scheduling or later conference.

In seeking agreement on privilege logging, parties may consider:

- agreeing that some types of privileged ESI need not be logged fully, e.g., communications among members of the trial team or between client and counsel regarding the matter after initiation of the proceeding;
- logging by categories as opposed to document-by-document logging;
- specifying the content of logs, e.g., limit to objective information downloaded from ESI metadata; and
- specifying the protocol and format for logging specific types of ESI such as email chains, e.g., logging only the last in time email in a chain or the email in the chain that includes all recipients of all the emails in the chain.

Comment 10.i. Counsel have ethical obligations to protect privileged and confidential information.

Rule 1.1 of the American Bar Association (ABA) Model Rules of Professional Conduct (Model Rules) states that a lawyer shall provide “competent representation to a client” which requires the “legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.”¹²⁹ Comment 8 to the Rule, as amended by the ABA in 2012, states in pertinent part: “To maintain the requisite knowledge and skill a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology”

In the context of protecting the privileged ESI, attorneys should have knowledge of the applicable substantive law of privilege, the provisions of Federal Rules of Evidence 501 and 502 and state equivalents, the client’s computer systems, any search technologies employed to identify potentially

¹²⁹ The ABA Model Rules and their commentary are available at http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/model_rules_of_professional_conduct_table_of_contents.html.

privileged or protected information, and the risks of disclosure in employing technologies or alternatives to full privilege reviews, e.g., “clawback” agreements. Counsel who do not possess the requisite technological knowledge and skills should consult with appropriate experts.

Pursuant to Rule 1.6 of the Model Rules, lawyers have an ethical duty to maintain the confidences of their client and must “not reveal information relating to the representation of a client unless the client gives informed consent, the disclosure is impliedly authorized in order to carry out the representation or the disclosure is permitted by paragraph (b) [of Rule 1.6].” Rule 1.6(c) expressly requires counsel to “make reasonable efforts to prevent the inadvertent or unauthorized disclosure of, or unauthorized access to, information relating to the representation of a client.” These duties require counsel not only to prevent disclosures of privileged and protected information, but also to inform the client fully of risks arising in the discovery and production of ESI and the protections offered by Fed. R. Evid. 502. Counsel should be mindful that these duties extend to all client confidences, including confidential matter learned during the course of the engagement, and undertake appropriate measures to ensure that ESI reflecting or containing those confidences are not disclosed absent informed client consent.

Rule 1.15 of the Model Rules requires attorneys to ensure the safekeeping of their client’s property, which includes their documents and ESI. ESI that is privileged or subject to work product protections is outside the scope of discovery under Fed. R. Civ. P. 26(b)(1), and producing privileged or protected ESI could be deemed a breach of the duty of safekeeping.

Lawyers also have a duty to supervise junior attorneys, staff, and vendors. *See* Model Rules 5.1 and 5.3. The duty encompasses appropriate training and oversight of junior attorneys, including contract attorneys who review ESI and make initial decisions regarding privilege and confidentiality, and staff who are assigned to conduct privilege reviews. The duty also requires counsel to supervise the preparation and execution of search terms and the selection and implementation of review tools used by vendors or the client’s information technology professionals.

Comment 10.j. Parties should be aware of and identify personal privacy, trade secret, and confidential ESI, and properly protect such information from unlawful or inappropriate disclosure.

Electronic information systems contain significant amounts of ESI that may be subject to trade secret, confidentiality, or privacy considerations. Examples of such information include proprietary business information such as formulas, business methods, sales strategies, marketing and forecasting projections, and customer and employee personal data (e.g., social security and credit card numbers, employee and patient health data, and customer financial records).

Privacy rights related to personal data may extend to customers, employees, and non-parties. Ample protections for such information during discovery are available through a Rule 26(c) protective order or by party agreement. In negotiating protection for such information, counsel should consider the scope of the applicable privacy rights, as defined in the operative contract or rule of law, includ-

ing whether such scope includes a judicial process exception. When potential discovery of ESI located outside of the United States is involved, counsel should pay attention to the foreign data protection and blocking statutes.¹³⁰ To address appropriate protection for trade secrets and other confidential commercial information in the United States, the parties and counsel should discuss at the Rule 26(f) conference, or a state equivalent, a suitable protective order providing that such information “not be revealed or be revealed only in a specified way,” as authorized by Rule 26(c)(1)(G). The protective order may specify the qualifications of persons authorized to see protected ESI; procedures for the use and treatment of protected ESI during depositions, at trial, and in court filings (e.g., filing under seal); and the destruction or return of protected ESI at the conclusion of the action.

Redactions or other actions necessary to protect private, personal information to meet required safeguards can be costly and time-consuming. The parties should address and attempt to resolve such issues at the Rule 26(f) conference. For example, parties may agree to exclude from production categories of private, personal information that are only marginally relevant to the claims and defenses or are cumulative of other produced information.

¹³⁰ See The Sedona Conference, *Practical In-House Approaches for Cross-Border Discovery & Data Protection*, 17 SEDONA CONF. J. 397 (2016); The Sedona Conference, *Commentary on Privacy and Information Security: Principles and Guidelines for Lawyers, Law Firms, and Other Legal Service Providers*, 17 SEDONA CONF. J. 1 (2016).

11. A responding party may satisfy its good faith obligations to preserve and produce relevant electronically stored information by using technology and processes, such as sampling, searching, or the use of selection criteria.

Comment 11.a. Employing technology to search for relevant ESI is reasonable, and can create cost and time savings.

Using a manual process to find relevant ESI may be infeasible or unwarranted in cases with complex data systems or large volumes of ESI. Using search methods—based on a combination of technology and process to help search for, preserve, retrieve, and produce relevant ESI—can result in cost and time savings, and should be viewed as reasonable, valuable, and often a practical necessity.¹³¹

For example, ESI may be found in broad groupings based on the “container” and not the “content,” such as in an email “inbox” or “outbox,” on a hard drive or mobile device, or on a shared drive or web server. Such unstructured or semi-structured data may not be stored in a manner conducive to identifying relevant ESI.

Success in using any search method based upon a combination of technology and process will be enhanced by a well thought out process with substantial human input on the front end, a basic understanding of the search methodology, including any potential limitations and risks, and an evaluation of how the technology would interface with the data source to be searched. The choice of a specific search method will depend on the specific legal context in which it is employed.¹³² Before employing a search technology, the responding party should perform due diligence on alternative information retrieval products or services, understand any potential limitations in capabilities, and test the technology(ies) against a data sample. Due to characteristics of human language, the various types of ESI searched, and the various ways organizations store ESI, the use of search tools does not guarantee that all relevant ESI will be identified in large data collections; but that is not, and never has been, the standard—reasonableness and proportionality is the standard. Moreover, different search methods may produce differing results, subject to a measure of statistical variation inherent in the science of information retrieval. The differences in search methodology, and the limits on the technology, also may hinder uses in different legal contexts. Search methods usually involve an iterative approach that modifies the search parameters based on the results of the searches, and different search methodologies may be applied to different data sources. Absent an agreement on the search methods to be used, parties should be prepared to explain their choice of search methods,

¹³¹ For additional information, see The Sedona Conference, *Best Practices Commentary on the Use of Search & Information Retrieval Methods in E-Discovery*, 15 SEDONA CONF. J. 217 (2014).

¹³² For example, some tools may work well in some contexts, but not so well in others. Antitrust investigations and litigation often involve broad allegations relating to marketing and competition. In such matters, technology assisted review may be more time- and cost-effective in culling relevant information than more traditional search terms. Conversely, in a technical case involving a specific patent design, search terms may be a perfectly adequate and cost-effective approach.

especially if there are perceived deficiencies in the identification and preservation efforts or production. *See* Principles 6 and 7. Documenting the search methods, execution, and results may help answer questions from opposing counsel or a court. To meet a party's discovery obligations, and a legal counsel's ethical obligations, any search methodology and process employed must be calculated to yield relevant information.

Illustration i. The relevant custodians each have 2 to 8 GB of ESI on their hard drives. The responding party, using a forensically sound process, collects those user-created files and has a third-party vendor process and index them and place them in a review platform. Rather than review every user-created file, the responding party reaches agreement with the requesting party on a series of search terms that capture the key concepts relevant to the claims and defenses, including restrictions for the relevant time frame. The responding party then reviews this subset to cull out (and log) privileged matter and confirm the relevance of other ESI for production. The responding party has satisfied its obligation to identify and produce relevant ESI.

Courts should encourage and promote the use of technology and processes to search, preserve, collect, review, and produce ESI to ensure that the costs and burdens associated with the preservation, collection, review, and production of responsive ESI is proportional to the needs of the case.¹³³

Comment 11.b. Sampling can substantially reduce the cost of discovery.

Parties should consider using sampling techniques to narrow the burden of searching voluminous ESI. For example, employing a search methodology on a sample in a data source could reveal that a very low percentage of files in that data source contain relevant ESI. This may weigh heavily against a need to search that source further, or it may be a factor in a cost allocation analysis. Such techniques also may reveal substantial redundancy among sources (e.g., duplicate ESI is found in multiple locations) such that it is reasonable for the organization to preserve and produce ESI from only one of the sources.¹³⁴

¹³³ *See* The Sedona Conference, *Commentary On Proportionality in Electronic Discovery*, THE SEDONA CONFERENCE (Nov. 2016 Public Comment Version), <https://thesedonaconference.org/publication/The%20Sedona%20Conference%20Commentary%20on%20Proportionality> (“Principle 2: Discovery should focus on the needs of the case and generally be obtained from the most convenient, least burdensome, and least expensive sources.”); Maura R. Grossman & Gordon V. Cormack, *Comments on “The Implication of Rule 26(g) on the Use of Technology-Assisted Review,”* 7 FED. CTS. L. REV. 285 (2014); Bennett B. Borden & Jason R. Baron, *Finding the Signal in the Noise: Information Governance, Analytics and the Future of Legal Practice*, 20 RICH. J.L. & TECH. 7 (2014); George L. Paul & Jason R. Baron, *Information Inflation: Can the Legal System Adapt?*, 13 RICH. J.L. & TECH. 10 (2007).

¹³⁴ *See* The Sedona Conference, *Best Practices Commentary on the Use of Search & Information Retrieval Methods in E-Discovery*, 15 SEDONA CONF. J. 217 (2014); The Sedona Conference, *Commentary On Proportionality in Electronic Discovery*, cmt. 4.c., THE SEDONA CONFERENCE (Nov. 2016 Public Comment Version), <https://thesedonaconference.org/publication/The%20Sedona%20Conference%20Commentary%20on%20Proportionality> (use of sampling to demonstrate the rate of responsive information in a source as an aid in determining whether the source is sufficiently important to warrant discovery).

Comment 11.c. Counsel should oversee the identification and collection processes.

Depending on the nature of the sources of ESI and the application of proportionality principles, both manual and automated procedures for collection may be appropriate in some situations. Whether manual or automated, the procedures must be directed and overseen by legal counsel to assure compliance with discovery and ethical obligations. *See* Comment 10.i.

Manual collection may be performed by the document authors or custodians themselves, by litigation support or information services personnel, or by others. In a manual collection, the items may be copied or transmitted by the end-user, or by using tools designed for forensically sound collections, and under a defined written protocol designed to preserve relevant metadata. Self-collections by custodians may give rise to questions regarding the accuracy and completeness of collections if directions and oversight by legal counsel or forensics experts are poor or non-existent.

Automated or computer-assisted collection involves using computerized processes to collect ESI meeting certain criteria, such as search terms, file and message dates, or folder locations. Automated collection can be integrated with an overall electronic data archiving or retention system, or it can be implemented using technology specifically designated to retrieve information on a case-by-case basis. Regardless of the method chosen, consistency across the processes including any de-duplication techniques can help ensure that responsive ESI is collected and produced.

12. The production of electronically stored information should be made in the form or forms in which it is ordinarily maintained or that is reasonably usable given the nature of the electronically stored information and the proportional needs of the case.

Comment 12.a. Special characteristics of ESI (metadata and non-apparent/undisplayed data) may be pertinent to the form in which ESI should be preserved and produced.

The forms of ESI are more varied and complex than paper.¹³⁵ ESI is fundamentally different from paper information in that it is dynamic, created and stored in different forms, and has a substantial amount of metadata and other non-apparent or undisplayed data associated with it. Because of these differences, as well as others, the preservation and production of ESI can raise distinct legal and practical issues.

An electronic document or file usually includes not only the visible information but also hidden text, formatting codes, formulae, and other information associated with the file. These many types of ancillary information are often lumped together as “metadata,” although there are some important distinctions between different types of metadata.¹³⁶ Two of the most common distinctions are between “application” metadata and “system” metadata. *Application metadata* is created as a function of the application software used to create the document or file. Common application metadata instructs the computer how to display the document (e.g., the proper fonts, spacing, size, and color). Other application metadata may reflect modifications to the document, such as prior edits or editorial comments. This metadata is embedded in the file it describes and moves with the file when it is moved or copied. *System metadata* reflects information the user or the organization’s information management system creates, sometimes automatically. Such information may, for example, track the title of the document, the identification of the computer that created it, the assigned data owner, and other document “profile” information, such as file creation and modification dates. System metadata generally is not embedded within the file it describes, but is stored externally on the organization’s information management system.

Depending on the circumstances and needs of the case, a particular piece of metadata may be critical or completely irrelevant. Accordingly, counsel should consider the data types that are relevant to the claims or defenses, what metadata associated with those data types may be relevant or may play a functional role in the use of the relevant ESI, and whether that metadata should be preserved, requested, or produced.

¹³⁵ See Introduction, *The Sedona Principles: Best Practices Recommendations & Principles for Addressing Electronic Document Production*, THE SEDONA CONFERENCE (2d ed. 2007), <https://thesedonaconference.org/publication/The%20Sedona%20Principles>.

¹³⁶ See generally *The Sedona Conference Glossary: E-Discovery & Digital Information Management (Fourth Edition)*, 15 SEDONA CONF. J. 305 (containing definitions of “Metadata,” “User Created Metadata,” “System Generated Metadata,” and “Hidden Files or Data”).

Aside from potentially bearing upon the merits of the case, metadata also may play a functional role in the usability of ESI. For example, system metadata may allow for the quick and efficient sorting of files by virtue of the dates or other information captured in metadata. Application metadata may be critical to allow the functioning of routines within the file, such as the coding that makes documents display in a certain way to the user. Additionally, both system and application metadata may be valuable when using technology platforms for searching, culling, and analyzing large volumes of ESI.

In addition to application and system metadata, some ESI in its “native format” will contain “user created data” that may not be apparent on the face of the document when printed, such as formulae and comments in spreadsheets, speaker notes in presentation files, or “tracked changes” in word processing files.¹³⁷ This typically undisplayed, non-apparent, user created data may be stored in a variety of manners within a native format file.

A native format file contains application metadata that may not always be contextually accurate. For example, when a Microsoft Word document is created, the computer on which that document is saved may automatically assign the document an “author” based on the information stored on that computer. That document subsequently may be used as a template by other persons, but the original “author” information may not change. Thus, subsequent iterations of the document may carry as an “author” a person with no knowledge of the document’s content. Similarly, if a Microsoft Word document is created on one machine, and transferred to and saved to a second machine without being altered, the copy on the second machine (erroneously) will show the date the document was saved to the second machine as the date created. Consequently, care should be taken when handling native format files, and their accompanying metadata and other non-apparent data, to avoid any inadvertent alteration.

Comment 12.b. Ideally, the form or forms used for production of ESI should be agreed upon early. Absent agreement, ESI must be produced as ordinarily maintained or in a form or forms reasonably usable to the requesting party.

In amending Rule 34(b) in 2006 to accommodate the expanding use and production of ESI, the Advisory Committee encouraged parties to reach agreement on the various form or forms of production, given that different types of data may serve different purposes and the potential need for native format production and metadata may vary. The default forms of production appropriate to paper discovery did not always have direct equivalents in electronic discovery, but the Rule 1 goals should be the same—to encourage forms of production that would facilitate the orderly, efficient, and cost-effective production of ESI and which allow the requesting party to meaningfully analyze, search, and display the produced electronic data.¹³⁸

¹³⁷ See *The Sedona Conference Glossary: E-Discovery & Digital Information Management (Fourth Edition)*, 15 SEDONA CONF. J. 305, 341 (2014) (“Native Format: Electronic documents have an associated file structure defined by the original creating application. This file structure is referred to as the native format of the document.”).

¹³⁸ See Comment 3.c.; Rules 1 and 26(f).

Absent agreement, ESI must be produced in the form in which it is ordinarily maintained or in a form that is reasonably usable to the requesting party.¹³⁹ Typically, a requesting party does not need ESI produced in its native format in order to access, cull, analyze, search, and display the ESI. Indeed, the most common way to produce ESI for more than a decade has been to create a static electronic image in Tagged Image File Format (TIFF) or Adobe Portable Document (PDF) file format, to place the extracted text from the document into a text file, and to place the selected metadata and other non-apparent data into one or more separate load files.¹⁴⁰ This form is frequently referred to as the production of “TIFF, Text and Load Files” or “TIFF+”. With production in this format, the requesting party may reassemble the components in a fashion compatible with a chosen review platform, so that the produced data can be text-searched and sorted or filtered based on available metadata fields.

Parties should not demand forms of production, including native files and metadata fields, for which they have no practical use or that do not materially aid in the discovery process. For example, it may be excessive for a party to demand that ESI be produced in native format when the evidence needed to prove the claims and defenses of the parties is found on the face of the documents, and the information contained in the text and load Files will allow the requesting party to organize and search the documents. Indeed, even with technological advances, in the majority of instances, TIFF+ is a “reasonably usable” form of production for most purposes and types of ESI under Rule 34(b)(2)(E)(ii). Accordingly, requesting parties should avoid demanding a form of production, such as all ESI to be produced in native format, unless they have a demonstrably reasonable need for that form of production and the necessary technology, skills, and resources available to make reasonable use of and to protect the ESI.¹⁴¹ Conversely, responding parties should not seek to produce ESI in a form or forms that inhibit the ability of the requesting party to use advanced technology reasonably required to access, cull, analyze, search, and display the information. Finally, all sides should bear in mind that both requests and responses to discovery are bounded by Rule 26(g) obligations.

In sum, when selecting the form or forms of production of ESI—when requesting production, when responding to requests for production, when meeting and conferring under Rule 26(f)(3), and when participating in Rule 16(b) scheduling conferences—parties and the court should consider: (a) the forms most likely to provide the information needed to establish the relevant facts related to the parties’ claims and defenses; (b) the need to receive ESI in particular formats in order to functionally access, cull, analyze, search, and display the information produced; (c) whether the information sought is reasonably accessible in the forms requested; (d) the relative value, and potential challenges

¹³⁹ See Principle 4 regarding using Rule 34 requests and responses to specify forms of production.

¹⁴⁰ See *The Sedona Conference Glossary: E-Discovery & Digital Information Management (Fourth Edition)*, 15 SEDONA CONF. J. 305 (2014) (containing definitions of “Electronic Image,” “Load File,” “Native Format,” “TIFF,” and “Portable Document File (PDF)”).

¹⁴¹ See Comment 12.b.ii. for further commentary regarding technical and practical issues related to the selection of the form or forms of production depending on the file types, and issues related to native file and TIFF+ production.

created, by responding with ESI in the requested format(s); and (e) the requesting party's own ability to effectively manage, reasonably use, and protect the information in the forms requested.

Comment 12.b.i. ***To be “reasonably usable,” the form of ESI need not necessarily be its native format or the form in which it is “ordinarily maintained.”***

Principle 12 of the Second Edition of *The Sedona Principles* moved beyond restating the then-current Rule 34(b) by asserting that parties should also 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 display the information as the producing party where appropriate or necessary in light of the nature of the information and the needs of the case.”¹⁴² It was understood, however, that the standard was not for the requesting party to literally have the *same ability* to “access, search and display” the information in the ordinary course (which may have required a significant investment in time, money, and proprietary resources), but the *same ability* to “access, search and display” the information in the context of prosecuting and defending the claims and defenses at issue in the litigation. Since the publication of the Second Edition, there have been significant developments in technology and the case law which may require a further nuanced approach to the formats for the production of ESI in certain cases, and which also underscore that it may not be practical or even possible to provide a requesting party with “the same” ability as the responding party to access, search, and display information. Indeed, parties’ desire or ability to use the various tools that have been and will be developed can vary as much as the evolving technologies themselves.

The touchstone remains, under Rule 34(b)(2)(E), that a requesting party is entitled to the production of ESI as it is ordinarily maintained or in a form that is reasonably usable for purposes of efficiently prosecuting or defending the claims and defenses involved in the matter. Consequently, the Third Edition of Principle 12 eliminates the phrase “the same ability,” and instead emphasizes that the parties should follow the Federal Rules and seek to reach agreement for the production of ESI as “ordinarily maintained or in a reasonably usable form or forms” that provide the requesting party a functionally adequate ability to access, cull, analyze, search, and display the ESI, as may be appropriate given its nature and the proportional needs of the case. *See* Comment 3.c. In some cases, this will mean that the production format provides the requesting party with the same ability to access, cull, analyze, search, and display the ESI as the responding party has in prosecuting or defending the matter (which may differ from how a responding party can access or search its own data in the ordinary course of conducting its business), but that is not a requirement.

The form in which ESI is “ordinarily maintained” may not be conducive to efficient production, and a requesting party may not want or need ESI to be produced as “ordinarily maintained” as it may not be reasonably usable or functional to access, cull, analyze, search, and display the ESI. For exam-

¹⁴² *The Sedona Principles: Best Practices Recommendations & Principles for Addressing Electronic Document Production*, Principle 12, THE SEDONA CONFERENCE (2d ed. 2007), <https://thesedonaconference.org/publication/The%20Sedona%20Principles> (emphasis added).

ple, emails are generally not produced in their true “native” format as they are “ordinarily maintained,” but instead they are commonly transformed into an alternative, reasonably usable electronic format. More specifically, the native format for Outlook and Lotus Notes emails are not the MSG and NSF file types, respectively, but instead the emails have been taken from their native email application format and exported into those standard formats that contain the message, any attachments, and the pertinent application metadata as well as miscellaneous non-apparent data. Similarly, producing relevant database materials in their true native format may not be reasonably feasible, and the cost and effort required to produce them in native format may not be proportional to the needs of the case.¹⁴³

While, as noted above, courts repeatedly have found under the facts presented that, in the context of Rule 34(b)(2)(E)(ii), a TIFF+ production is reasonably usable, the 2006 Advisory Committee Note to Rule 34(b) warns that “[i]f the responding party ordinarily maintains the information it is producing in a way that makes it searchable by electronic means, the information should not be produced in a form that removes or significantly degrades this feature.” For this reason, some courts have ruled that production of static electronic images without text and load files is not reasonably usable and is therefore impermissible under Rule 34(b)(2)(E)(ii).

As an alternative to producing ESI in a reasonably usable form, Rule 34(b)(2)(E)(ii) allows production in the forms in which the ESI is ordinarily maintained. The form in which ESI is “ordinarily maintained” also is not necessarily synonymous with the form in which it was created. There are occasions when legitimate business considerations involve the migration or transfer of ESI to other applications or systems.¹⁴⁴ For example, customer information may routinely be gathered by an organization from internet-based forms, and then stored in a relational database for further business use before any litigation-related obligations attach. The information in Microsoft Word documents, such as memoranda or correspondence, later may be transferred into static electronic images for long-term storage and retrieval. Likewise, some organizations do not keep electronically-created documents in their original format, but instead routinely transfer the content of the documents into a formal records management database system. In such cases, the form in which the ESI is maintained understandably varies from that in which it was obtained or created, but producing ESI in that form nevertheless meets the “ordinarily maintained” requirement of Rule 34(b)(2)(E)(ii).

¹⁴³ For further information on these specific issues, see The Sedona Conference, *Database Principles Addressing the Preservation and Production of Databases and Database Information in Civil Litigation*, 15 SEDONA CONF. J. 171 (2014).

¹⁴⁴ See *The Sedona Conference Glossary: E-Discovery & Digital Information Management (Fourth Edition)*, 15 SEDONA CONF. J. 305 (2014) (Native Format: “Because viewing or searching documents in the native format may require the original application (for example, viewing a Microsoft Word document may require the Microsoft Word application), documents may be converted to a neutral format as part of the record acquisition or archive process.”).

Comment 12.b.ii. Parties should consider and understand the pros and cons of preserving and producing ESI in native format.

Depending on the circumstances of the particular matter, it may be appropriate to produce certain types of ESI, such as spreadsheet files (e.g., Microsoft Excel), portable database files (e.g., Microsoft Access), audio/video files (e.g., WAV, JPG, GIF, MPG, MP3, DMG, etc.), and, on occasion, even presentation files (e.g., Microsoft PowerPoint) in native format. This is because a TIFF+ production of these types of ESI may not provide the requesting party relevant aspects of the ESI in a reasonably usable format. Or, for example, if there is a reasonable question regarding the authenticity of the underlying file, a forensic examination of the file (or even the underlying data source¹⁴⁵) may be necessary. Thus, a format that may be reasonable for most of the production (e.g., TIFF+) may not be reasonable for a certain subset of files or even specific files.

When circumstances warrant that ESI be produced in native format, the parties should consider the technological challenges traditionally presented by native format production, including, by way of example, the ability or inability to redact ESI effectively in its native format, and issues regarding the application of page-level Bates numbering as opposed to document-level Bates or control numbers that can be assigned and maintained for ESI produced in native format. Additionally, suitable applications for accessing, searching, and displaying native format are not always accessible to requesting parties, who may also lack the equipment or expertise required to use such applications.¹⁴⁶ Parties should further weigh the potential burdens and offsetting efficiencies that can come from the production of ESI in native format.

For example, in the digital age, the ease with which ESI can be copied and moved has raised concerns about the security of productions of large volumes of native format files in litigation. Just as responding parties are obligated to take reasonable steps that are proportional to the needs of the case to find and produce requested information within the scope of discovery under Rule 26(b)(1), a requesting party is obligated to take reasonable steps to secure the information they requested and received, and to make sure the information is used only for the purpose it is provided. This includes investing in appropriate physical, technical, and human security necessary to meet the obligations the requesting party inherits upon taking possession of that information.¹⁴⁷

¹⁴⁵ See Principle 9.

¹⁴⁶ As one commentator has observed: “One reason for the alternative production in a reasonably usable form is to prevent a party from using native format as a kind of non-production because the opposing party may not have the ability to read the ESI in its native format. The opposing party may not have access to the application in which the ESI was created.” Ralph C. Losey, *Hash: The New Bates Stamp*, 12 J. TECH. L. & POL. 1, 21 n.78 (June 2007).

¹⁴⁷ See generally The Sedona Conference, *Commentary on Privacy and Information Security: Principles and Guidelines for Lawyers, Law Firms, and Other Legal Service Providers*, 17 SEDONA CONF. J. 1 (2016). ESI productions in civil litigations can be ripe targets for corporate espionage and data breach as they may contain trade secrets and other proprietary business information; highly sensitive and private medical, health, financial, religious, sexual preference, and other personal information; or information about third parties subject to contractual confidentiality agreements. Not only may this ESI be subject to U.S. data privacy obligations, but as ESI is collected from beyond the borders of the United States,

Another risk that requesting parties must consider is whether or not they have the necessary technical competence to manage large volumes of native format ESI. Counsel who lack the technical competence to handle ESI in its native format without risking spoliation or inadvertent disclosure of client confidences should either obtain professional assistance or decline the representation.¹⁴⁸

Aside from production, parties should also consider the most desirable form in which to preserve relevant ESI within the scope of discovery. Preservation of ESI in native format pending agreements or decisions on the ultimate form of production may be beneficial. The failure to preserve and produce metadata or other non-apparent information contained within a native file may deprive the responding party of the opportunity later to contest the authenticity of the document if that data would be material to that determination. Similarly, subject to proportionality considerations, responding parties may wish to consider taking extraordinary preservation measures (e.g., preserving hard drives or system logs), pending agreements or decisions on the scope and form of production, when it is reasonably foreseeable that system-generated metadata¹⁴⁹ contains unique evidence that likely is material to the claims and defenses involved in the matter. Again, parties ideally should address such preservation issues early on in the matter as part of their required Rule 26(f) discovery planning conference; or, if unable to reach agreement, it should be brought to the court's attention in the Rule 16(b) scheduling conference or later status conference.¹⁵⁰

Illustration i. Plaintiff seeks the production of native format files from defendant, asserting that to prepare its case most cost-effectively and efficiently, it plans to utilize advanced technology that works best if it has native format files. Defendant asserts that it cannot redact the native format files adequately prior to production, and insists on responding with only TIFF, text, and load Files, with the images and text redacted as appropriate. Assuming that the defendant is correct in that it cannot redact native format files but has no other objection to native format production, as an alternative, defendant can produce native format files for all documents that have no redactions. For ESI with redactions, excluding spreadsheets, defendant can produce redacted TIFF images, accompanied by redacted text, and full metadata, including all non-redacted hidden elements in fields. For spreadsheets with redac-

these productions may include information that involves the data privacy and protection rights of non-U.S. data subjects. A requesting party inherits the data privacy and protection obligations that come with the ESI it receives, including the responsibilities that arise from the loss of that information.

¹⁴⁸ See Cal. St. Bar Standing Comm. on Prof'l Resp. & Cond., Formal Op. No. 2015-193 (June 30, 2015) (identifying nine skills relating to electronic discovery that every attorney should be able to handle, alone or in association with competent co-counsel); see also ABA MODEL RULES OF PROF'L CONDUCT R. 1.1, cmt. 8. See Comment 10.i.

¹⁴⁹ See *The Sedona Conference Glossary: E-Discovery & Digital Information Management (Fourth Edition)*, 15 SEDONA CONF. J. 305 (2014) (containing definition of "System-Generated Metadata").

¹⁵⁰ See Principles 3 and 5 for more in-depth discussions regarding preservation of ESI. See also 2006 Advisory Comm. Note to Rule 34 (regarding retaining the original source of ESI that is subject to a duty to preserve and not degrading ESI subject to preservation and production obligations).

tions, the parties should meet and confer on the possibility of manually removing any protected content, and saving the spreadsheet as a new document for production, noting the fields removed.

Illustration ii. Plaintiff alleges that the defendant engaged in a fraud regarding software development. The plaintiff seeks a preliminary order permitting direct access to the hard drives of the software engineers involved and demonstrates that the computer program sold by defendant appears to incorporate plaintiff's source code. In this case, production of the source code in native format may be appropriate, as well as targeted forensic examination of the hard drives concerning the development of the source code. The court may condition production on terms appropriate to protect recognized legitimate intellectual property, business, and privacy interests of the defendant and its employees.

Comment 12.b.iii. Objections to unreasonable or non-proportional requests for a form or forms of production.

As discussed in Principle 2, all discovery is subject to relevancy and proportionality considerations. Thus, a responding party that believes that a production request is unreasonable, not relevant, or not proportional may object to the requested form or forms of production, state the alternative form or forms that it intends to use, meet and confer in an effort to resolve the matter, and, if they are unable to do so, seek a protective order under Rule 26(c). *See* Comment 4.b. A responding party should not simply refuse to produce ESI in the form or forms requested, unilaterally produce in a form or forms that it prefers, or produce in forms that are not “reasonably usable” or as “ordinarily maintained.” If it does so, it may well have difficulty invoking protection under Rule 34(b)(2)(E)(iii) and arguing that it need not produce the same information a second time. *See* Comment 12.d.

Comment 12.c. There is no requirement to label ESI to correspond to the categories in requests for production.

Rule 34(b)(2)(E) begins with this preamble: “Unless otherwise stipulated or ordered by the court, these procedures apply to producing documents or electronically stored information,” and goes on to state in subpart (i) that “[a] party must produce *documents* as they are kept in the usual course of business or must organize and label them to correspond to the categories in the request.”¹⁵¹ Subparts (ii) and (iii) then go on to discuss *ESI*, providing that, among other forms, ESI can be produced in reasonably usable form or forms.

The preamble's mention of both documents and ESI has led to some confusion as to whether the labeling requirement in subpart (i) applies to ESI. There is no indication that the Advisory Committee on Civil Rules intended such a result. As explained below, there are at least four reasons why the better view is that subpart (i) only applies to documents other than ESI, and subparts (ii) and (iii) apply only to ESI.

¹⁵¹ Rule 34(b)(2)(E)(i) (emphasis added).

First, when Rule 34(b) was amended in 2006 to state how ESI was to be produced, the preamble did not include the phrase “documents or electronically stored information,” and instead said simply, “Unless the parties otherwise agree, or the court otherwise orders,” even though, like the current version of Rule 34(b)(2)(E), subpart (i) addressed “documents” and subparts (ii) and (iii) addressed “electronically stored information.” The 2007 amendments added “documents or electronically stored information” to the preamble, but those amendments were part of a project to conform style throughout the Rules, and nothing in the Advisory Committee Notes to the 2007 amendments suggests a substantive change from 2006 was intended. Second, the preamble uses the words “documents *or* electronically stored information” in the disjunctive—suggesting that the requirements of (i), (ii), and (iii) do not all apply to both documents *and* ESI, and the language of the subparts is straightforward in addressing *documents* in (i), and *ESI* in (ii) and (iii). Third, with large scale ESI productions, it would be burdensome to label every produced file “to correspond to the categories of the request,” and there is little guidance as to how a party is to produce ESI as “kept in the usual course of business.” Finally, the production of common metadata and source fields in a load file¹⁵² should suffice to permit the requesting party to sort and filter materials using standard review software to determine how the materials were “kept in the usual course of business.”

Accordingly, in line with several courts,¹⁵³ subpart (i) should not be interpreted to apply to ESI.

Comment 12.d. Parties need not produce the same ESI in more than one format.

Provided that the forms of production are as “ordinarily maintained” or “reasonably usable,” a party is not required to produce the same information in both hard copy and electronic format, or in both native format and another electronic format, such as TIFF+.¹⁵⁴ A responding party should first identify the form(s) in which it proposes to produce ESI pursuant to Rule 34(b)(2)(D), or risk that the requesting party can show that the chosen form is not reasonably usable and have the court order a further, more usable production. In addition, the 2015 Advisory Committee Notes to amended Rule 34(b)(2)(C) make clear that a responding party should specifically alert other parties if requested ESI—such as metadata—is objected to and withheld, and thereby facilitate an informed discussion of the objection.

Illustration i. After failing to address the issue of production in their Rule 26(f) conference, a requesting party indiscriminately demands that ESI be produced as “maintained in the ordinary course of business.” The responding party timely objects to producing any ESI in native format and states that production of all ESI will be made through PDF or TIFF images

¹⁵² Most service providers have a list of approximately 30 common metadata and source fields that they include with productions. *See, e.g.*, LTPI Model Stipulated Production Specifications, LEGAL TECHNOLOGY PROFESSIONALS INSTITUTE, available at <https://www.legaltechpi.org/Resource-ESI-Stipulations> (last visited Feb. 14, 2017).

¹⁵³ *See, e.g.*, *Kissing Camels Surgery Ctr., LLC v. Centura Health Corp.*, No. 12-cv-03012, 2016 WL 277721, at *3–4 (D. Colo. Jan. 22, 2016); *National Jewish Health v. WedbMD Health Servs. Grp.*, 305 F.R.D. 247, 253 (D. Colo. 2014); *Anderson Living Trust v. WPX Energy Prod. LLC*, 298 F.R.D. 514, 520–27 (D.N.M. 2014).

¹⁵⁴ Rule 34(b)(2)(E)(iii).

with load files containing electronically searchable text and selected application metadata. *The requesting party does not respond to the objection or request to meet and confer on the topic.* Subsequently, the responding party produces emails and ESI in a PDF or TIFF format, and spreadsheets in native format, all accompanied by a load file including the searchable text and selected metadata for each item of ESI. This production satisfies Rule 34(b) because the production is in reasonably usable form, e.g., electronically searchable and paired with essential metadata, and there was no timely objection. If the requesting party moves to compel production in an additional form, for example in native format, the court should reject the request pursuant to Rule 34(b)(2)(E)(iii).

Illustration ii. After failing to address the form of production in their Rule 26(f) conference, a requesting party indiscriminately demands that ESI be produced in native format. The responding party timely objects to responding with all documents in native format and states that production instead will be made through PDF or TIFF images with load files containing electronically searchable text and limited application metadata selected by the responding party. In response, the requesting party calls for a meet and confer on the topic. During the meet and confer, the requesting party narrows its request for native format production of certain non-privileged documents, such as spreadsheets and presentation files, offering to allow for any such privileged documents with redactions to be produced in a TIFF+ format. The requesting party also asks for inclusion of some additional metadata fields in the load files associated with TIFF+ productions that will assist the requesting party's use of commonly-used technology assisted review tools. Without agreeing to the narrowed request or seeking intervention by the court, the responding party proceeds on its own to produce emails, spreadsheets, and other ESI in TIFF+ format, including the searchable text and selected metadata for each item of ESI. This production of ESI fails to satisfy the goals of Principle 12. In making a unilateral decision about the form of production, the responding party failed to honor its Rule 26(f) and Rule 34 responsibilities to meet and confer in a reasonably cooperative manner in an effort either to resolve the issue or to present it to the court. On a motion to compel after the unilateral production, the court should consider, among other factors, whether or not the TIFF+ production was in a form reasonably usable by the requesting party for access, culling, analysis, search, and display of the information, given the nature of the information and the needs of the case. If the court were to conclude that the production was not in reasonably usable form, the court, subject to proportionality considerations, may order reproduction of the requested native format files and the additional metadata fields.

13. The costs of preserving and producing relevant and proportionate electronically stored information ordinarily should be borne by the responding party.

Comment 13.a. Factors for allocating the cost of production.

The ordinary and predictable costs of discovery, including preservation (addressed below in Comment 13.b.) and production, are borne fairly by the responding party. However, Rule 26 long has empowered courts to allocate costs in appropriate circumstances.¹⁵⁵

Consideration of cost allocation traditionally has been and continues to be at the discretion of the court. Rule 26(c)(1) has long authorized orders to protect against “undue burden or expense.” Rule 26(c)(1)(B) now expressly provides for entry of protective orders that allocate expenses for discovery. The 2015 Advisory Committee Note to this new provision observes, however, that cost shifting should not become a common practice and that “[c]ourts and parties should continue to assume that a responding party ordinarily bears the costs of responding.”¹⁵⁶ Moreover, the party seeking cost allocation typically bears the burden to show that allocation is appropriate.

If the result of the proportionality analysis clearly demonstrates that the requested discovery is appropriately proportional, the discovery should be allowed with the presumption that costs will not be allocated among the parties. Conversely, if the result of the proportionality analysis clearly demonstrates that the requested discovery is not proportional, and the request is not within the permissible scope of discovery, the request should be denied and cost allocation would not apply. If, however, the result of the proportionality analysis is not clear cut, the court has discretion to allocate some or all of the costs to the requesting party. *See* Principle 8. Cost allocation, however, should not be used as a shortcut to resolve difficult proportionality analyses or to “buy” arguably disproportionate discovery. *See* Comment 13.c.

Factors to be considered in the context of allocating costs for the production of ESI overlap with the proportionality factors in Rule 26(b)(1) and include:

- 1) the extent to which the request is specifically tailored to discover relevant information;
- 2) the availability of such information from other sources, including testimony, requests for admission, interrogatories, and other discovery responses;
- 3) the importance of the issues at stake in the litigation;

¹⁵⁵ Consistent with the reference in Rule 26(c)(1)(B) to “the allocation of expenses,” this Principle uses “cost allocation” as shorthand for situations where some of the costs are “shared” by the parties and situations where all of the costs are “shifted” to the requesting party. This Principle is limited to the allocation of costs related to the preservation or production of ESI, even though the cost allocation in Rule 26(c) has broader applications.

¹⁵⁶ 2015 Advisory Comm. Note to Rule 26(c)(1)(B). The Advisory Committee Note also explains: “Authority to enter such orders is included in the present rule, and courts already exercise this authority. Explicit recognition will forestall the temptation some parties may feel to contest this authority.”

- 4) the total cost of production, compared to the amount in controversy;
- 5) the total cost of production, compared to the resources available to each party; and
- 6) the relative ability of each party to control costs and its incentive to do so.

Thus, while certain of these factors also may bear on the court's proportionality analysis, the factors listed above are intended to be weighed separately in the unique circumstance of determining whether cost allocation is appropriate.

Comment 13.b. The cost of preservation should be allocated only in extraordinary circumstances.

Just as the costs of production ordinarily are borne by the responding party, the ordinary and predictable costs of preservation typically are borne by the preserving party, subject to application of proportionality principles. In the rare circumstance where the requesting party makes specific preservation demands and complying with those demands would require extensive and costly efforts or resources, cost allocation may be appropriate.

Cost allocation should not be used to expand preservation obligations beyond what is proportionate to the needs of the case. Courts should discourage burdensome preservation demands that have little or no reasonable prospect of producing material assistance to the fact finder. *See* Comment 5.e.

As with the costs of production, the party seeking to allocate the cost of preservation bears the burden of persuasion. That burden of persuasion may be satisfied more readily at various stages in the case, including after discovery has closed and summary judgment motions have been adjudicated, when information that was preserved but has not been produced is less likely to be requested or produced. For example, where a case has been disposed of by the trial court and is awaiting resolution of an appeal and the responding party desires to stop preserving potentially relevant ESI that was not reviewed by the requesting party, cost allocation may be appropriate if the requesting party insists that the ESI be preserved during the pendency of the appeal.

Comment 13.c. Cost allocation cannot replace reasonable limits on the scope of discovery.

Allocating the costs of extraordinary ESI discovery efforts should not be used as an alternative to sustaining a responding party's objection to undertaking such efforts in the first place. Instead, extraordinary discovery efforts should be required only where the requesting party demonstrates substantial need or justification, and cost allocation may be a condition of allowing such discovery efforts to proceed.

Illustration i. A requesting party demands that the responding party preserve, restore, and produce ESI from a backup tape. The requesting party produces some evidence that relevant ESI, not available elsewhere, may exist on the tape. The ESI, not being reasonably accessible, is costly to acquire, and the responding party seeks a protective order conditioning its

production upon payment of costs. Absent proof that the responding party intentionally has deleted ESI that is relevant to the issues in the case to avoid discovery obligations, the court should order the requesting party to pay at least a portion of the costs.

Illustration ii. A requesting party demands that the responding party preserve, restore, and produce ESI about a topic in dispute from backup media. The requesting party produces evidence that important relevant ESI, not available elsewhere, is likely to exist on the media. The ESI is reasonably accessible but is somewhat burdensome to acquire, and the responding party seeks a protective order conditioning its production upon payment of costs. The protective order should be denied.

Comment 13.d. Non-party requests must be narrowly focused to avoid mandatory cost allocation.

Since 1991, Rule 45 has required persons issuing subpoenas to take reasonable steps to avoid imposing undue burdens or expense on the subpoenaed person and, if objection is made, any order to compel production “must protect [the subpoenaed person] from significant expense.” The 1991 Advisory Committee Note to Rule 45 explains as follows:

A non-party required to produce documents or materials is protected against significant expense resulting from involuntary assistance to the court The court is not required to fix the costs in advance of production, although this will often be the most satisfactory accommodation to protect the party seeking discovery from excessive costs. In some instances, it may be preferable to leave uncertain costs to be determined after the materials have been produced, provided that the risk of uncertainty is fully disclosed to the discovering party.

In support of this proposition, the Advisory Committee cited a 1982 Ninth Circuit decision in a case where non-parties produced more than six million documents, and the costs of non-party discovery exceeded \$2 million. In light of the potentially significant burdens associated with non-party discovery, parties seeking information from non-parties have a substantial interest in narrowly tailoring requests to avoid a greater likelihood that a court may impose cost allocation. Indeed, parties seeking information from non-parties should be prepared to address these issues at informal meet and confer discussions to determine if disputes can be resolved by agreement instead of court rulings on a motion to quash or a motion to compel. *See* Comment 3.a.

The nature of the relationship between the non-party and parties to the litigation also may bear on cost allocation. If, for example, a party's accountant, payroll processing company, or another contracted entity is subject to a subpoena, the court may be less likely to allocate costs than for a non-party that has no affiliation or relationship with the parties in the case.¹⁵⁷

¹⁵⁷ See FED. R. CIV. P. 45(d)(2)(B)(ii) (protection not mandatory for a party's officer); *Chevron Corp. v. Donziger*, 11 Civ. 0691, 2013 WL 1087236, at *32–33 (S.D.N.Y. March 15, 2013); see also The Sedona Conference, *Commentary on Rule 34 and Rule 45 "Possession, Custody or Control,"* 17 SEDONA CONF. J. 467 (2016).

14. The breach of a duty to preserve electronically stored information may be addressed by remedial measures, sanctions, or both: remedial measures are appropriate to cure prejudice; sanctions are appropriate only if a party acted with intent to deprive another party of the use of relevant electronically stored information.

Comment 14.a. Historical background and the adoption of the 2015 amendment to Rule 37(e).

Case law concerning spoliation sanctions has evolved substantially in recent years. A circuit split had emerged on the issue of whether a court could impose spoliation sanctions for the negligent loss of relevant ESI, or whether a showing of bad faith was required.¹⁵⁸ The December 2015 amendment of Rule 37(e) was intended to resolve this circuit split, and provides that consequences for failure to preserve ESI are available only upon a finding that the ESI should have been preserved, the party failed to take reasonable steps to preserve the ESI, and the relevant ESI cannot be restored or replaced.

Principle 14 has long recognized that there must be a sufficient level of culpability to support the imposition of spoliation sanctions, and that unintentional spoliation resulting in prejudice more appropriately may be addressed through remedial measures. Having clarified that unintentional destruction of relevant ESI is not sufficient to trigger the imposition of spoliation sanctions, Rule 37(e) now is aligned in that respect with *The Sedona Principles*.¹⁵⁹ The concepts of this Principle 14 should apply in all relevant litigation contexts, including in state courts that do not have procedural rules to the contrary.¹⁶⁰

Comment 14.b. Conditions for imposition of remedial measures and sanctions.

Neither remedial measures nor sanctions for failure to preserve relevant ESI are available under Rule 37(e) unless all of the following conditions are met: (1) the ESI should have been preserved in the anticipation or conduct of litigation; (2) the ESI is lost because a party failed to take reasonable steps

¹⁵⁸ 2015 Advisory Comm. Note to Rule 37(e) (“Federal circuits have established significantly different standards for imposing sanctions or curative measures on parties who fail to preserve electronically stored information. These developments have caused litigants to expend excessive effort and money on preservation in order to avoid the risk of severe sanctions if a court finds they did not do enough.”); *see* *Victor Stanley v Creative Pipe*, 269 F.R.D. 497, 523–37 (D. Md. 2010).

¹⁵⁹ Rule 37 does not use the term “sanctions.” Instead, the 2015 Advisory Committee Note explains that the consequences authorized under Rule 37(e)(2) when there is an intent to deprive are “very severe measures to address or deter failures to preserve electronically stored information.” Principle 14 uses “sanctions” as shorthand for these and other “severe measures” to address or deter failures to preserve ESI.

¹⁶⁰ Rule 37(e) expressly addresses only ESI, and not tangible things or hard copy documents. Common law and state laws about the loss or destruction of potential evidence may conflict with Rule 37(e)’s approach to claims about the loss of ESI. This Principle addresses only the loss of ESI, and differs in one respect from Rule 37(e). That *difference* is discussed in Comment 14.d.

to preserve it; and (3) the ESI cannot be restored or replaced through additional discovery. Accordingly, no remedy is available if a party had no duty to preserve the ESI, or if the relevant ESI is still available, or if the relevant ESI was lost despite the party having taken reasonable steps to preserve it.

If a court concludes that the party failed to take reasonable steps to preserve the ESI, the court must consider whether the ESI can be restored or replaced by other means. If the ESI cannot be restored or replaced, the court may continue its analysis to determine whether remedial measures or sanctions may be appropriate.

Under Rule 37(e)(1), remedial measures are available upon a finding of prejudice (*see* Comment 14.c.), whereas Rule 37(e)(2) clarifies that spoliation sanctions are available only upon a finding of intent to deprive another party of the use of the irretrievably lost information that cannot be replaced through additional discovery or other means. *See* Comment 14.d. Remedial measures and spoliation sanctions are described in further detail below.

Comment 14.c. Remedial measures are intended to redress prejudice.

Upon a finding of prejudice, a court may direct a party that has lost relevant ESI to undertake remedial measures no greater than necessary to redress the prejudice and place the requesting party in the position it would have been in if the lost, relevant ESI had been produced. Remedial measures may include orders for additional discovery or allocation of costs or attorneys' fees, and other measures traditionally employed by courts. Remedial measures should not be applied as a substitute for sanctions, the purpose of which is to punish undesired behavior; the application of remedial measures should not be limited, however, such that the party that has lost relevant ESI is in a better position than it would have been in had the lost relevant ESI been produced to the requesting party.

Determining whether the loss of relevant information results in prejudice requires an evaluation of whether the lost information is irretrievable or can be replaced, and whether the lost information is both unique and important to the litigation. Destruction of relevant but duplicative information, for example, is not prejudicial.

Rule 37(e) does not identify which party bears the burden of proving prejudice and instead, according to the 2015 Advisory Committee Note, leaves the parties to make their respective showings and the court, to its discretion. A party deprived of relevant information, however, likely faces a quandary when attempting to establish the prejudice that is a prerequisite to imposition of remedial measures, given the absence of the spoliated information.

In addition, the timeliness of a challenge to production failures also may bear on prejudice, or the lack of it. Since their inception, *The Sedona Principles* have urged an early constructive dialogue between parties regarding preservation obligations and expectations. The Federal Rules and many state counterparts also have adopted disclosure requirements as well as the presumption of early dialogue on issues relating to ESI. A corollary to these early discussions is that untimely challenges to production failures may not provide a basis for relief.

Illustration i. A requesting party does not object when ESI is produced without metadata. Shortly before trial, it files a motion for sanctions and requests an adverse inference instruction based on the failure to produce metadata. Having not raised the issue earlier, the party waived the right to seek metadata or sanctions.

Comment 14.d. Sanctions may be appropriate where the court finds an “intent to deprive.”

Sanctions are available only upon a finding of intent to deprive another party of the use of the irretrievably lost information that cannot be replaced through additional discovery or other means. Adoption of the “intent to deprive” standard is intended to establish a uniform standard for addressing failure to preserve relevant ESI and is consistent with the historic roots of the duty to preserve and the desire to avoid the sometimes inconsistent standards for “intentional destruction.” A finding of intent to deprive is also consistent with the premise of an adverse inference instruction, which assumes that a party’s intentional loss or destruction of evidence gives rise to a reasonable inference that the evidence was unfavorable to the party responsible for its loss or destruction.

This Principle differs from amended Rule 37(e)(2) in one respect—the “incompetent spoliator.” Although the Rule requires a finding of irretrievable loss before a court may impose remedial measures or sanctions, this Principle recognizes that remedial measures or some form of sanctions (e.g., paying a fine to the court) may be appropriate to defer future behaviors where there was an intent to deprive but ultimately no irretrievable loss.

Illustration i. Two days after a party is scheduled to turn over the laptop of a key executive, the executive runs a program called “Evidence Eliminator” on the laptop resulting in the loss of relevant ESI to the prejudice of the requesting party. The requesting party provides the court with forensic evidence establishing the foregoing facts. The court finds an intent to deprive the requesting party of the use of relevant ESI on the laptop. The court may order both remedial measures and sanctions against the responding party and, if appropriate, the key executive individually.

Illustration ii. The same facts as set forth in *Illustration i* above; however, through advanced forensic technology, the ESI erased by the “Evidence Eliminator” software is restored in full or in large part. Under the concepts of this Principle 14 (but not Rule 37(e)), the court may elect to order remedial measures and sanctions against the responding party and, if appropriate, the key executive, including payment of the requesting party’s reasonable expenses (including attorneys’ fees) incurred in recovering the wiped data and litigating the issue.¹⁶¹

Illustration iii. The requesting party asks for relevant ESI from the company-issued laptop of a key former executive. The responding party advises that the laptop was subject to a litigation hold and preserved for more than a year, after which the company installed a new archiving

¹⁶¹ See *CAT3, LLC v. Black Lineage*, 14 Civ. 5511, 2016 WL 154116 (S.D.N.Y. Jan. 12, 2016).

system. The responding party contends that in-house counsel was consulted about the laptop by the IT department during the transfer to the new archiving system and that in-house counsel directed that the data on the laptop's hard drive be imaged and stored to the company's server before the laptop was reissued. The company ultimately acknowledges its inability to locate the laptop data on its servers or backup tapes. The court finds that the laptop included relevant, irreplaceable ESI but that the responding party did not delete the ESI on the executive's hard drive with the intent to deprive the requesting party of the relevant ESI. The court therefore orders that the responding party pay the requesting party's attorneys' fees incurred in litigating the issue, but should not issue spoliation sanctions.

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*Appendix B: Discovery in a World of Electronic Documents and Data—2007*¹⁶²

How is Discovery of Electronically Stored Information Different from Discovery of Paper Documents?

The answer to the question—“why and how is electronic discovery different?”—lies in the subtle, but sometimes profound, ways in which electronic documents present unique opportunities and problems for document production. Magistrate Judge Nan Nolan noted some of these differences in *Byers v. Illinois State Police*, 53 Fed. R. Serv. 3d 740, No. 99 C 8105, 2002 WL 1264004 (N.D. Ill. May 31, 2002):

Computer files, including e-mails, are discoverable. . . . However, the Court is not persuaded by the plaintiffs’ attempt to equate traditional paper-based discovery with the discovery of e-mail files. . . . Chief among these differences is the sheer volume of electronic information. E-mails have replaced other forms of communication besides just paper-based communication. Many informal messages that were previously relayed by telephone or at the water cooler are now sent via e-mail. Additionally, computers have the ability to capture several copies (or drafts) of the same e-mail, thus multiplying the volume of documents. All of these e-mails must be scanned for both relevance and privilege. Also, unlike most paper-based discovery, archived e-mails typically lack a coherent filing system. Moreover, dated archival systems commonly store information on magnetic tapes which have become obsolete. Thus, parties incur additional costs in translating the data from the tapes into useable form.

Id. at *31–33.

The qualitative and quantitative differences between producing paper documents and electronic information can be grouped into the following six broad categories.

A. Volume and Duplicability

There is substantially more electronically stored information than paper documents, and electronically stored information is created and replicated at much greater rates than paper documents.

The dramatic increase in e-mail usage and electronic file generation poses particular problems for

¹⁶² Excerpted and adapted from the Introduction to the Second Edition of *The Sedona Principles, Second Edition* (2007) with permission from The Sedona Conference. As noted in the Introduction to *The Sedona Principles, Third Edition*, technology has moved quickly, and some of the points in this Appendix may seem quaint as well as outdated. For one new to electronic discovery, however, the points should provide a helpful orientation to the differences from past experience. The editors have changed citation styles within this excerpt for purposes of consistency and clarity. Footnote numbering in this excerpt does not reflect the original numbering.

large data producers, both public and private. A single large corporation can generate and receive millions of emails and electronic files each day. A very high percentage of information essential to the operation of public and private enterprises is stored in electronic format and never printed to paper. Not surprisingly, the proliferation of the use of electronically stored information has resulted in vast information accumulations. While a few thousand paper documents are enough to fill a file cabinet, a single computer tape or disk drive the size of a small book can hold the equivalent of millions of printed pages. Organizations often accumulate thousands of such tapes as data is stored, transmitted, copied, replicated, backed up, and archived.

Electronic information is subject to rapid and large scale user-created and automated replication without degradation of the data. Email provides a good example. Email users frequently send the same email to many recipients. These recipients, in turn, often forward the message, and so on. At the same time, email software and the systems used to transmit the messages automatically create multiple copies as the messages are sent and resent. Similarly, other business applications are designed to periodically and automatically make copies of data. Examples of these include web pages that are automatically saved as cache files and file data that is routinely backed up to protect against inadvertent deletion or system failure.¹⁶³

B. Persistence

Electronically stored information is more difficult to dispose of than paper documents. A shredded paper document is essentially irretrievable.¹⁶⁴ Likewise, a paper document that has been discarded and taken off the premises for disposal as trash is generally considered to be beyond recovery. Disposal of electronically stored information is another matter altogether. The term “deleted” is misleading in the context of electronic data, because it does not equate to “destroyed.” Ordinarily, “deleting” a file does not actually erase the data from the computer’s storage devices. Rather, it simply finds the data’s entry in the disk directory and changes it to a “not used” status—thus permitting the computer to write over the “deleted” data. Until the computer writes over the “deleted” data, however, it may be recovered by searching the disk itself rather than the disk’s directory. This persistence of electronic data compounds the rate at which electronic data accumulates and creates an entire subset of electronically stored information that exists unknown to most individuals with ostensible custody and ostensible control over it.

¹⁶³ Neither the users who created the data nor information technology personnel are necessarily aware of the existence and locations of the copies. For instance, a word processing file may reside concurrently on an individual’s hard drive, in a network-shared folder, as an attachment to an email, on a backup tape, in an internet cache, and on portable media such as a CD or floppy disk. Furthermore, the location of particular electronic files typically is determined not by their substantive content, but by the software with which they were created, making organized retention and review of those documents difficult.

¹⁶⁴ Modern technology, however, has made recovery at least a theoretical possibility. See Douglas Heingartner, *Back Together Again*, N.Y. TIMES, July 17, 2003, at G1 (describing technology that can reconstruct cross-shredded paper documents).

C. Dynamic, Changeable Content

Computer information, unlike paper, has content that is designed to change over time even without human intervention. Examples include: workflow systems that automatically update files and transfer data from one location to another; backup applications that move data from one storage area to another to function properly; web pages that are constantly updated with information fed from other applications; and email systems that reorganize and purge data automatically. As a result, unlike paper documents, much electronically stored information is not fixed in a final form.

More generally, electronically stored information is more easily and more thoroughly changeable than paper documents. Electronically stored information can be modified in numerous ways that are sometimes difficult to detect without computer forensic techniques. Moreover, the act of merely accessing or moving electronic data can change it. For example, booting up a computer may alter data contained on it. Simply moving a word processing file from one location to another may change creation or modification dates found in the metadata. In addition, earlier drafts of documents may be retained without the user's knowledge.

D. Metadata

A large amount of electronically stored information, unlike paper, is associated with or contains information that is not readily apparent on the screen view of the file. This additional information is usually known as "metadata." Metadata includes information about the document or file that is recorded by the computer to assist in storing and retrieving the document or file. The information may also be useful for system administration as it reflects data regarding the generation, handling, transfer, and storage of the document or file within the computer system. Much metadata is not normally accessible to the computer user.

There are many examples of metadata. Such information includes file designation, create and edit dates, authorship, comments, and edit history. Indeed, electronic files may contain hundreds or even thousands of pieces of such information. For instance, email has its own metadata elements that include, among about 1,200 or more properties, such information as the dates that mail was sent, received, replied to or forwarded, blind carbon copy ("bcc") information, and sender address book information. Typical word processing documents not only include prior changes and edits but also hidden codes that determine such features as paragraphing, font, and line spacing. The ability to recall inadvertently deleted information is another familiar function, as is tracking of creation and modification dates.

Similarly, electronically created spreadsheets may contain calculations that are not visible in a printed version or hidden columns that can only be viewed by accessing the spreadsheet in its "native" application, that is, the software application used to create or record the information. Internet documents contain hidden data that allow for the transmission of information between an internet user's computer and the server on which the internet document is located. So-called "meta-tags" allow search engines to locate websites responsive to specified search criteria. "Cookies" are text files

placed on a computer (sometimes without user knowledge) that can, among other things, track usage and transmit information back to the cookie's originator.¹⁶⁵

Generally, the metadata associated with files used by most people today (such as Microsoft Office™ documents) is known as “application metadata.” This metadata is embedded in the file it describes and moves with the file when it is moved or copied. On the other hand, “system metadata” is not embedded within the file it describes but stored externally. System metadata is used by the computer's file system to track file locations and store information about each file's name, size, creation, modification, and usage.

Understanding when metadata is relevant and needs to be preserved and produced represents one of the biggest challenges in electronic discovery. Sometimes metadata is needed to authenticate a disputed document or to establish facts material to a dispute, such as when a file was accessed in a suit involving theft of trade secrets. In most cases, however, the metadata will have no material evidentiary value—it does not matter when a document was printed, or who typed the revisions, or what edits were made before the document was circulated. There is also the real danger that information recorded by the computer as application metadata may be inaccurate. For example, when a new employee uses a word processing program to create a memorandum by using a memorandum template created by a former employee, the metadata for the new memorandum may incorrectly identify the former employee as the author. However, the proper use of metadata in litigation may be able to provide substantial benefit by facilitating more effective and efficient searching and retrieval of electronically stored information.

E. Environment-Dependence and Obsolescence

Electronic data, unlike paper data, may be incomprehensible when separated from its environment.¹⁶⁶ For example, the information in a database may be incomprehensible when removed from the structure in which it was created. If the raw data (without the underlying structure) in a database is produced, it will appear as merely a long list of undefined numbers. To make sense of the data, a viewer needs the context, including labels, columns, report formats, and similar information. Report formats, in particular, allow understandable, useable information to be produced without producing the entire database. Similarly, stripping metadata and embedded data from the data files such as spreadsheets can substantially impair the functionality of the file and the accuracy of the production as a fair representation of the file as kept and used in the ordinary course of business.

Also, it is not unusual for an organization to undergo several migrations of data to different platforms within a few years. Because of rapid changes in computer technology, neither the personnel familiar with the obsolete systems nor the technological infrastructure necessary to restore the out-

¹⁶⁵ There is much confusion over the use of terms, and distinctions between application and system metadata can be confusing. See Craig Ball, *Understanding Metadata: Knowing Metadata's Different Forms and Evidentiary Significance Is Now an Essential Skill for Litigators*, 13 LAW TECH. NEWS 36 (Jan. 2006).

¹⁶⁶ In addition, passwords, encryption, and other security features can limit the ability of users to access electronic documents.

of-date systems may be available when this “legacy” data needs to be accessed. In a perfect world, electronically stored information that has continuing value for business purposes or litigation would be converted for use in successor systems, and all other data would be discarded. In reality, such migrations are rarely flawless.

F. Dispersion and Searchability

While a user’s paper documents will often be consolidated in a handful of boxes or filing cabinets, the user’s electronically stored information may reside in numerous locations—desktop hard drives, laptop computers, network servers, floppy disks, flash drives, CD-ROMs, DVDs, and backup tapes. Many of these electronic documents may be identical backup copies or archive copies. However, some documents may be earlier versions drafted by that user or by other users who can access those documents through a shared electronic environment.

Consequently, it may be more difficult to determine the provenance of electronically stored information than paper documents. The ease of transmitting electronic data and the routine modification and multi-user editing process may obscure the origin, completeness, or accuracy of a document. Electronic files are often stored in shared network folders that may have departmental or functional designations rather than author information. In addition, there is growing use of collaborative software that allows for group editing of electronic data, making authorship determination more difficult. Finally, while electronically stored information may be stored on a location, such as a local hard drive, it is likely that such documents may also be found on high-capacity, undifferentiated backup tapes, or on network servers—not under the custodianship of an individual who may have “created” the document.

While the dispersed nature of electronically stored information complicates discovery, the fact that many forms of electronically stored information and media can be searched quickly and accurately by automated methods provides new efficiencies and economies. In many instances, software is able to search through far greater volumes of these types of electronically stored information than human beings could review manually.