the terms of licenses granted to interactive services.\textsuperscript{178} Congress contemplated the idea that the DPRA could stand in the way of technological innovation. To this end, the legislative history makes clear that Congress intended “to provide copyright holders of sound recordings with the ability to control the distribution of their product by digital transmissions, without hampering the arrival of new technologies.”\textsuperscript{179} Ironically, the DPRA does exactly the opposite of what Congress intended with respect to streaming music. By stifling competition in the streaming music market, the DPRA is hampering technological development and hindering artists’ ability to effectively monetize their music.

Congress should modify the DPRA to make sound recording licenses compulsory for interactive services. Compulsory licensing would eliminate the labels’ gatekeeping function, giving emerging streaming services access to the labels’ catalogs. Moreover, the labels would no longer be able to leverage copyright ownership into streaming service ownership. By its current language, the DPRA is enabling majoritarian rights holders to prevent the use of sound recordings. Hampering instead of helping technological innovation in streaming music, the DPRA is exceeding the bounds of its legislative findings and working against its intended purpose of helping rights holders monetize their digital recordings. Moreover, it is working against the underlying constitutional goal of copyright, the dissemination of creative works.\textsuperscript{180}

VI. CONCLUSION

Spotify, and streaming music generally, have great potential to revolutionize music for listeners and artists. So long as the major labels possess the strong combination of oligopoly market share and holdout power, though, they will remain the gatekeepers of streaming music, demanding equity as the price of admission. Further, streaming services like Spotify, insulated from competitive pressures, will likely continue in non-transparency and poor treatment of artists. Creating a compulsory licensing scheme for streaming music will foster the competitive climate necessary to compel the transparency and fairness necessary for a truly successful, artist-focused Spotify revolution.

\textsuperscript{178} Id.

\textsuperscript{179} Id.

\textsuperscript{180} U.S. CONST. art. 1, § 8, cl. 8 (“To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”).
question of admissibility of metadata under the parol evidence rule. Finally, the author suggests several practical and efficient solutions for transactional attorneys who must guard against the unintended effects of metadata, one of which involves a critical change to boilerplate merger clause language.

I. THE PAROL EVIDENCE RULE

The parol evidence rule derives from the wording of the Statute of Frauds and Perjuries in 1678, which implied that a legal act could be constituted, not merely proved, by an ordinary writing not under seal. Today, the parol evidence rule establishes that a writing embodying an agreement should be treated as the sole reliable indicia of what that agreement is, and thus prevents a court from looking beyond the four corners of a document in order to establish either party’s legal obligations under that document. The rule serves the classic formalist goals of clarification and administrability: it embodies the idea that a party, when signing a document, ought to be able to rely on that document as the final and binding statement of an agreement between the parties.

Although the parol “evidence rule” resembles both rules of evidence and rules of interpretation, it is formally neither; rather, it is substantive law. This means that even if parol evidence gets into the record without objection, the trier of fact must disregard the evidence.

A. Integration and Application

This integration of agreements is a prerequisite for the parol evidence rule to apply: the agreement must be the complete and contemporaneous agreements made inoperative by integration of a contract in writing are generally oral, this is not necessarily the case as prior agreements. A prior written agreement is superseded by a later integration. Where writings relating to the same subject-matter are contemporaneous, both form part of the integration.

5. See Cruzan, 497 U.S. at 284 (discussing how the parol evidence rule forbids oral testimony when determining the intent of the parties to an agreement).

6. Restatement (First) of Contracts § 237 cmt. a (1932) (“It defines the subject-matter to be interpreted. Though the prior and contemporaneous agreements made inoperative by integration of a contract in writing are generally oral, this is not necessarily the case as to prior agreements. A prior written agreement is superseded by a later integration. Where writings relating to the same subject-matter are contemporaneous, both form part of the integration.”).


8. E.g., Primex Int’l Corp. v. Wal-Mart Stores, Inc., 679 N.E.2d 624, 627 (N.Y. 1997); Alaska Diversified Contractors, Inc. v. Lower Kuskokwim Sch. Dist., 778 P.2d 581, 583-84 (Alaska 1989). See also Capmark Bank v. RSR, LLC, 81 So. 3d 1258, 1269 (Ala. 2011) (“It is only when the instrument shows that it does not contain all the terms of the contract as to both parties to it that evidence may be offered to show further stipulation than those expressed.”); Conrad Milwaukee Corp. v. Wasilewski, 141 N.W.2d 240, 244 (Wis. 1966) (citing Moore v. Schalk, 111 N.W.2d 80, 84 (Wis. 1961)); Mears v. Smith, 85 N.E. 165, 166 (Mass. 1908).

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4. See, e.g., Cruzan by Cruzan v. Dir., Mo. Dept’ of Health, 47 U.S. 261, 264 (1990) (“At common law and by statute in most States, the parol evidence rule prevents the variations of the terms of a written contract by oral testimony.”); see also Restatement (First) of Contracts § 237 (1932) (“Except as stated in §§ 240, 241 the integration of an agreement makes inoperative to add to or to vary the agreement all contemporaneous oral agreements relating to the same subject-matter; and also, unless the integration is void, or voidable and avoided, all prior oral or written agreements relating thereto. If either void or voidable and avoided, the integration leaves the operation of prior agreements unaffected.”).

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1. Merger Clauses

Merger clauses are fundamental. They exist to show integration. Merger clauses thus let businesses protect themselves from ambiguous oral understandings between salespersons and consumers by invocation of the parol evidence rule, and similarly allow businesses to rely upon their contracts in business-to-business deals. Simply put, when relying on a rule that prevents one from looking to earlier evidence, one’s position is far more equitable and persuasive if there is a clause in the contract saying in essence, “we agree that the deal is described accurately by looking only to this document.”

While merger clauses are not always necessary to prove the integration necessary to bar parol evidence, they are a regular tool of the prudent lawyer.

2. Parol evidence and the plain meaning rule: interpretation of terms. Historically, the rule prevented the admission of extrinsic evidence to show either meaning or obligation under a contract. Today, however, in some jurisdictions, extrinsic evidence is considered through a more limited interpretive rule that is arguably distinct from the parol evidence rule—the “plain meaning rule.” The plain meaning rule allows the admission of extrinsic evidence to determine the meaning of ambiguous terms, but it does not apply when the meaning is unequivocal from the face of the document.

Confusion of the parol evidence rule and the plain meaning rule occurs periodically in academic literature and in the judiciary for two reasons. First, both rules involve the question of when it is permissible to look to extrinsic evidence; and second, the plain meaning rule can be and often is seen as an exception to—and therefore part of the jurisprudence of—the parol evidence rule. For example, the Ninth Circuit has called the California parol evidence rule “liberal” because the California Supreme Court abandoned the plain meaning rule and now allows extrinsic evidence to be admitted in situations where there is a plain meaning rule jurisprudence. There, the parol evidence rule excludes extrinsic evidence of the meaning of an integrated contract because such evidence is, by definition, irrelevant—but it does not bar extrinsic evidence where ambiguity can be found in the agreement, because the evidence is then relevant to show meaning. Alstom Power, Inc. v. Balcke-Durr, Inc., 849 A.2d 804, 811 (Conn. 2007) (noting that parol evidence is admissible in Maryland only to resolve the meaning of ambiguous terms in a contract) (citing Truck Ins. Exch. v. Marks Rental, Inc., 418 A.2d 1187, 1190 (Md. 1980)).

10. Also called “integration clauses.” An example appears in Kupka v. Morey, 541 P.2d 740, 748 n. 14 (Alaska 1975) (“No representations, warranties, promises, guarantees or agreements, oral or written, expressed or implied, have been made by either party hereto with respect to this lease . . . except as expressly provided herein.”). See also Alaska Diversified Contractors, Inc., 778 P.2d at 585 (“Oral explanations or instructions given before the award of the contract will not be binding.”).

11. E.g. Capmark Bank, 81 So. 3d at 1269 (“A merger clause creates a presumption that the writing represents an integrated, that is, the final and complete, agreement of the parties.”) (internal quotations omitted); Primez, 679 N.E.2d at 627 (“Courts and commentators addressing the substantive and procedural aspects of New York commercial litigation agree that the purpose of a general merger provision, typically containing the language found in the clause of the parties’ 1995 Agreement that it ‘represents the entire understanding between the parties,’ is to require full application of the parol evidence rule in order to bar the introduction of extrinsic evidence to vary or contradict the terms of the writing.”).

12. See Restatement (Second) of Contracts § 216 cmt. e (1981) (A merger clause “may negate the apparent authority of an agent to vary orally the written terms . . .”).


14. See Linzer, supra note 9, at 801 (“[T]he parol evidence rule and the plain meaning rule are often conflated and confused.”).

15. See, e.g., Linzer, supra note 9, at 807 (“[I]nstead of a parol evidence ‘rule’ there is a continuum of many different approaches, all using the same name and often using the same words.”); Posner, supra note 9, at 534; Marinarico, III, supra note 9, at 408–21.

16. See, e.g., Orwaen, 497 U.S. at 284 (“At common law and by statute in most States, the parol evidence rule prevents the variations of the terms of a written contract by oral testimony.”).

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While merger clauses are not always necessary to prove the integration necessary to bar parol evidence, they are a regular tool of the prudent lawyer.

2. Parol evidence and the plain meaning rule: interpretation of terms

There is significant variation in how the parol evidence rule is applied. Historically, the rule prevented the admission of extrinsic evidence to show either meaning or obligation under a contract. Today, however, in some jurisdictions, extrinsic evidence is considered through a more limited interpretive rule that is arguably distinct from the parol evidence rule—the “plain meaning rule.” The plain meaning rule allows the admission of extrinsic evidence to determine the meaning of ambiguous terms, but it does not apply when the meaning is unequivocal from the face of the document.

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18. Connecticut, for example, includes the plain meaning rule in its parol evidence rule jurisprudence. There, the parol evidence rule excludes extrinsic evidence of the meaning of an integrated contract because such evidence is, by definition, irrelevant—but it does not bar extrinsic evidence where ambiguity can be found in the agreement, because the evidence is then relevant to show meaning. Alston Power, Inc. v. Balcke-Durr, Inc., 849 A.2d 804, 811 (Conn. 2004) (listing non-exclusively examples of situations where evidence excluded by the parol evidence rule becomes relevant: to explain ambiguity, to prove a collateral oral agreement that does not vary the writing, to add a missing term in a writing not integrated, or to show fraud). See also, e.g., Heaven v. Timber Hill, LLC, 900 A.2d 560, 569 (Conn. App. Ct. 2005) (allowing the use of testimony in interpreting the meaning of “rentable space” in a contract) (“[T]he parol evidence rule does not of itself . . . forbid the presentation of parol evidence, that is, evidence outside the four corners of the contract concerning matters governed by an integrated contract, but forbids only the use of such evidence to vary or contradict the terms of such a contract.”).
to show custom, trade usage, or other evidence of the parties' intended meaning of terms. The term "liberal" reflects the deep and well-known divide in United States contract law between those states that follow the plain meaning rule and those that follow this more liberal approach, allowing extrinsic evidence to create ambiguity. For example, Alaska, following Corbin, takes an approach similar to California's, while New York and Missouri, following Williston, adopt the plain meaning rule.

Although intellectually coherent, the conceptualization of the plain meaning rule primarily as part of the parol evidence rule risks losing sight of a key difference between the principal roles of the two rules. It is important for litigators and courts in jurisdictions that adopt both rules to understand the precise distinction between the interpretation of stated obligations (under the plain meaning rule) and the addition of contractual obligations (under the parol evidence rule). This is in part due to the basic illogic of looking for ambiguities in the plain meaning of a document to determine whether additional terms have been agreed upon. In a contract dispute in a jurisdiction employing the plain meaning rule, the defaulting party will seize on any ambiguity in the contract to admit parol evidence. By understanding the distinction between the parol evidence rule and the plain meaning rule, the party enforcing the contract can, in many cases, phrase the issue simply and persuasively for the bench: courts do not look to ambiguity to determine whether an additional agreement has been made.

3. Additional Consistent Terms

If the court finds that an agreement is only partially integrated, some jurisdictions allow parol evidence to be admitted to show additional consistent terms agreed to by the parties.

19. Prudential Ins. Co. of Am. v. L.A. Mart, 68 F.3d 370, 377 (9th Cir. 1995). See also In re Estate of Russell, 69 Cal. 2d 200, 208-09 (1968) (noting parol evidence should be admissible to determine whether the terms in a written agreement are in fact ambiguous). See also CAL. CIV. PROC. CODE § 1856(c) (West 2012) (noting terms in a written agreement may be explained or supplemented by course of dealing or usage of trade or by course of performance).

20. See 40 A.L.R.3d 1384 §§ 3-4 (1971) ("[T]he traditional view seems to be that the search for the ambiguity must be conducted within the 'four corners' of the writing, unaided by any reference to external circumstances. As a corollary of the view that an agreement which 'appears' to be plain and unambiguous bars the admission of parol evidence, this position has been criticized, but many courts have, almost as a matter of course, considered initially the express terms of the writing to discover any ambiguity.").

21. See Alaska Diversified Contractors, Inc, 778 P.2d at 584 ("[T]he meaning of a contract prior to the application of the parol evidence rule, extrinsic evidence should be consulted.").

22. Missouri allows the admission of extrinsic evidence in making a threshold determination as to whether the contract was integrated—a prerequisite for application of the parol evidence rule—but then applies a "four-corners" approach, which excludes evidence beyond the four corners of the document. North Am. Sav. Bank v. Resolution Trust Corp. 65 F.3d 111, 114 (8th Cir. 1995) ("[T]he rule does not apply unless the written agreement at issue is completely integrated. Indeed, the court may consider evidence of prior or contemporaneous negotiations and agreements in determining whether the parties intended for a particular written contract to be complete") (applying Missouri Law). Missouri does still follow the plain meaning rule, so it does not necessarily exclude all evidence from beyond the four corners of the document. E.g. Whitehill v. Whitehill, 218 S.W.3d 579, 584 (Mo. Ct. App. 2007) ("It is well established in Missouri that the parol evidence rule bars the admission of extrinsic evidence unless a contract is ambiguous."). See also Del Vecchio v. Cohen, 733 N.Y.S.2d 479, 480 (N.Y. App. Div. 2003) ("[W]hen the terms of a written contract are clear and unambiguous, the intent of the parties must be found within the four corners of the contract, giving a practical interpretation to the language employed and the parties' reasonable expectations") (quoting Slamov v. Delco, 174 A.D.2d 720, 726 (N.Y. App. Div. 1991) (subsequent history omitted)).
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4. The Fraud Exception\textsuperscript{27}

There is also a fraud exception to the parol evidence rule,\textsuperscript{28} which varies slightly by jurisdiction. For example, in \textit{Clements Auto Company v. Service Bureau Corporation}, the Eighth Circuit applied Minnesota law to a fraud claim despite a contract specifying New York law would apply, holding that a general merger clause was insufficient to bar parol evidence of fraud even absent intent to deceive.\textsuperscript{29} Interestingly, the choice of law was unlikely to have made a difference since New York likewise considers general merger clauses insufficient to bar parol evidence of fraud.\textsuperscript{30}

\textbf{B. Criticisms}

Corbin\textsuperscript{31} did not believe the parol evidence rule served a useful purpose and thought it ought to be abolished.\textsuperscript{32} He noted that “[i]t is universally agreed that it is the first duty of the court to put itself in

\textsuperscript{27} The fraud exception is the exception one drafting a contract must be most aware of, and the exception that gets the most use. However, states of necessity allow exceptions to the parol evidence rule when looking to see whether certain grounds for unenforceability of the contract exist, such as dures or mutual mistake. See Fed. Deposit Ins. Co. v. First Mortg. Investors, 250 N.W.2d 362, 365 [Wis. 1977]; Anzelie Skomp Aguilar, \textit{The Law Applicable to International Trade Transactions} with Brazilian Parties: A Comparative Study of the Brazilian Law, the CISG, and the American Law About Contract Formation, 17 L. & Bus. Rev. Am. 487, 548 (2011).


\textsuperscript{29} Clements Auto Co. v. Serv. Corp., 444 F.2d 169, 179 (8th Cir. 1971) ("[t]he buyer were to bring a suit in tort for deceit instead of in contract for breach of warranty, the action should not be defeated by a provision waiving warranties. Although in a majority of the American courts the purchaser undoubtedly would not be able to prevail if he could not prove scienter, a few states headed by Minnesota, do not make that requirement." (quoting Note, \textit{Sales Warranties: Contractual Disclaimers of Warranties}, 23 Minn. L. Rev. 784, 798 (1939))).


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34. See, e.g., Fed. Deposit Ins. Co. v. First Mortg. Investors, 250 N.W.2d 362, 365 (Wis. 1977) (discussing the complexities and numerous tests surrounding the parol evidence rule, and how this gives rise to criticism).

35. *E.g.*, id. *See also* Linzer, supra note 9, at 802 (noting debate over whether the primary purpose of the parol evidence rule is to prevent self-serving oral testimony or simply to express a presumption that the most recent statement of the parties’ will supersedes what came before)

36. Although the parol evidence rule is standard in Anglo-American jurisprudence, it is not always followed in private international disputes; the parol evidence rule has been rejected by the United Nations Convention on Contracts for the International the Sale of Goods (C.I.S.G.) and so parties must be especially careful if they intend to give effect to merger clauses in this context. *See Trevor Perea, Comment, Treatbacher Industrie, A.G. V. Allegheny Technologies, Inc.: A Perspective on the Lackluster Implementation of the CISG by American Courts*, 20 Pace Int’l L. Rev. 191, 213 (2008). It is worth noting one major additional benefit of the parol evidence rule: it decreases transaction costs of contract enforcement by limiting the scope of admissible evidence. This simplifies the task for courts and parties, and indirectly limits the scope of discovery, which must be calculated to lead to the discovery of admissible evidence. *See Fed. R. Civ. P. 26(b)(1).

37. *Linzer, supra note 9, at 802.*
few subjects in the law seemingly as indefinite and uncertain of
application as the so-called rule of integration or merger of prior or
temporaneous negotiations.38

The second major ground of criticism is injustice.39 Because the
parol evidence rule bars extrinsic evidence, it often results in
injustice.40 For example, in Silberman v. Crane, the defendant bought
new advertising space in a periodical in which he had previously
advertised, and the periodical's agent allegedly informed him that he
would be released from his old contract if he agreed to continue
advertising.41 The parol evidence rule nevertheless allowed the
periodical to enforce the old contract against him.42 Similarly, in Dall
v. Certified Sales, Inc., the plaintiff bought a boat at auction,
allegedly following verbal representations that the boat had “fresh
engines,” but the engines were delivered damaged.43 Since the auction
bid form contained a warranty disclaimer, the parol evidence rule
barred the admission of the “fresh engines” statement.44 Similarly,
Anastasia Myskina45 posed for a photoshoot and signed a release only
after being promised the day of the photoshoot that the nearly nude
images taken of her would be published only in a single issue of the
magazine GQ.46 Because the release did not contain this limitation,
the parol evidence rule barred admission of the assurance made to
her.47 In these three cases and countless others, the parol evidence
rule excludes evidence which, if believed by a trier of fact, shows
injustice being perpetrated by the enforcing party and implicitly
sanctioned by the court.

II. WHERE IS THE METADATA?

A. What is Metadata?

Metadata, as the word suggests, is data about data.48 The Sedona
Principles note that it is not readily apparent in the screen view of a
file, which is mostly true for at least some screen views of a file.49
Examples of metadata include data storing system information about
a file, changes to a file as in Microsoft Word’s “tracked changes”
feature, or version history or other information automatically saved in
the same file as the document by the program that a user is using to
create, edit, view, or even delete the document.50 Electronically-entered
comments that may or may not be visible on an electronic or printed
version of a file are also a form of metadata.51 Full emails, including metadata, may contain far more
information than is ordinarily visible in an Outlook or Gmail client:
undisplayed headers may include anti-Spam information, information
about attachments being sent with the email, information about the
path the email took over the internet to reach the user, a “Reply-to”

38. First Mortg. Investors, 250 N.W.2d at 365.

39. See, e.g., Linzer, supra note 9, at 804 ("More ‘liberal’ rules give a
different sort of comfort, one in which justice appears to trump
formalism . . . ."). Note that there is some protection from injustice at
the expense of both parties: courts sometimes admit parol evidence
where, by some mistake of fact, it uses different words than the parties
intended, because it would consequently be unjust to enforce it against
either party in such a case. Ivinson v. Hutton, 98 U.S. 79, 82-83 (1878)
quoting 2 Tabor, Evidence (6th ed.) 1041.

40. See First Mortgage Investors, 250 N.W.2d at 365 ("The rule causes
injuries because it allows a party to avoid a legal obligation which he
accepted during the negotiation process.").


42. Id. at 599-600. Although the intonations of fraud in the formation of
the later oral promise suggest that courts have some leeway in
determining the admissibility of parol evidence in such a case, it is far
from the only example of injustice perpetrated with the rule.

43. Case No. 3:08CV19(DFM), 2011 U.S. Dist. LEXIS 14762, at *3 (D.

44. Id.

2005) (describing Myskina as one of the world’s most highly-ranked
female professional tennis players).

46. Id. at 412.

47. Id. at 415.

48. E.g., Hans P. Sinha, The Ethics of Metadata: A Critical Analysis and a
Practical Solution, 63 Me. L. Rev. 175, 176 (2010-11) (discussing the general
definition of the term “metadata”); W. Lawrence Wescott II, The Increasing
Importance Of Metadata In Electronic Discovery, 14 REJ.L. & TACS, 10,
*1 (2007-08); Lee H. Rosenthal, Metadata And Issues Relating To The

49. The Sedona Principles 3 (Jonathan M. Regrave et al. eds., 2nd ed.
2007) ("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.”").

50. See, e.g., Randall Farrar, Metadata: The Hidden Disaster That’s Right
In Front Of You, 82 N.Y. St. B.J. 49, 51 (2010) (noting over 200 example
types of document metadata).

51. This is true, for example, for Word documents and Adobe PDF
documents. See id. at 49 (discussing user entered metadata and inserted
comments into Word documents).
few subjects in the law seemingly as indefinite and uncertain of application as the so-called rule of integration or merger of prior or contemporaneous negotiations.\textsuperscript{38}

The second major ground of criticism is injustice.\textsuperscript{39} Because the parol evidence rule bars extrinsic evidence, it often results in injustice.\textsuperscript{40} For example, in \textit{Silberman v. Crane}, the defendant bought new advertising space in a periodical in which he had previously advertised, and the periodical's agent allegedly informed him that he would be released from his old contract if he agreed to continue advertising.\textsuperscript{41} The parol evidence rule nevertheless allowed the periodical to enforce the old contract against him.\textsuperscript{42} Similarly, in \textit{Dall v. Certified Sales, Inc.}, the plaintiff bought a boat at auction, allegedly following verbal representations that the boat had “fresh engines,” but the engines were delivered damaged.\textsuperscript{43} Since the auction bid form contained a warranty disclaimer, the parol evidence rule barred the admission of the “fresh engines” statement.\textsuperscript{44} Similarly, Anastasia Myskina\textsuperscript{45} posed for a photoshoot and signed a release only after being promised the day of the photoshoot that the nearly nude images taken of her would be published only in a single issue of the magazine GQ.\textsuperscript{46} Because the release did not contain this limitation, the parol evidence rule barred admission of the assurance made to

\textsuperscript{38} \textit{First Mortg. Investors}, 250 N.W.2d at 365.

\textsuperscript{39} \textit{See}, e.g., \textit{Linzer}, supra note 9, at 804 (“More ‘liberal’ rules give a different sort of comfort, one in which justice appears to trump formalism . . . .”). Note that there is some protection from injustice at the expense of both parties: courts sometimes admit parol evidence where, by some mistake of fact, it uses different words than the parties intended, because it would consequently be unjust to enforce it against either party in such a case. \textit{Ivison v. Hutton}, 98 U.S. 79, 82–83 (1878) (quoting 2 Taylor, Evidence (6th ed.) 1041).

\textsuperscript{40} \textit{See First Mortgage Investors}, 250 N.W.2d at 365 (“The rule causes injustices because it allows a party to avoid a legal obligation which he accepted during the negotiation process.”).

\textsuperscript{41} \textit{44 A.2d 598, 599} (Pa. Super. Ct. 1945).

\textsuperscript{42} Id. at 599-600. Although the intonations of fraud in the formation of the later oral promise suggest that courts have some leeway in determining the admissibility of parol evidence in such a case, it is far from the only example of injustice perpetrated with the rule.

\textsuperscript{43} \textit{Case No. 3:08CV19(DFM)}, 2011 U.S. Dist. LEXIS 14762, at *3 (D. Conn. Feb. 15, 2011).

\textsuperscript{44} Id.

\textsuperscript{45} Myskina v. Condé Nast Publ’ns, Inc., 386 F.Supp.2d 409, 411 (S.D.N.Y. 2005) (describing Myskina as one of the world’s most highly-ranked female professional tennis players).

\textsuperscript{46} Id. at 412.

47. In these three cases and countless others, the parol evidence rule excludes evidence which, if believed by a trier of fact, shows injustice being perpetrated by the enforcing party and implicitly sanctioned by the court.

\textbf{II. WHERE IS THE METADATA?}

\textbf{A. What is Metadata?}

Metadata, as the word suggests, is data about data.\textsuperscript{48} The Sedona Principles note that it is not readily apparent in the screen view of a file, which is mostly true for at least some screen views of a file.\textsuperscript{49} Examples of metadata include data storing system information about a file, changes to a file as in Microsoft Word’s “tracked changes” feature, or version history or other information automatically saved in the same file as the document by the program that a user is using to create, edit, view, or even delete the document.\textsuperscript{50} Electronically-entered comments that may or may not be visible on an electronic or printed version of a file are also a form of metadata.\textsuperscript{51} Full emails, including metadata, may contain far more information than is ordinarily visible in an Outlook or Gmail client: undisplayed headers may include anti-Spam information, information about attachments being sent with the email, information about the path the email took over the internet to reach the user, a “Reply-to”
header directing that reply emails should be sent to an address other than the sender, or any of many other header fields.\textsuperscript{53}

In addition, metadata can also consist of server logs, such as the logs on a web server that record visits to the websites being hosted on that server, and that record which computer or network is visiting the site.\textsuperscript{54} The logs on an email server that may record the sender and recipient of every email transmitted, relayed, or received through the server can also be considered metadata.\textsuperscript{55}

Furthermore, formulae in an Excel Spreadsheet, though a programmer or ordinary user may not consider them metadata,\textsuperscript{56} may be considered metadata by an annoying e-discovery opponent or a litigant lacking technical knowledge.\textsuperscript{57}

Additionally, in electronically stored photographs, metadata may include the camera type, the camera’s date and time setting indicating when the photograph was taken, exposure information, copyright information of a photograph).  The information maintained in server logs varies widely, but generally includes, for example, the IP Address of the computer requesting data from the website, the date and time of the request, the browser type that is making the request, and the referrer site from which the user clicked a link to go to the present web site. E.g., Apache mod\_log\_config documentation, \texttt{https://httpd.apache.org/docs/2.2/mod/mod\_log\_config.html} (allowing customization of Apache log files, and showing numerous log formats including the remote host (accessing computer), Referrer (referring web site), User-Agent (the browser being used), and other data) (last visited December 27, 2012). Further tracking information is often obtained through or by advertisers, cookies, or third parties such as Facebook or Google. See Kenneth J. Withers, “Ephemeral Data” and the Duty to Preserve Discoverable Electronically Stored Information, 37 UT. BALT. L. REV. 349, 353-54 (2008) (discussing typical contents of server logs).

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55. Formulae in Excel spreadsheets may not be considered metadata because the spreadsheet contains the formula that determines the displayed result. This is in sharp contrast to metadata which displays what the document previously contained, for example. The differentiating factor may be viewed through the lens of the primary use of the data—the data primarily used in an application may be considered data, while data that provides information about that data may be considered metadata. In an Excel spreadsheet, the formulae entered into a box do not represent data about the derived values that fill the box, but rather are the primary data in the spreadsheet from which the values are derived.

52. See Douglas L. Rogers, \textit{A Search for Balance in the Discovery of ESI Since December 1, 2006}, 14 RICH. J.L. & TECH. 8, 81 (2008) (discussing how email metadata is often not immediately viewable, but can normally be accessed through a “Properties” view). Note that this information is generally readily available to an email user, but few users ever choose to view it.

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In addition, metadata can also consist of server logs, such as the logs on a web server that record visits to the websites being hosted on that server, and that record which computer or network is visiting the site.\textsuperscript{53} The logs on an email server that may record the sender and recipient of every email transmitted, relayed, or received through the server can also be considered metadata.\textsuperscript{54}

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Additionally, in electronically stored photographs, metadata may include the camera type, the camera’s date and time setting indicating when the photograph was taken, exposure information, information about applications used to edit the photograph, or a copyright notice.\textsuperscript{57}

Similarly, music files likewise often contain information in “id3 tags” or other metadata indicating the recording artist, album, copyright status, or other information.\textsuperscript{58}

This section provides a brief overview of the roles that metadata has played in law to date. This helps establish what baseline of familiarity with metadata a modern attorney should have. The degree of this familiarity should inform any analysis of metadata’s role in the context of the parol evidence rule.

1. Metadata in discovery

Metadata has become increasingly important in litigation.\textsuperscript{59} It is most frequently considered in the discovery context,\textsuperscript{60} where it adds to the discovery of evidence.\textsuperscript{61}

Contrariwise, a regular Microsoft Excel user may recognize that the formulas are the important part, and hence are effectively the primary data in the sheet—the numbers that are generated just happen to be the results of these formulas. At least one court has also treated spreadsheet metadata differently than document or email metadata.\textsuperscript{62}

See, e.g., Latimer v. Roaring Toyz, Inc., 601 F.3d 1224, 1230 (11th Cir. 2010) (discussing metadata that may be considered or integral to the content of a spreadsheet but not necessarily integral to word documents or emails).

52. See Douglas L. Rogers, A Search for Balance in the Discovery of Electronic Evidence: Since December 1, 2006, 14 Rich. J.L. & Tech. 8, 81 (2008) (discussing how email metadata is often not immediately viewable, but can normally be accessed through a “Properties” view). Note that this information is generally readily available to an email user, but few users ever choose to view it.

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55. Formulae in Excel spreadsheets may not be considered metadata because the spreadsheet, contains the formula that determines the displayed result. This is in sharp contrast to metadata which displays what the document previously contained, for example. The differentiating factor may be viewed through the lens of the primary use of the data—the data primarily used in an application may be considered data, while data that provides information about that data may be considered metadata. In an Excel spreadsheet, the formulae entered into a box do not represent data about the derived values that fill the box, but rather are the primary data in the spreadsheet from which the values are derived.


57. See, e.g., Lucia Cucu, Note, The Requirement For Metadata Production Under Williams v. Sprint/United Management Co.: An Unnecessary Burden For Litigants Engaged In Electronic Discovery, 93 CORNELL L. REV. 221, 221-22 (2007); J. Brian Beckham, Production, Preservation
the growing volume of electronically stored information ("ESI") at issue in a modern lawsuit.\(^61\) Because metadata is stored in a variety


See also, e.g., Telereign Corp. v. Sitel Corp., 376 F.R.D. 428, 435 (S.D.N.Y. 2011); Centrifugal Force, Inc. v. Softnet Commc’n Inc., 783 F.Supp.2d 736, 744 (S.D.N.Y. 2011) (holding that duty to preserve does not extend to files considered metadata in the runtime environment of different versions of a program used during the course of litigation under the facts of the case); Minter v. Wells Fargo Bank, N.A., 274 F.R.D. 535, 531 (D. Md. 2011) (holding that defendants prohibited by order from relying upon more than a specific sample of files in their attempt to defeat class certification were not allowed to rely on metadata about those files); JFB Hart Coatings, Inc. v. AM Gen. LLC, 764 F.Supp.2d 974, 976 (N.D.Ill. 2011) (ordering evidentiary hearing on motion for default judgment and ordering production of certain metadata in response to request for sanctions); Aponte-Navedo v. Nalco Chem. Co., 269 F.R.D. 31, 38-39 (D. Puerto Rico 2010) (holding defendants in Title VII claim must provide information about electronic systems as well as, for each document produced, a "soft copy" in its native format in order and with original metadata).

61. See, e.g., Rosenthal, supra note 48 ("The amendment to Rule 34(a) ends the debate over whether various parts of electronic files, including metadata, are subject to discovery because they are, or are not, part of a document. Metadata is electronically stored information, discoverable if relevant, not privileged, and within the limits that govern discovery.") (using quotation marks omitted). It is critical that attorneys understand how to quantify this volume, as it can distort discovery cost projections by billions of documents. Compare Haka v. Lincoln Cent., 246 F.R.D. 577, 578 (W.D. Wisc. 2007) (indicating a terabyte is 1024 gigabytes and contains about 500 billion typewritten pages), with McNulty v. Roddy Ice Holdings, Inc., 271 F.R.D. 569, 570 n. 1 (terabyte is one trillion bytes, equivalent to approximately 200 million pages of printed text). There are several reasons why the same nominal volume may be presented differently. \(Haka\) used a base two definition of terabyte, meaning 1024 or 2\(^{10}\) gigabytes, 2\(^{10}\) megabytes, 2\(^{10}\) kilobytes, and 2\(^{10}\) bytes. These numbers are used in computer science because it is easier to get computers to do math in base two than it is to get them to do math in base ten, which humans use because we have ten fingers. However, for marketing purposes, purposed for storage of images, use a decimal definition—one based on raising ten to an exponent. Long ago, marketers realized that they could advertise storage devices as larger than they really are by using a terabyte 1000 or 10\(^{3}\) gigabytes, meaning 10\(^{10}\) bytes, nearly one hundred billion characters smaller than a regular terabyte consisting of 2\(^{10}\) bytes. For a modern drive manufacturer's acknowledgment of using decimal rather than binary numbers, and the effect on disk size measurement, see \(Why\) does my hard drive report less capacity than indicated on the drive's label? Seagate Technology LLC, http://knowledge.seagate.com/articles/en_US/FAQ/172191en (last visited December 27, 2012). In addition, the number of bytes taken by a document may be much larger—or, on occasion, much smaller—than the actual number of characters in the document. Metadata takes up a lot of space, and other space is taken up as a byproduct of the ways in which computers store information. To see this, simply open a word document, write a few letters in it, save the file, and check the file size: it is likely to be reported by the operating system as at least a few thousand characters (bytes) long. As a result, claims made during electronic discovery as to the amount of information to be searched that are based solely on the sizes of the storage media may be wildly misleading: the allegedly five-hundred-billion-page terabyte in \(Haka\) is unlikely to be three orders of magnitude greater than the allegedly two-hundred-million-page terabyte in McNulty.

of technical fashions, a law firm will usually require significant technical expertise to establish a proper workflow process for the review and production of metadata.\(^62\) Attorneys drafting a document request for ESI may specify the form of production.\(^63\) Attorneys seeking metadata should specify that they want the documents in their native format, including all original metadata.\(^64\) Responding attorneys must consult with technical experts to determine whether they should object to the request on grounds of undue burden.\(^65\) Although the rule is far from settled, multiple courts have now found that during discovery, "in light of the emerging recognition of the benefits of producing metadata, the

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\(^61\) See also, e.g., Telereign Corp. v. Sitel Corp., 376 F.R.D. 428, 435 (S.D.N.Y. 2011); Centrifugal Force, Inc. v. Softnet Commc’n Inc., 783 F.Supp.2d 736, 744 (S.D.N.Y. 2011) (holding that duty to preserve does not extend to files considered metadata in the runtime environment of different versions of a program used during the course of litigation under the facts of the case); Minter v. Wells Fargo Bank, N.A., 274 F.R.D. 535, 531 (D. Md. 2011) (holding that defendants prohibited by order from relying upon more than a specific sample of files in their attempt to defeat class certification were not allowed to rely on metadata about those files); JFB Hart Coatings, Inc. v. AM Gen. LLC, 764 F.Supp.2d 974, 976 (N.D.Ill. 2011) (ordering evidentiary hearing on motion for default judgment and ordering production of certain metadata in response to request for sanctions); Aponte-Navedo v. Nalco Chem. Co., 269 F.R.D. 31, 38-39 (D. Puerto Rico 2010) (holding defendants in Title VII claim must provide information about electronic systems as well as, for each document produced, a "soft copy" in its native format in order and with original metadata).

62. Using third-party consultants is also useful in the event that the person or persons involved in the metadata needs to testify at trial. See, e.g., E-Discovery consulting, KROLL ONTRACK (Oct. 12, 2012, 4:24 PM) http://www.krollontrack.com/e-discovery/ (explaining how Kroll consulting assists law firms working through the complexity of e-discovery and trial).

63. Fed. R. Civ. P. 34(b) ("The request ... may specify the form or forms in which electronically stored information is to be produced.").

64. Romero v. Allstate Ins. Co., 271 F.R.D. 96, 108 (E.D. Pa. 2010). See also R.F.M.A.S., Inc. v. So, 271 F.R.D. 13, 45 (S.D.N.Y. 2010) (stating that the party wanting metadata should ask for it up front or risk not being entitled to it); Autotech Services Ltd. P’ship v. Automationdirect.com, Inc., 248 F.R.D. 556, 559 (N.D.Ill. 2008) ("It seems a little late to ask for metadata after documents responsive to a request have been produced in both paper and electronic format."); D’Onofrio v. SFX Sports Grp., Inc., 247 F.R.D. 43, 47 (D.D.C. 2008) (declining to compel production where original request used broad paper discovery language for how documents were to be produced and no reference to ESI of any kind); Ford Motor Co. v. Edgewood Properties, Inc., 257 F.R.D. 418, 425-26 (D.N.J. 2009) (refusing to order production of metadata where its absence was not timely objected to by the party wanting metadata should ask for it up front or risk not being entitled to it); Autotech Services Ltd. P’ship v. Automationdirect.com, Inc., 248 F.R.D. 556, 559 (N.D.Ill. 2008) ("It seems a little late to ask for metadata after documents responsive to a request have been produced in both paper and electronic format.");

65. These consultations will frequently include negotiations with opposing counsel regarding the format in which the information will be produced, since this can influence cost. See White v. Graceland College Ctr. for ProFI Dev. & Lifelong Learning, Inc., 580 F.Supp.2d 1250, 1264 (D. Kan. 2008) (the entire discovery dispute could have been avoided had parties adequately conferred during their Fed. R. Civ. P. 26(f) conference).
the growing volume of electronically stored information ("ESI") at issue in a modern lawsuit. Because metadata is stored in a variety of technical fashions, a law firm will usually require significant technical expertise to establish a proper workflow process for the review and production of metadata.

Attorneys drafting a document request for ESI may specify the form of production. Attorneys seeking metadata should specify that they want the documents in their native format, including all original metadata.

Responding attorneys must consult with technical experts to determine whether they should object to the request on grounds of undue burden. Although the rule is far from settled, multiple courts have now found that during discovery, "in light of the emerging recognition of the benefits of producing metadata, the word document, write a few letters in it, save the file, and check the file size: it is likely to be reported by the operating system as at least a few thousand characters (bytes) long. As a result, claims made during electronic discovery as to the amount of information to be searched are based solely on the sizes of the storage media may be wildly misleading: the allegedly five-hundred-billion-page terabyte in Haka is unlikely to be three orders of magnitude greater than the allegedly two-hundred-million-page terabyte in McNulty.

Using third-party consultants is also useful in the event that the person or persons involved in gathering the metadata needs to testify at trial. See, e.g., E-Discovery consulting, Kroll Ontrack (Oct. 12, 2012, 4:24 PM) http://www.krollontrack.com/e-discovery/ (explaining how Kroll consulting assists law firms working through the complexity of e-discovery and trial).

Fed. R. Civ. P. 34(b) ("The request . . . may specify the form or forms in which electronically stored information is to be produced.")
burden falls on the party objecting to its production to show undue hardship and expense. Assuming they do not move for a protective order, responding attorneys must then review the metadata to determine whether it should be withheld and added to the privilege log. Even in the absence of a request for metadata, producing attorneys may have an obligation to produce it under the Sedona Principles. These principles will often be used by courts to resolve disputes that arise during e-discovery.

It is critical that attorneys ensure all metadata in their client’s possession that could be relevant to pending litigation is preserved. Preserving evidence is important in case the court orders later disclosure. If the client had made a good faith attempt to preserve metadata in this complicated and evolving area of law, the risks of Rule 11 sanctions, the finding of spoliation, or the granting of an adverse inference instruction can be minimized. A proper litigation hold helps demonstrate good faith. Although courts disagree on cases for the basis of related discovery errors or abuse rather than on the merits, they are willing to do so. When even courts are not making default judgments, the practical effects of improper metadata handling during discovery can be as


67. **THE SEDONA PRINCIPLES,** supra note 49, at ii. See also **Ford Motor Co.** v. 257 F.R.D. at 425-26 (refusing to order production of metadata where its absence was not timely objected to by the receiving party, considering a party’s affirmative obligation to produce unrequested metadata under Principle 12 of the Sedona Conference); **Richard A. Cirillo & Ann M. Cook,** A Bedeviling Little Subject Called Metadata: What Is It, And Must It Be Produced?: Discovery: ‘E’ Is Now Far Everybody, N.Y.L.J. (Apr. 17, 2006) (noting it is no longer safe for responding attorneys to withhold metadata without explicitly saying they are doing so or they risk waiver of privilege under Williams v. Sprint/United Mgmt. Co., 230 F.R.D. 640 (D. Kan. 2005)).


69. Note, however, that the failure to create records, unlike the intentional destruction of records, does not give rise to a spoliation instruction. See **R.F.M.A.S., Inc. v. Sot,** 271 F.R.D. 13, 40 (S.D.N.Y. 2010).


71. See **Favro,** supra note 70, at 21-22. See also **Goetz,** 531 F.3d at 454-55; **Philips Elecs. N. Am. Corp. v. BC Technical,** 773 F.Supp.2d 1149, 1189 (D. Utah 2011) (noting, inter alia, that improper deletion and overwriting of files on a BCT laptop denied Philips the chance to analyze metadata, following alleged lack of improper litigation hold notice to BCT employees). In **Goetz,** the court ordered complete responses to ESI requests, including requests for metadata and all deleted information or on any computer of any custodian, following a failure to initiate a proper litigation hold. Following a subsequent discovery battle, plaintiff’s expert was allowed to image copies of hard drives of fifty custodians to prevent future spoliation. Following further motions, an order issued to have the drives held in custody of the U.S. Marshall and ordered the search of computers, including personal computers at the homes of the custodians. The defendant sought an emergency stay. A writ of mandamus was ultimately granted by the Sixth Circuit, both because there was no evidence of willful spoliation and because of federalism issues raised in imaging the computers of high-ranking state officials. **Goetz,** 531 F.3d at 460-41. A proper litigation hold goes a long way toward mitigating the risk of e-discovery sanctions. Formally, the law requires that all data be retained, but not necessarily multiple identical copies of the same data. **Bleich One Commc’ns, Inc. v. NumereX Corp.,** 271 F.R.D. 429, 436 (S.D.N.Y. 2010). It is not always clear what constitutes an “identical copy.” Id. at 437 n. 11 (noting multiple copies of the same email need not be preserved but the metadata on where it was delivered must be preserved).

72. **Stichting Mayflower Mountain Funds v. City of Park City, Utah,** 441 F. App’x 568, 570 (10th Cir. 2011) (noting also this was the sixth case the Tenth Circuit had dismissed that year for discovery abuse without reaching the merits). But see **United States v. Lancon,** 639 F.3d 1285, 1302 (11th Cir. 2011) (affirming the Southern District of Florida’s refusal to instruct the jury on spoliation when a police detective had copied and pasted instant message conversations into Microsoft Word and then saved the file to a floppy disk rather than his hard drive—resulting in limited amount of metadata being saved. Because there was no evidence of bad faith, the Eleventh Circuit affirmed).
burden falls on the party objecting to its production to show undue hardship and expense. Assuming they do not move for a protective order, responding attorneys must then review the metadata to determine whether it should be withheld and added to the privilege log. Even in the absence of a request for metadata, producing attorneys may have an obligation to produce it under the Sedona Principles. These principles will often be used by courts to resolve disputes that arise during e-discovery.

It is critical that attorneys ensure all metadata in their client’s possession that could be relevant to pending litigation is preserved. Preserving evidence is important in case the court orders later disclosure. If the client had made a good faith attempt to preserve metadata in this complicated and evolving area of law, the risks of Rule 11 sanctions, the finding of spoliation, or the granting of an adverse inference instruction can be minimized. A proper litigation hold helps demonstrate good faith. Although courts dislike deciding cases on the basis of related discovery errors or abuse rather than on the merits, they are willing to do so. Even when courts are making default judgments, the practical effects of improper metadata handling during discovery can be as


67. THE SEDONA PRINCIPLES, supra note 49, at ii. See also Ford Motor Co., 257 F.R.D. at 425-26 (refusing to order production of metadata where its absence was not timely objected to by the receiving party, considering a party’s affirmative obligation to produce unrequested metadata under Principle 12 of the Sedona Conference); Richard A. Cirillo & Ann M. Cook, A Bedeviling Little Subject Called Metadata: What Is It, And Must It Be Produced?, Discovery: “E” Is Now For Everybody, N.Y.L.J. (Apr. 17, 2006) (noting it is no longer safe for responding attorneys to withhold metadata without explicitly saying they are doing so or they risk waiver of privilege under Williams v. Sprint/United Mgmt. Co., 230 F.R.D. 640 (D. Kan. 2005)).


69. Note, however, that the failure to create records, unlike the intentional destruction of records, does not give rise to a spoliation instruction. See R.F.M.A.S., Inc. v. So, 271 F.R.D. 13, 40 (S.D.N.Y. 2010).
sanctions proceeding filed concurrently with a legal malpractice action.

During the medical malpractice suit, the hospital's risk manager admitted on cross-examination that the hospital's defense counsel had intentionally concealed certain metadata during document discovery.

An eleven million dollar settlement followed, along with legal malpractice and sanctions actions.

2. Clawback Agreements

The sheer volume of ESI—metadata and otherwise—has made "clawback agreements," in which both parties agree to return inadvertently disclosed privileged information, a common feature of modern e-discovery. Although the point of document review is to limit improper disclosure of privileged information, errors in the process often happen, resulting in improper disclosure of information. Clawback agreements provide a last chance to minimize the damage caused when information does inadvertently get through the cracks. The Federal Rules of Evidence now include a default clawback provision that provides some default protection from inadvertent disclosure, and some ethics rules limit a party's knowing use of inadvertently disclosed information or create an affirmative duty to inform an opposing party of the disclosure. However, practitioners should nevertheless draft a clawback agreement to protect their


74. Id.

75. Id.


77. See, e.g., Kandel v. Brother Int'l Corp., 683 F. Supp. 2d 1076, 1085-86 (C.D. Cal. 2010) (giving an example where, despite a document review protocol, confidential information was inadvertently released).

78. FED. R. EVID. 502(b). It is important to note that there is at least some debate as to the Constitutionality of the default clawback provision. See Henry S. Noyes, Federal Rule of Evidence 502: Stirring the State Loos of Privilege and Professional Responsibility with a Federal Stick, 66 WASH. & LEE L. REV. 673, 678 (2009); Adam K. Israel, Note: To Scrub or Not to Scrub: The Ethical Implications of Metadata and Electronic Data Creation, Exchange, and Discovery, 60 ALA. L. REV. 469, 480 (2006).

79. See, e.g., MODEL RULES OF PROF'L CONDUCT R. 4.4(b) (requiring notification to the sender if a lawyer "knows or reasonably should know that the document was inadvertently sent.

80. See, e.g., Loudenslager, supra note 59, at 161-62; Garcia, supra note 59, at 587-88 (2010) (discussing the varying approaches to the ethics of information inadvertently disclosed to opposing counsel in metadata).

81. We do not consider here whether a clawback provision can provide adequate grounds for the recall of metadata that, but for the inadvertent disclosure, a party would likely not have had to produce under the law of the relevant jurisdiction even though it is not privileged. For example, inadvertent disclosure may preclude a party from convincingly pleading that responding to a request to disclose metadata would be unduly burdensome. Although a party could truthfully still claim that the technical tracking and document review of the quantity of metadata involved would create a significant burden on the party—perhaps even an undue burden—such an argument is far less convincing as a practical matter when the other side has already been given some of the metadata.

82. See, e.g., Loudenslager, supra note 59, at 161-62; Garcia, supra note 59, at 587-88 (2010) (discussing the varying approaches to the ethics of information inadvertently disclosed to opposing counsel in metadata).

83. See Bennett & Cloud, supra note 76, at 476.

84. For example, where an attorney is admitted pro hac vice and is operating under both the ethical rules of his own jurisdiction and of the forum state. See, e.g., C.R.C.P. 220(3) (stating that an out of state attorney is subject to the Colorado Rules of Professional Conduct when appearing in the state.).

conclusive. For example, Post v. St. Paul Travelers Ins. Co. is a case against a legal insurance provider for failure to cover the cost of a sanctions proceeding filed concurrently with a legal malpractice action arising out of alleged legal malpractice during a medical malpractice suit. During the medical malpractice suit, the hospital’s risk manager admitted on cross-examination that the hospital’s defense counsel had intentionally concealed certain metadata during document discovery. An eleven million dollar settlement followed, along with legal malpractice and sanctions actions.

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Because metadata is naturally easier to miss than other information during document review, clawback provisions are especially important with regard to privileged information within metadata. While other solutions—technical and ethical—have been proposed to the problem of inadvertent metadata disclosure, the clawback agreement is an ideal choice for practitioners because it does not rely on a policy beyond the power of the parties involved. Clawback agreements may also help to rectify ethical asymmetries that occur when, for example, state ethics rules applicable to only one attorney in a case preclude the examination of accidentally disclosed metadata.

3. Ethical Issues

Ethical issues surround the use of metadata. Many bar associations have decided that looking at metadata is often unethical.


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The New York State Bar Association led the way, concluding in 2001 that the use of metadata is merely an attorney’s “use of computer software applications to surreptitiously get behind” visible documents. Its expressed concern was that using metadata to view prior drafts of a document or perhaps the identity of those who make those changes is an impermissible intrusion into the “confidences” and “secrets” of DR 4-101 of the Lawyer’s Code of Professional Responsibility. This was considered analogous to unethical means of invading privilege, such as making use of inadvertent disclosures of confidential information. It is important to note that this opinion was couched in terms of “surreptitiously” using metadata and was based in part on the belief that surreptitiously using the metadata was a deliberate act by the receiving lawyer, rather than carelessness on the part of the sending lawyer. However, as conscious usage and management of metadata become more prevalent and as metadata removal becomes easier, it becomes harder to argue both that the sending attorney was not careless and that the viewing attorney was acting surreptitiously. At the least, recognition of this reality should invoke the public policy balancing test present in inadvertent disclosure ethics opinions under New York ethics rules. The test requires a balancing of the public policy interest in encouraging more careful conduct against the public policy in favor of confidentiality.

As of 2010, fourteen bar associations had considered metadata in such contexts as whether it was ethical for receiving attorneys to look at stored “undo” commands, improperly redacted PDF documents, or Excel formulas. Alabama, Arizona, Florida, Maine, New Hampshire, and New York City have followed the lead of New York. The American Bar Association, the Maryland Bar Association, and the Vermont Bar Association have reached the opposite conclusion. The District of Columbia, Colorado, West Virginia, and Pennsylvania Bar Associations have all taken a middle-ground approach, allowing receiving parties to review metadata in some cases.

A responsible party must be aware of the possibilities not only of ethical rules binding his use of metadata, but also of potential ethical asymmetries with other parties to the case. These occur when, for example, state ethics rules applicable to only one attorney in a case or transaction differ from those ethical standards governing the use of metadata by the other attorneys.

In near direct counterpoint to the ethical prohibition on the use of metadata lies the growing expectation that metadata may be an important part of discovery. The practice of law has changed in its appreciation of metadata since the New York Bar Association released its opinion in 2001, and metadata management has become easier. It may well be time to revisit these ethical opinions, and any practicing attorney should keep in mind that they are not a firm safeguard against the use of inadvertently disclosed information due to the legal profession’s changing views on metadata. In a world where transactional attorneys exchange metadata in the form of tracked changes every day, litigators exchange metadata after reviewing it for privilege, and even law students routinely remove metadata from their exams to facilitate blind grading, it is past time for practitioners to be routinely removing metadata to safeguard their clients.

4. Metadata as Evidence

The role of metadata in law is somewhat larger than the law of metadata. Metadata is also sometimes evidence. For example, it can provide compelling evidence of spoliation. In Southern New England
The New York State Bar Association led the way, concluding in 2001 that the use of metadata is merely an attorney's "use of computer software applications to surreptitiously 'get behind' visible documents". It expressed concern that using metadata to view metadata is analogous to ethical activity that violates the same ethical rules binding both the ethical rules of his own jurisdiction and of the forum state. It also considered analogous to (1) soliciting the disclosure of privileged information by former corporate employees and (2) exploiting the willingness of others to undermine the confidentiality principle, but these analogies are really non-analogous examples of unethical activity that violates the same provision of the Code.

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Telephone Co. v. Global NAPs Inc., the defendant’s bookkeeping agent purposefully overwrote data so it would be unavailable. The Second Circuit affirmed the granting of a default judgment items, nearly Metadata studied during forensic analysis revealed that of 93,560 files were not copied from legitimate sources. It has been recognized against the JOURNAL OF as evidence that may be used to authenticate a document under Rule show the falsification of documents prepared for a tax cause by admission of other evidence. Metadata has also been used in copyright actions to show that other metadata regarding file access and modification dates of sound files showed the files had not come from a legitimate source, where the defendant neither knew what metadata was nor how to access it. Metadata has also made an appearance in trademark and advertising law, where there has been some discussion of trademarks being used as metadata on a web site in order to draw search engine traffic. For example, examined the legal and technical issues surrounding HTTP META tags more than a

The Court found that this made notable the defendant’s prior failure to inform plaintiff of an exhibit from GM that it sought to admit in order to rebut a witness’s testimony. The Court refused to disturb the jury’s verdict. The United States v. Abu-Jihaad, 630 F.3d 102, 111–12 & n.8 (2d Cir. 2010).


Lake, 207 P.3d at 731.

Lake, 218 P.3d at 1008.

See F. Gregory Lastowka, Search Engines, Html, And Trademarks: What’s The Meta For?, 86 VA. L. REV. 835, 837–38 (2000) (discussing the use of competitor trademarks in web pages in META tags that are invisible to a page visitor but that may be used by search engines to identify what the page is about, for example).
agent purposefully overwrote data so it would be unavailable. Metadata studied during forensic analysis revealed that of 93,500 items, nearly 20,000 had been erased with anti-forensic software. The Second Circuit affirmed the granting of a default judgment against the defendants.

Metadata has also been used in copyright actions to show that files were not copied from legitimate sources. It has been recognized that other metadata regarding file access and modification dates of relevant disclosed files was inaccurate. Metadata in a spreadsheet showed that GM had prepared the spreadsheet defendant GMAC had used, a fact from which the court concluded that GMAC had access to GM's records. Id. at 653 n.43.

of 1,417 files and emails the day after a litigation hold was issued; see also Philips Elecs. N. Am. Corp. v. B.C. Technical, 773 F. Supp. 2d 1149, 1183 (D. Utah 2011) (reporting metadata analyzed during forensic analysis of a party computer showed evidence of file deletion); Dawe v. Corr. USA, 263 F.R.D. 613, 619 (E.D. Cal. 2009) (noting that the granted permission to review metadata was especially important in searching for evidence of transfer or deletion of documents); Plasse v. Tyco Elecs. Corp., 448 F. Supp. 2d 302, 306-07 (D. Mass. 2006) (noting that metadata in security log of system date and time changed when other metadata regarding file access and modification dates of relevant disclosed files was inaccurate).

99. 624 F.3d 123, 142 (2d Cir. 2010).
100. Id. at 143.
101. Id. at 150.
102. See Warner Bros. Records, Inc. v. Walker, 704 F. Supp. 2d 460, 466 (W.D. Pa. 2010) (noting user-added metadata comments on copyrighted sound files showed the files had not come from a legitimate source, where the defendant neither knew what metadata was not how to access it).
104. See United States v. Thorson, 633 F.3d 312, 316 (4th Cir. 2011).
105. See Brown v. Colegio de Abogados de P.R. 765 F. Supp. 2d 133, 136-37 (D.P.R. 2011) (using metadata to authenticate a form the court had prohibited the defendant from using).
106. See Mento Chevrolet Oldsmobile, Inc. v. GMAC, 728 F. Supp. 2d 662, 653-56 (E.D. Pa. 2010) (here, the court considered a motion for JMOL, or new trial. Metadata in a spreadsheet showed that GM had prepared the spreadsheet defendant GMAC had used, a fact from which the court concluded that GMAC had access to GM's records. Id. at 653 n.43.

used as a link in the chain to establish the unauthorized disclosure of national defense information regarding the movements of a United States Navy battlegroup.

5. Other Metadata Law

Although the primary locus of metadata in law has been in issues surrounding e-discovery and, more recently, in evidentiary matters, it has also begun to appear periodically in other areas. In 2006, former police officer David Lake of Phoenix, Arizona, submitted several public record requests for metadata from public records he believed had been backdated in connection with his discharge. The Arizona Court of Appeals held the metadata was not itself a public record, in part because it was a by-product of computer use rather than being made in the pursuance of official duties. The Arizona Supreme Court unanimously reversed, holding that "it would be illogical, and contrary to the policy of openness to conclude that public entities can withhold information embedded in an electronic document while they would be required to produce the same information if it were written manually on a paper public record." Metall has also made an appearance in trademark and advertising law, where there has been some discussion of trademarks being used as metadata on a web site in order to draw search engine traffic. Scholar Gregory Lastowka, for example, examined the legal and technical issues surrounding HTTP META tags more than a
decade ago. More recently, the Second Circuit held in Rescuecom Corp. v. Google, Inc. that the internal use of a trademark as metadata within a search indexing database or other software program does not per se insulate the program creator or user from charges of infringement as this would run contrary to the purpose of the Lanham Act. The question to be answered under the Lanham Act was not necessarily whether the trademark would be visible to the consumer, but whether its use by Google in generating its advertisements and search results would result in consumer confusion.

B. Arguments Favoring Metadata Admissibility

This section lays out the arguments for considering metadata to be substantively admissible and not barred by the parol evidence rule.

1. Parties are presumed to have read a contract

It is a fiction to pretend that in all cases the parties to a contract will have read all of the metadata contained in the final file containing the document when it is signed. However, it is a fiction demanded by precedent and supported by strong policy justification. It is a long-standing rule of law that one is presumed to have read what he signs. This presumption normally applies not only to the contents of a signed document, but to all attachments. The parol evidence rule is intimately related to this rule: we do not look beyond the contents of the signed form but also to its attachments ....


114. 562 F.3d 123, 130 (2d Cir. 2009).

115. Id. at 131.

116. E.g., Maier v. Fld. Mut. Life Ass'n, 78 F. 566, 570 (6th Cir. 1907); In re Cajun Elec. Power Co-op., Inc., 791 F.2d 353, 359 (5th Cir. 1986) ("Under elementary principles of contract law, one is presumed to have read a contract that one signs . . . . "). See also Jones v. N.Y. Life & Annuity Corp., 985 F.2d 563, 568 (10th Cir. 1993) (holding that an applicant for insurance, "in the absence of fraud, accident, misrepresentation, imposition, illiteracy, artifice or device (any of which would reasonably prevent the applicant from reading the application . . . . "), is by law conclusively presumed to have read the application when he signs it.

117. Arch of Ky., Inc. v. Dir., Office of Workers' Comp., 556 F.3d 472, 480 (6th Cir. 2009) ("This presumption would normally apply not only to the contents of the signed form but also to its attachments . . . . ").

presumed to have established the agreement in the final document. This rule favors practicality and efficiency: if people were forced to read and understand every contract they signed in order for that contract to be enforceable, it would cost a fortune and cause evidentiary nightmares.

We regularly assume that parties to a contract have read the document, even though quite frequently this is not true. There is no reason to create a special exception to this centuries-old precedent for metadata in the document file, particularly in an age when people are becoming increasingly adept with metadata.

2. Competent Counsel

A competent attorney in today's legal market knows about metadata and has the option to remove metadata or alter metadata to better reflect an agreement, but chooses not to. This supports metadata admissibility.

Microsoft Word comments and tracked changes are a regular part of a lawyer's day. Excel formulas are commonly included in financial attachments during transactional work or are consulted during litigation; file authorship information and filesystem modified dates are frequently consulted by counsel during discovery or drafting and may be relevant during litigation; metadata review is increasingly important in electronic discovery; and law firms employ

118. See, e.g., In re Cajun Elec. Power Co-op., Inc., 791 F.2d at 359-60.

119. If everyone were to read, consider the cost of educating laypeople to read contract law. Consider also the uncertainty cost and incredibly perjury motive of making the enforceability of contracts rest on the testimony of parties that they had read and understood the contracts.


122. E.g., Please v. Tyco Electronics Corp., 448 F. Supp. 2d 302, 306-07 (D. Mass. 2006) (noting that metadata in security log of system date and time change showed that other metadata regarding file access and modification dates of relevant disclosed files was inaccurate).

123. See, e.g., Dennis J. Connolly & W. Clay Massey, Privileges under Pressure: How Chapter 11 Bankruptcy Proceedings Can Jeopardize Privileges against Disclosure, 2007 ANN. SURV. OF BANKR. LAW 3, Part IV ("Inadvertent waiver, pressure from the government, and the new rules regarding metadata and electronic discovery all create complex issues that must be considered by practitioners in advising their clients and in managing their communications with clients and others.").
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automated email scrubbers to remove metadata from word documents to prevent inadvertent disclosure to opposing counsel. 124

In short, a competent attorney has the opportunity to specify whether he would like metadata to be considered part of the integrated agreement, and chooses not to use that opportunity. Accordingly, counsel should be presumed to have consulted the metadata in a contract and to have found it acceptable to include that metadata in the final version. Any metadata in the final electronic version of a contract should thus be considered part of the contract.

3. Formalist Benefits

The formalist benefits of the parol evidence rule and related doctrines include clarity, 125 administrability, 126 and ex-ante reliability. 127 The exclusion of parol evidence allows parties and the courts to rely on a written document as the embodiment of their agreement. 128 Courts are not dragged into evidentiary swamps filled with the muck of two parties each trying to establish that up means down, down means up, and that a particular dog at issue has five legs.

To a casual analysis, this would seem to argue against metadata admissibility. However, these benefits are not precluded by the use of metadata during contract analysis. Rather than opening up the entire negotiation history of a contract to scrutiny within the purview of the fact-finder, a court looking to metadata only looks at evidence contained in the final document itself.

4. Accuracy Benefits

Metadata provides more accurate detail about how a contract should be interpreted. For example, a tracked changes history may record that one paragraph was drafted by a particular party. Accordingly, the court will know to interpret the language of that paragraph in favor of the other party. 129

A comment on a final document discussing the meaning of a term or paragraph may directly state the intent and understanding of the parties. A modification date on a file set long after the contract was purportedly signed may show the contract was signed after its nominal date, thus changing which evidence is admissible to vary its terms. A formula in an Excel spreadsheet attached and integrated into a contract may conflict with the formula described in the contract, thus creating a real ambiguity in the contract that should be resolved. In short, metadata is a real part of the integrated agreement that can show details about the final, integrated agreement of the parties and that a court should be willing to look to as evidence of that agreement.

5. The Counterarguments Are Weak

Consider the scenario where a party, seeking to hoodwink another, enters metadata into a contract that significantly alters what would otherwise be the plain meaning of the underlying contract. A critic against allowing the introduction of metadata would point to this scenario as evidence that metadata should not be admissible. However, this is no more than a case of easily provable fraud. In the scenario where a party attempts to use metadata to perpetrate a fraud, parol evidence—not just the metadata—will be admissible under the fraud exception to the parol evidence rule. 130


126. See Larry A. DiMatteo & Daniel T. Ostas, Comparative Efficiency In International Sales Law, 26 Am. U. INT’L L. REV. 371, 414 (2011) (noting anti-formalists will argue these administrability benefits are overcome by increased transaction cost involved in finalizing an agreement, replacing efficient negotiators with inefficient lawyer-drafters).

127. See Gerald M. Moody, Jr., Writing Is Reading Is Writing: Two Applications of the Parol Evidence Rule to Collective Bargaining Agreements, 2009 COLUM. BUS. L. REV. 326, 356 n.113 (2009) (“The traditional arguments are that a strong parol evidence rule conserves judicial resources by placing the burden on the parties to draft carefully ex ante, rather than rely on a court to resolve poor drafting disputes ex post.”)

128. See supra Part I.
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The formalist benefits of the parol evidence rule and related doctrines include clarity,\textsuperscript{125} administrability,\textsuperscript{126} and ex-ante reliability.\textsuperscript{127} The exclusion of parol evidence allows parties and the courts to rely on a written document as the embodiment of their agreement.\textsuperscript{128} Courts are not dragged into evidentiary swamps filled with the muck of two parties each trying to establish that up means down, down means up, and that a particular dog at issue has five legs.

To a casual analysis, this would seem to argue against metadata admissibility. However, these benefits are not precluded by the use of metadata during contract analysis. Rather than opening up the entire negotiation history of a contract to scrutiny within the purview of the fact-finder, a court looking to metadata only looks at evidence contained in the final document itself.

4. Accuracy Benefits

Metadata provides more accurate detail about how a contract should be interpreted. For example, a tracked changes history may record that one paragraph was drafted by a particular party. Accordingly, the court will know to interpret the language of that paragraph in favor of the other party.\textsuperscript{129}

A comment on a final document discussing the meaning of a term or paragraph may directly state the intent and understanding of the parties. A modification date on a file set long after the contract was purportedly signed may show the contract was signed after its nominal date, thus changing which evidence is admissible to vary its terms. A formula in an Excel spreadsheet attached and integrated into a contract may conflict with the formula described in the contract, thus creating a real ambiguity in the contract that should be resolved.

In short, metadata is a real part of the integrated agreement that can show details about the final, integrated agreement of the parties and that a court should be willing to look to as evidence of that agreement.

5. The Counterarguments Are Weak

Consider the scenario where a party, seeking to hoodwink another, enters metadata into a contract that significantly alters what would otherwise be the plain meaning of the underlying contract. A critic against allowing the introduction of metadata would point to this scenario as evidence that metadata should not be admissible. However, this is no more than a case of easily provable fraud. In the scenario to where a party attempts to use metadata to perpetrate a fraud, parol evidence—not just the metadata—will be admissible under the fraud exception to the parol evidence rule.\textsuperscript{130}


\textsuperscript{126} See Larry A. DiMatteo & Daniel T. Oetos, Comparative Efficiency In International Sales Law, 26 Am. U. Int’l L. REV. 371, 414 (2011) (noting anti-formalists will argue these administrability benefits are overcome by increased transaction cost involved in finalizing an agreement, replacing efficient negotiations with inefficient lawyer-drafters).

\textsuperscript{127} See Gerald M. Moody, Jr., Writing Is Reading Is Writing: Two Applications of the Parol Evidence Rule to Collective Bargaining Agreements, 2009 Colum. Bus. L. Rev. 326, 356 n.113 (2009) (“The traditional arguments are that a strong parol evidence rule conserves judicial resources by placing the burden on the parties to draft carefully ex ante, rather than rely on a court to resolve poor drafting disputes ex post.”)

\textsuperscript{128} See supra Part I.

While it is reasonable for courts to construe metadata in a document as part of the document, a judge reviewing documents where invisible metadata is directly contrary to or massively divergent with the visible data will either discount the metadata or will see it as introducing an ambiguity into the document which, again, parol evidence will be admissible to resolve. In short, the use of metadata to perpetrate fraud is not a real issue because the law of fraud and the process for resolving ambiguity will remain unchanged.

Arguments that metadata is new, complex, and difficult to deal with are similarly unpersuasive. The novelty associated with managing metadata is not a legitimate reason to ignore it. Lawyers do not declare things to be outside the scope of law because they are new; instead, lawyers have CLE programs in order to adapt to represent clients properly in a changing world. It is neither complex nor difficult for law firms to scrape documents to remove metadata before sending the documents to opposing counsel for document drafters to review documents in the “final showing markup” mode rather than in the “Final” mode, or to strip most metadata from a Word document when it is saved. Any of these techniques goes a long way toward removing the issue of inadvertent disclosure or inadvertent use of metadata.

Admitting metadata also creates no additional technical burden on the court because the burden will be on the parties to present arguments from metadata when they wish to do so, and the court itself will only rarely need to independently examine the metadata. When it does have such a need, the Federal Rules of Evidence allow the court to appoint an appropriate expert or to directly question the parties’ experts. Metadata is an emerging reality of court life in law and in evidence, and excluding some of it under the parol evidence rule would not change that.

Finally, a party wishing to avoid allowing the interpretation of metadata in its contracts can easily eliminate the entire issue by the use of a proper merger clause. This section lays out the arguments for considering metadata to be beyond the four corners of a document and hence barred by the parol evidence rule.

C. Arguments Barring Metadata Admissibility

This section lays out the arguments for considering metadata to be beyond the four corners of a document and hence barred by the parol evidence rule.

1. Invisibility

Metadata is “data about data.” It is usually invisible and a party signing a document expects they are agreeing to only the parts of a document that they can see. Would a court hold a party to all of an agreement where its lawyers or opposing counsel had written some paragraphs in invisible ink?

2. Novelty

State ethics boards are prohibiting parties from looking at metadata in transactions because they consider its use in many circumstances a “surreptitious” attempt to invade attorney-client privilege. They are right to do so, not because the use of metadata is inherently surreptitious, but because it is effectively surreptitious in an age when not all lawyers are accustomed to working with metadata. This reasoning applies whether one is using metadata surreptitiously to “get behind” privilege or surreptitiously to look beyond a contract’s text. Because of metadata’s novelty and its technical complexity, allowing metadata to be a regular part of contract law would basically render the majority of lawyers ineffective counsel on certain basic contract matters.

3. Transaction Costs

It costs time and money for law firms to scrape documents and remove metadata before sending the documents to opposing counsel. Although automatically scraping outgoing documents is relatively easy, doing so means that a special process must be set up for sharing metadata with opposing counsel—and sharing metadata (such as tracked changes) with opposing counsel is very much an everyday part of a transactional lawyer’s job. Thus the amount of time a


133. See supra Part I.A.1.

134. Sinha, supra note 48, at 176.

135. Invisible language is easily overlooked. For example, pharmaceutical company Merck allegedly had evidence linking the arthritis drug Vioxx to increased risk of heart disease and concealed it, but accidentally included it in tracked changes sent to the New England Journal of Medicine. If true, this was an instance in which a party did not intend to be bound by invisible language—after all, one assumes they were hiding it precisely so that they would not be bound by it. Although it was a study rather than a contract, the principle is the same. See David M. Ewalt, When Words Come Back from the Dead, FORBES (Dec. 13, 2005, 5:00 PM), http://www.forbes.com/2005/12/13/microsoft-word-merck_ex_de_1214word.html (describing tracked changes in a document submitted from Merck to the New England Journal of Medicine that, according to the Journal, showed deletion of information linking Vioxx to increased risk for heart attack from a study).

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137. See id.
While it is reasonable for courts to construe metadata in a document as part of the document, a judge reviewing documents where invisible metadata is directly contrary to or massively divergent with the visible data will either discount the metadata or will see it as introducing an ambiguity into the document which, again, parol evidence will be admissible to resolve. In short, the use of metadata to perpetrate fraud is not a real issue because the law of fraud and evidence will be admissible to resolve. In short, the use of metadata introducing an ambiguity into the document which, again, parol evidence will remain unchanged.

Arguments that metadata is new, complex, and difficult to deal with are similarly unpersuasive. The novelty associated with managing metadata is not a legitimate reason to ignore it. Lawyers do not declare things to be outside the scope of law because they are new; instead, lawyers have CLE programs in order to adapt to represent clients properly in a changing world. It is neither complex nor difficult for law firms to scrape documents to remove metadata before sending the documents to opposing counsel, for document drafters to review documents in the “final showing markup” mode rather than in the “Final” mode, or to strip most metadata from a Word document when it is saved. Any of these techniques goes a long way toward removing the issue of inadvertent disclosure or inadvertent use of metadata.

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lawyer spends dealing with the new process may make it expensive to implement.

In addition, the vast quantity and differing types of metadata in the modern computer means that no lawyer can understand or reasonably screen for all types of metadata, and it is impractical to expect otherwise.

4. Administrability

It is a burden on the court to properly judge between two opposing parties’ differing characterizations of metadata, let alone more parties in complex litigation. In a world of relevant metadata, the level of abstraction that has been a bedrock principle of contract law formalism—the easy lie of merger doctrine that says the parties wrote down their exact agreement—begins to dissolve. The work of the bench is more complex if it must consider metadata in construing contract language and obligation.

5. The Risk of Planted Metadata: Hidden Qualifying Language

“The Contractor will use Kohler Faucets in all installations listed in Appendix A.”138 In the above sentence, “Kohler Faucets” is commented on with the comment “If we think they look nicer, we will use American Standard Faucets.”139 If this article is viewed or printed as “Final: Show Markup,” that comment is visible. However, if this article is viewed or printed as “Final,” it is not visible. Even more problematic is qualifying language written in document-wide metadata such as the “Comments” field of document properties in Word files, or JPEG or TIFF metadata in other files, for example.140 Qualifying language like this can substantially alter the requirements of a contract. If one party can plant metadata that the other may not notice, consequently altering the meaning of a contract, this will mean that even a party who closely reads the plain text of a contract is not protected from agreeing to something by accident.

III. The Four-Factor Test and Protection for Practitioners

This section proposes a simple four-factor test for metadata admissibility and suggests simple, practical solutions for jurists, litigators, and transactional attorneys.

A. Why a Four-Factor Test?

The persuasiveness of argument for inclusion of metadata will always vary based upon the particular facts of a case. A bright-line rule indicating that metadata should always be barred or always be admissible under the parol evidence rule would necessarily be over-inclusive or under-inclusive. However, the greater the complexity of the test used for admissibility, the less consistent and administrable the law becomes. A simple four-factor test would be an appropriate method, lying between these extremes, to determine the admissibility of metadata under the parol evidence rule.

B. The Four-Factor Test for Metadata Admissibility under the Parol Evidence Rule

The questions to be considered under such a test are as follows:

1. Is the metadata visible?

If the metadata is visible on the final version of the contract, this should be conclusive weight in favor of its admissibility. Only if a merger clause specifically bars the parties from relying on visible metadata should it be discounted as barred by the parol evidence rule.

The strength of this factor lies in the fact that it is unpersuasive to argue that a party should not be held to visible text on a final contract merely because that text is in a comment box or is otherwise labeled differently than the other text on a contract.141

138. If we think they look nicer, we will use American Standard faucets.
139. Updated to a footnote late in the editing process. Footnotes, unlike comments, are a form of metadata that will definitely appear in the final, printed version of this file.
141. It is worth noting, as well, that there are different “levels” of visibility—for example, an email viewing program may be configured to show the date but not the time that an email was sent, but this information may be readily visible in a different email viewing program or even a different view within the same program. Similarly, an author name or last modification date might be readable visible when someone scrolls over an electronic document, even though it does not appear if the reader opens the document itself. Where the visibility of metadata is liminal, a court should make a fact-based determination as to whether it is visible to an attorney or party engaging in standard data management practices, and weigh in favor of admissibility where it is readily visible even though technically it may arguably be hidden.
latter spends dealing with the new process may make it expensive to implement.
In addition, the vast quantity and differing types of metadata in the modern computer means that no lawyer can understand or reasonably screen for all types of metadata, and it is impractical to expect otherwise.

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Qualifying language like this can substantially alter the requirements of a contract. If one party can plant metadata that the other may not notice, consequently altering the meaning of a contract, this will mean that even a party who closely reads the plain text of a contract is not protected from agreeing to something by accident.

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2. Does the merger clause address the issue?

The parties may have negotiated a merger clause addressing the issue of metadata. This should be a routine part of contract practice. Attorneys who fail to address metadata in their transactional work are violating what will become the reasonable standard of care in the profession. A merger clause might, for example, indicate that only visible metadata such as comments on the final contract are part of the agreement between the parties, and that neither party is relying upon metadata not plainly visible in the final version of the contract.

3. Does the type of transmission include metadata?

The type of final contract formation is important. The closer contract formation is to being wholly electronic, the more likely it is that metadata should be considered part of the contract. A document faxed or mailed to an opposing party for signature would thus have its metadata barred by the parol evidence rule; contrariwise, having a document e-mailed to an opposing party for signature would weigh heavily in favor of admitting metadata. This is because the version of the document transmitted to the signing party or the signing party’s counsel contains all of the metadata text and that party had the opportunity to review the metadata, in addition to the option of excluding it via the merger clause.

4. Is the information in the metadata of the type meant to be barred by the parol evidence rule?

The parol evidence rule is meant to allow parties to rely upon the final version of their contract. Thus, its purpose is served, for example, when information about prior drafts of a contract is excluded. Metadata as to contents of a prior draft of a contract should therefore not be admitted unless the prior draft itself would be admitted under an exception to the parol evidence rule, such as in case of fraud, ambiguity, or partial integration under the applicable state law.

This factor may result in the admission of only a portion of the metadata in a given contract. For example, metadata might indicate (1) the date and time at which a final contract was exchanged, (2) the authors of the different phrases and paragraphs in the contract, (3) the history of changes to those paragraphs, and (4) comments as to the parties’ understanding of the text. This factor would favor admission of (1) and (2), weigh against admissibility of (3), and weigh neutrally on admission of (4).

142. E.g. Linzer, supra note 9, at 802 (noting debate over whether the primary purpose of the parol evidence rule is to prevent self-serving oral testimony or simply to express a presumption that the most recent statement of the parties’ will supersedes what came before).

Additionally, the date and time of admission of final contract exchange is part of the integration inquiry and cannot reasonably be barred by the parol evidence rule.

When clearly shown by metadata in the final contract, the authors’ identities could be used to determine who drafted or who inserted the final, relevant portion of the contract and, therefore, which party the contract should be more strictly interpreted against. The evidentiary problems and administrability issues raised by a detailed inquiry into which counsel drafted a particular provision no longer exists if metadata clearly identifies the author of a provision.

It is well established that a primary purpose of the parol evidence rule is to avoid using earlier drafts of a document against a party that has since negotiated for a change in the agreement, because doing otherwise would undermine the contract’s finality and effectiveness. Accordingly, where metadata such as tracked changes shows prior versions of a document, this should weigh heavily against admissibility. In such a case, the presumption against admissibility should only be overcome where other factors weigh strongly in favor of admissibility, such as where the tracked changes are visible on the final version of the document.

Comments as to understanding of the text that were accessible (or perhaps even visible) to both parties at the time the agreement was made serve not only to resolve ambiguities in the text, but to explicitly identify the meaning of the parties when a person looking at the plain text would come to a different conclusion. Unlike any prior comments exchanged between counsel in other media, these comments were actually on the final agreed-upon version of the document and could therefore be admitted without violating the purpose of the parol evidence rule. Admitting this evidence does not open the floodgates for further evidence about party intent, but does fairly hold the parties to the final agreement as they saw it.

C. Protection for Practitioners

There are three techniques transactional practitioners should be aware of when dealing with metadata: Modern Merger Clauses, Metadata Stripping, and the Analog Gap. These protect against the risk of accidental metadata integration by reflecting the true intent of the parties and removing metadata when it is unwanted.

143. See, e.g., Dakota Minn. & E. R.R. Corp. v. Wis. & S. R.R. Corp., 657 F.3d 615, 620 (7th Cir. 2011) (“The parol evidence rule does not permit [preliminary drafts] to be used to contradict the terms of an unambiguous written contract . . . .”).
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1. Modern Merger Clauses

The precise merger clause used by default in an attorney's contracts will vary slightly based on the state, the field of law, and the experience of the particular attorney. Metadata is likely to result in an update to the boilerplate merger clause language used by most attorneys. For example, many general merger clauses indicating that the contract represents the entire agreement between the parties may be updated to specifically note that metadata in the main contract, any attachments, or (if appropriate) any subsequent agreements governed by the contract is not a part of the final integrated agreement. In the alternative, a merger clause may note that only metadata visible in a particular circumstance—such as visible metadata after all tracked changes are accepted—is included in the final agreement. In the alternative, a subset of metadata may be integrated into the agreement. For example, comments included on the document may be considered part of the agreement while tracked changes are not.

It is also important to note in such clauses whether metadata in attached spreadsheets is to be treated the same way as other metadata.

The virtue of a merger clause over a default legal rule for metadata admissibility is that—if written correctly and for the particular agreement—it properly captures the negotiated intent of the parties. 144

A sample merger clause might read as follows: “This Agreement constitutes the entire understanding between the Parties and supersedes all previous understandings, agreements, communications, and representations, whether written or oral, concerning the subject of transaction. Any prior agreements, offers, promises, nominations, or representations, either oral or written or in Metadata, relating to the subject matter of this Agreement that are not expressly set forth in this Agreement are of no force or effect. Any arguments, offers, promises, nominations or representations occurring solely in Metadata are not considered to be expressly set forth in this Agreement. 145

Alternatively, a drafter wishing to have only the traditional final, black-letter version of the contract considered part of the agreement for purposes of the parol evidence rule may define Agreement specifically to exclude metadata: “This Agreement does not include any Metadata associated with it.”

144. See supra Part I.A.1.

2. Metadata Stripping

A responsible law firm today should consider metadata stripping, as it is possible to strip metadata from documents. 146 Technically astute law firms routinely and automatically strip all metadata from attachments in their outgoing email to prevent inadvertent disclosure of privileged information. Automatic metadata stripping also prevents the inadvertent inclusion of non-final metadata in the final version of a contract. 147 In such an environment, lawyers wishing to communicate metadata must affirmatively make that decision.

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144. See supra Part I.A.1.

146. This would allow courts to interpret visible metadata as part of the contract, and would be fair to all parties and arguably more intuitive than straightforward metadata exclusion. The downside, of course, is the risk that a disreputable party will alter its printed version of the contract to reduce its obligations thereunder. This is a risk commonly accepted by parties, and can be addressed by including an electronic hash of the document file in the final contract language.


148. See id. (discussing automated metadata stripping from PDF files).
functions may be the difference between excellent work and a scenario where a lawyer receives comments from a client’s in-house automated metadata removal tool, taking advantage of these inadvertent disclosure of privileged information. Consider the counsel on a contract he is negotiating for them. He makes changes based on those comments, deletes the comments, and then sends the new document to the other party to the negotiation. Depending on program design and saved file format, the other party may be able to see in-house counsel’s privileged comments by use of the “Undo” function in a given application. But if one first inspects the document and strips information, this becomes significantly harder.

3. The Analog Gap

Every year, a few truly embarrassing incidents occur in which improperly redacted documents are released and state secrets or confidential business information is publicized as a result. In the most classic cases, a redactor draws a rectangular black box over secret text in a PDF document. This is like putting a piece of black tape on a sheet of paper. A member of the public later deletes the rectangular black box (removing the tape) and looks at the text left underneath it.

A common example of improper redaction is accidentally deleting something while change tracking is on, or sending a file to someone having deleted a section that they can undelete with the “Undo” command.


150. It may become impossible, but this depends on nuances of program design. Ideally a vendor should be consulted.

151. See, e.g., Alex Kingsbury, TSA to Conduct Full Review After Leak of Sensitive Information An improperly redacted PDF allowed access to secret TSA information, U.S. NEWS & WORLD REP. (Dec. 7, 2009), http://www.usnews.com/news/articles/2009/12/07/tna-to-conduct-full-review-after-leak-of-sensitive-information. See also Favro, supra note 70, at 4-5 (“Indeed, Google, Dell, Merck, the United Nations Secretary General, the Democratic National Committee, and others have recently made embarrassing and sometimes damaging revelations through inadvertent disclosures of metadata.”) (footnotes omitted).

Deletion of the black box is not the only option—the copy and paste function may still be available for the redacted text, for example. Kingsbury, supra note 151.

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154. There are some scenarios under which hidden information could still be revealed, but these are unlikely and rarely a cause for worry. For example, in the extreme, a program could be configured to print an almost-invisible code representing metadata so that it could later be reviewed following subsequent scans. Similarly, the type setting of text following or preceding a redacted line in a PDF file might give away some information about the length of the words used on the hidden lines.

155. United States v. Safavian, 435 F.Supp.2d 36, 41 (D.D.C. 2006) (“[E]mail communication now is a normal and frequent fact for the majority of this nation’s population, and is of particular importance in the professional world.”). Courts have embraced the technology as the business world has, establishing new evidentiary standards to suit the changing world in a sensible way. See Lorraine v. Markel Am. Ins. Co., 241 F.R.D. 534, 558 (D. Md. 2007) (collecting cases and thoroughly exploring the treatment of electronically stored information under the Federal Rules of Evidence).

156. Consider the tracked changes copy of a contract, the formula in an Excel spreadsheet, data showing whose faces are in a photograph on a social networking platform, or the date that an email was sent—all useful kinds of metadata likely to be used for the foreseeable future.
functions may be the difference between excellent work and inadvertent disclosure of privileged information.

Consider the scenario where a lawyer receives comments from a client’s in-house counsel on a contract he is negotiating for them. He makes changes based on those comments, deletes the comments, and then sends the new document to the other party to the negotiation. Depending on program design and saved file format, the other party may be able to see in-house counsel’s privileged comments by use of the “Undo” function in a given application. But if one first inspects the document and strips information, this becomes significantly harder. 149

3. The Analog Gap

Every year, a few truly embarrassing incidents occur in which improperly redacted documents are released and state secrets or confidential business information is publicized as a result. 150 In the most classic cases, a redactor draws a rectangular black box over secret text in a PDF document. This is like putting a piece of black tape on a sheet of paper. A member of the public later deletes the rectangular black box (removing the tape) and looks at the text left underneath it. 151

A common example of improper redaction is accidentally deleting something while change tracking is on, or sending a file to someone having deleted a section that they can undelete with the “Undo” command.


150. It may become impossible, but this depends on nuances of program design. Ideally a vendor should be consulted.

151. See, e.g., Alex Kingsbury, TSA to Conduct Full Review After Leak of Sensitive Information An improperly redacted PDF allowed access to secret TSA information, U.S. NEWS & WORLD REP. (Dec. 7, 2009), http://www.usnews.com/news/articles/2009/12/07/tsa-to-conduct-full-review-after-leak-of-sensitive-information. See also Favro, supra note 70, at 4-5 (“Indeed, Google, Dell, Merck, the United Nations Secretary General, the Democratic National Committee, and others have recently made embarrassing and sometimes damaging revelations through inadvertent disclosures of metadata.”) (footnotes omitted).

Deletion of the black box is not the only option—the copy and paste function may still be available for the redacted text, for example. Kingsbury, supra note 151.

There are technical solutions to these problems, 152 but the safest method of preventing the recovery of information that is not immediately visible to a document viewer is the analog gap: printing the visible part of the file to paper and scanning it back into the computer makes it largely impossible for a viewer of the newly created file to recover the redacted information. 153 This is like copying the paper on a copying machine with the piece of black tape on it. By only giving out the copy, counsel prevents anyone from removing the tape.

CONCLUSION

Today, metadata is where email was ten years ago and fax machines were twenty-five years ago: a reality of the business world, brought on by technology. 154 It is useful and it is here to stay. 155 Transactional attorneys work with it every day and must protect themselves and their clients from its drawbacks. Litigators must consider it during document production and make strategic decisions and tactical decisions about it during discovery, settlement, and trial. And courts must determine how it will interact with the parol

152. Deletion of the black box is not the only option—the copy and paste function may still be available for the redacted text, for example. Kingsbury, supra note 151.


154. There are some scenarios under which hidden information could still be revealed, but these are unlikely and rarely a cause for worry. For example, in the extreme, a program could be configured to print an almost-invisible code representing metadata so that it could later be reviewed following subsequent scans. Similarly, the typesetting of text following or preceding a redacted line in a PDF file might give away some information about the length of the words used on the hidden lines.

155. United States v. Safavian, 435 F.Supp.2d 36, 41 (D.D.C. 2006) (“[E]-mail communication now is a normal and frequent fact for the majority of this nation’s population, and is of particular importance in the professional world.”). Courts have embraced the technology as the business world has, establishing new evidentiary standards to suit the changing world in a sensible way. See Lorraine v. Markel Am. Ins. Co., 241 F.R.D. 534, 558 (D. Md. 2007) (collecting cases and thoroughly exploring the treatment of electronically stored information under the Federal Rules of Evidence).

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evidence rule, a formalist rule originating a third of a millennium ago, at the dawn of the Enlightenment.\footnote{157}{See Wigmore, supra note 3, at 339.}

The four-factor test proposed has the virtue of being easy for practitioners and jurists to deal with, while capturing the intent and advantages of the parol evidence rule without disregarding the role and utility of metadata for courts and practitioners. This lowers transaction costs and administrability costs as compared to a more nuanced approach, without defeating the basic goal of adjudicating cases upon the merits in a post-formalist world.