O’Keefe and the Wheel That Begs for Reinvention: An Exceptionalist Approach to Electronic Discovery in Criminal Actions

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By Jared S. Beckerman*

I. INTRODUCTION

¶1 On April 7, 1969, Dr. Wernher von Braun, director of NASA’s Apollo Applications Program, established the Lunar Roving Task Team at Marshall Space Flight Center in Huntsville, Alabama.1 Acknowledging that “there are no superhighways on the moon (yet),” von Braun believed that a specialized “moonmobile”2 would facilitate exploration of the moon on Apollo missions 15, 16, and 17.3 The unique physical attributes of the moon required that the project engineers from NASA, Boeing, and GM construct mechanical systems for the lunar roving vehicle that were markedly different from those found on earth-bound vehicles.4 One such integral system pertaining to mobility focused predominantly on the four wheels that would carry the rover across the moon’s surface.5

The wheels had to be specially designed with several considerations in mind—the absence of an atmosphere on the moon; extreme surface temperatures fluctuating between positive or negative 250 degrees Fahrenheit; a force of gravity measuring one-sixth of Earth’s gravitational pull; and the relatively unknown conditions presented by lunar soil and topography.6 To accommodate the moon’s rough terrain, several modifications to the conventional vehicle wheel were proposed.7 The final design delivered to NASA featured hollow wheels made of spun aluminum with titanium bump stops.8 The vehicle’s tires were thirty-two inches in diameter and nine inches wide, and they were made of a woven mesh of zinc-coated piano wire to which titanium threads were riveted in a “chevron” pattern, giving the wheel traction in deep levels of moon dust.9

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1 NASA, A BRIEF HISTORY OF THE LUNAR ROVING VEHICLE 4 (Mike Wright, Bob Jacques & Saverio Morea eds., 2002) [hereinafter BRIEF HISTORY].
3 BRIEF HISTORY, supra note 1, at 3–4.
4 Id. at 6.
5 Id. at 7.
6 Id. at 6.
7 Getting Along on the Moon, supra note 2, at 271.
8 Everly Driscoll, Moon Mobile Debut on Apollo 15, SCI. NEWS, June 12, 1971, at 404, 405.
9 BRIEF HISTORY, supra note 1, at 7; Driscoll, supra note 8, at 405.
On July 26, 1971, NASA sent the first lunar roving vehicle to the moon with the launch of Apollo 15. While on its maiden voyage, many of the vehicle’s systems suffered fallbacks. The wheels, however, functioned quite well, traversing obstacles without significant accumulation of dust due to their particular design. After the proverbial moon dust settled, it became clear that the engineers’ special attention to the specific demands of travel on the moon and the resulting consideration given to the vehicle’s wheels paid off.

Few people, if any, would argue that the issues presented by travel on the earth and travel on the moon are the same. Certainly there are several similarities shared by both, as illustrated by the general design of the lunar roving vehicle—four wheels powered by a motor—elements by no means foreign to the modern earth traveler. However, the stark differences between surface conditions on the earth and moon caused designers of the rover to quite literally reinvent the wheel, without which the lunar roving vehicle may not have been at all successful.

As intrinsically dissimilar as are the earth and moon, arguably, so are the Federal Rules of Civil Procedure (Civil Rules) and the Federal Rules of Criminal Procedure (Criminal Rules). While both have provisions for jurisdiction, venue, discovery, etc., there are undeniable and stark differences between the principles underlying the function of each set of procedural guidelines.

*United States v. O’Keefe* was the first case in which a court explicitly applied provisions of the Civil Rules pertaining to electronic discovery (e-discovery) to a criminal action. In doing so, United States Magistrate Judge Facciola opined that it was not only proper but preferable to turn to the Civil Rules for guidance on e-discovery matters in criminal actions. Because the rules are the product of countless years of revision by judges and scholars, Judge Facciola explained that “it is far better to use these rules than to reinvent the wheel when the production of documents in criminal and civil cases raises the same problems.”

The court reached the right decision in *O’Keefe* and appealing to the Civil Rules for guidance was well within Judge Facciola’s authority. This article will argue, however, that the wholesale adoption of the Civil Rules in solving problems of e-discovery in criminal actions is not the best solution. Judge Facciola was correct in stating that “the production of documents in criminal and civil cases raises the same problems,” as the

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10 BRIEF HISTORY, supra note 1, at 18.
11 For example, on the lunar roving vehicles’ initial run, the front steering mechanism failed to operate, a difficulty overcome by driving the rover using only rear-wheel steering. *Id.*
12 *Id.*
13 *Id.* at 7.
14 A main subcontractor to the lunar roving vehicle project, who seized the opportunity in titling a press release, used this pun. See Press Release, General Motors, Delco Electronics Division, GM Reinvented the Wheel for Lunar Roving Vehicle (June 1971).
17 *O’Keefe*, 537 F. Supp. 2d at 19.
18 *Id.* (emphasis added).
19 See *FED. R. CRIM. P.* 16(d)(1); see also infra Part II.C.
20 *O’Keefe*, 537 F. Supp. 2d at 19.
technical issues (and headaches) in the production of electronically stored information (ESI), and they are the same regardless of the type of case in which they arise. However, despite similar problems, the principles underlying the Civil Rules and the Criminal Rules may in several instances dictate different solutions to these perhaps shared problems.

Because there is no guidance within the Criminal Rules providing insight into the method of production of ESI and there is some indication that e-discovery issues are finally arising in criminal actions, now is the time to consider how such issues will be handled, before the deluge begins. Instead of adopting the Civil Rules carte blanche to solve problems related to e-discovery in criminal actions when they arise, as O’Keefe suggests, this article advocates for appropriate amendments to the Criminal Rules. These amendments will address the problems presented by the production of ESI in a manner which will be both similar and dissimilar to how they are handled in civil actions—an approach guided by the principle differences underlying the two sets of rules.

When NASA decided to construct vehicles for exploration of the moon, they reinvented the wheel. Now, as our legal system is ripe to handle e-discovery issues born in civil actions and tackle them in criminal actions, it should similarly reinvent the wheel and establish appropriate, specialized rules.

II. THE EFFECT OF O’KEEFE

A. United States v. O’Keefe

Before he was indicted, Michael John O’Keefe, Sr. worked as a consular officer at the U.S. Consulate in Toronto, Canada. The United States brought bribery charges against him and a co-defendant, Sunil Agrawal, the chief executive officer of STS Jewels, Inc., related to improprieties in the processing of visa applications. The U.S. alleged that O’Keefe expedited visa appointments for individuals affiliated with STS Jewels in contravention of established procedures and that Agrawal gave O’Keefe gifts as quid pro quo for expediting applications.

Agrawal brought a motion to compel discovery, to which O’Keefe joined, pursuant to Fed. R. Crim. P. 16(a)(1)(E). The rule sets forth in relevant part that “the government must permit the defendant to inspect and to copy or photograph books, papers, documents, data, photographs, tangible objects, buildings or places, or copies or portions of any of these items, if the item is within the government's possession, custody, or control.” In addition, the production must only be made if either: the item(s) are material to the preparation of a defense, the government plans to use the item(s) during its case-in-chief during trial, or the item(s) belong to or were seized from the defendant. In their motion, Agrawal and O’Keefe claimed that they were entitled to discovery from the

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21 United States v. O'Keefe, Criminal No. 06-0249, 2007 WL 1239204, at *1 (D.D.C. April 27, 2007) (containing the initial order of United States District Judge Friedman granting discovery to the defendants pursuant to FED. R. CRIM. P. 16(a)(1)(E)).
22 Id.
23 Id.
24 Id.
26 Id.
government, because what they sought to obtain was “material” to their defense. They wished to show that they lacked the requisite mens rea to commit bribery (Agrawal in giving, O'Keefe in taking) through the use of documents that showed that there were no set procedures regarding expediting visa appointments; even if there were such policies, they were routinely violated by all consulars.

After receiving paper documents and ESI pursuant to an order finding their requested production “material” under Rule 16(a)(1)(E), the defendants filed a second motion to compel, which claimed that the government had not fully complied. They first took issue with the manner in which both paper and electronic documents were searched, and they demanded that the government provide a detailed description of what was searched, how it was searched, and who performed the search. Next, in regard to paper production, the defendants complained that the government produced in a manner that made it “impossible to identify the source or custodian of the document,” and they demanded that the government produce an index identifying a document's custodian, source, and Bates number. Finally, the defendants presented several objections regarding the government's electronic production, including the manner in which the government searched for relevant ESI and its preservation efforts. The defendants also expressed concern about the government’s handling of metadata.

Before evaluating the parties' claims on their merits, Judge Facciola set forth the authority he would use to guide his decisions on these matters of criminal discovery. Noting that there were no rules courts could look to for guidance regarding the form of production in criminal actions, Judge Facciola decided that because the Civil Rules “speak specifically to the form of production,” he would use them to settle the parties' discovery disputes. He went even further, however, and stated that the Civil Rules had been in use and refined over many years, and the problems presented by the production of documents (both paper and electronic) are universal, regardless of whether they arise in a civil or criminal action. He implied that it would be imprudent to look elsewhere for

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28 Id.
30 O'Keefe, 537 F. Supp. 2d at 16.
31 Id. at 16–18.
32 Id. at 18.
33 Id. at 21–24.
34 Id. at 22–24. Metadata is “data about data.” See ALLISON BRECHER & SHAWNNA CHILDRESS, E-DISCOVERY PLAIN & SIMPLE: A PLAIN ENGLISH CRASH COURSE IN E-DISCOVERY 54–55 (2009). Contained in the native file, it is “[s]econdary data that organize, manage, and facilitate the use and understanding of primary data.” BLACK'S LAW DICTIONARY 1080 (9th ed. 2009). Some examples of metadata include:

   "a file's name, a file's location (e.g., directory structure or pathname), file format or file type, file size, file dates (e.g., creation date, date of last data modification, date of last data access, and date of last metadata modification), and file permissions (e.g., who can read the data, who can write to it, who can run it) . . . . Most metadata is generally not visible when a document is printed or when the document is converted to an image file."

35 O'Keefe, 537 F. Supp. 2d at 19.
36 Id.
authority, and concluded that “it is far better to use these rules than to reinvent the wheel.”

¶14 As for the defendants’ qualms with the government's methods of searching for ESI, Judge Facciola was not convinced that the defendants deserved relief.38 In their motion to compel, O’Keefe and Agrawal criticized several aspects of the government's search methods, including the quality of the keywords used and their failure to use proper “forensic searchware.”39 Mindful of the work of the Sedona Conference, which highlighted how complex these questions regarding search truly are, Judge Facciola denied the defendants’ request.40 He instructed that if they wished to pursue these complaints further, they would have to file a motion to compel satisfying the requirements of Rule 702 of the Federal Rules of Evidence.41

¶15 Lastly, and most relevant to this article, Judge Facciola discussed the defendants' worries about metadata.42 In their motion, they stated that while it was not “per se problematic” that the government produced ESI as electronic images files,43 the defendants had concerns about the role of metadata at later stages in the case.44 Again utilizing Rule 34 of the Civil Rules, Judge Facciola invoked the subsections dealing primarily with the production of ESI, Rules 34(b)(2)(E)(ii) and 34(b)(2)(E)(iii).45 The first requires that a responding party produce ESI in the form in which it is ordinarily maintained or in a form that is reasonably usable.46 The second states that in doing so, the responding party does not have to produce ESI in more than a single form.47 Since the government had already produced PDF and TIFF files, he concluded that unless the defendants could show that for some reason the files were not reasonably usable (without metadata), the government was in compliance with Rule 34(b)(2)(E)(ii).48 Furthermore, if the defendants wished to ensure that the government retained the native files with their metadata, they would have to secure it with a stipulation or file a motion to compel if the

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37 Id.
38 See id. at 22–24.
39 Id. at 22, 24.
40 Id. at 24 (citing The Sedona Conference, Best Practices Commentary on the Use of Search and Information Retrieval, 8 SEDONA CONF. J. 189 (2008)).
41 Id. By referencing Rule 702 of the Federal Rules of Evidence, Judge Facciola indicated that he would require testimony that reflected “scientific, technical, or other specialized knowledge” by an individual qualified as an expert. FED. R. EVID. 702.
42 See O’Keefe, 537 F. Supp. 2d at 23.
43 The Government usually produced PDF or TIFF files, which are static file formats converted from the file format in which they were natively maintained. See PSEG Power N.Y., Inc. v. Alberici Constructors, Inc., No. 1:05-CV-657, 2007 WL 2687670, at *2 n.2 (N.D.N.Y. Sept. 7, 2007) (“A Tagged Image File Format (abbreviated as TIFF) is a flexible and adaptable file format for storing images and documents used worldwide. TIFF files use LZW lossless compression without distorting or losing the quality due to the compression. In layman's terms, TIFF is very much like taking a mirror image of many documents in format that can be compressed for storage purposes.”).
44 O’Keefe, 537 F. Supp. 2d at 23.
45 Id.
48 O’Keefe, 537 F. Supp. 2d at 23.
In commenting that the government's production of files in PDF and TIFF formats complied with "these rules [34(b)(2)(E)(ii) and 34(b)(2)(E)(iii)]," Judge Facciola seemed to imply that the government would not have to produce files in an additional format pursuant to Rule 34(b)(2)(E)(iii).  

**B. O'Keefe’s Progeny**

Judge Facciola’s application of the Civil Rules to e-discovery issues arising in a criminal action, for what appears to be the first time, has caused *O'Keefe* to emerge as the likely seminal case on criminal e-discovery. The case’s importance did not go unnoticed by e-discovery commentators in the blogosphere, who discussed the long-term implications of the decision. Nor was it ignored by law firms or e-discovery vendors. Most commentary on the decision, however, focused on the fact that *O'Keefe* “was the first opinion to suggest that judicial review of alleged search deficiencies [in the production of ESI] requires expert testimony.” This is not surprising, considering that most, if not all, notable e-discovery commentators either practice or are primarily concerned with civil law matters (and few criminal actions to date have been concerned with ESI search methods). In fact, several civil cases have cited to and followed *O'Keefe’s* rationale regarding Federal Rule of Evidence 702 and the need for expert testimony in challenging a responding party’s search methods.

Those concerned with criminal law have also taken note of this important case and its unique application of civil law rules to criminal actions. During the course of his criminal trial on federal corruption charges, former Senator Ted Stevens advanced similar claims to the *O'Keefe* defendants. In addition, less than four months after Judge

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49 *Id.*  
50 *Id.* See infra Part IV.A.  
54 See generally Losey, supra note 51.  
55 E.g., Stanley, Inc. v. Creative Pipe, Inc., 250 F.R.D. 251 (D. Md. 2008) (holding that the attorney-client privilege or work product protected status had been waived in regard to several electronic documents that the producing party failed to discover during a privilege review while not using reasonable search terms).  
56 See Murphy & Byers, supra note 16.  

("Criminal discovery is not a game. It is integral to the quest for truth and the fair adjudication of guilt or innocence. But even civil litigants must either produce documents as
Facciola handed down his decision, the United States Attorneys' Bulletin, published by the Executive Office for United States Attorneys, featured an article on e-discovery and criminal law.\(^59\) After citing to \textit{O'Keefe}, the article warned that “prosecutors should be aware that federal judges may hold them to certain standards common to civil litigation.”\(^60\) Taking an apparent cue from Judge Facciola’s adoption of the Civil Rules, the article followed with a basic crash course on the fundamentals of e-discovery—everything from litigation holds to metadata. If a reader were somehow unaware of the article’s title or purpose, the majority of its content could be reasonably confused with a civil litigator’s pocket manual on e-discovery.

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Judge Facciola’s opinion did not discuss the vast majority of e-discovery topics included in the bulletin. This is an important observation, as it appears that the authors, and likely several decision makers at the United States Department of Justice, believed that Judge Facciola had fired the opening salvo in the judiciary’s wholesale adoption of the Civil Rules pertaining to e-discovery. The inclusion of information on a broad array of e-discovery topics would prepare their readership accordingly.

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Although the \textit{O'Keefe} opinion captured the attention of the legal blogosphere, armed criminal defense attorneys with more fodder for their clients’ motions to compel, and even brought some level of concern to the United States Department of Justice, one obvious reaction appears to be missing—critique.\(^61\) Despite a bold judicial opinion that facially advocated for imputing the procedures of civil law to criminal law, few voices have emerged discussing the opinion’s merits. In what appears to be the only article\(^62\) (albeit unpublished) to do so, the author is only somewhat critical of Judge Facciola’s bold statements.\(^63\) While discussing two courts’ diverse approaches to the application of the Civil Rules to paper “data-dumping” in criminal actions, the author does, however, conclude that the Criminal Rules need to be changed to address e-discovery.\(^64\)

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\(^{60}\) Id. at 27.

\(^{61}\) The omission is odd, particularly in the legal profession.

\(^{62}\) Between the initial writing of this article and its publication, Daniel B. Garrie and Daniel K. Gelb published an excellent piece asserting, as this article does, that criminal law deserves specific e-discovery rules. See Daniel B. Garrie & Daniel K. Gelb, \textit{E-Discovery in Criminal Cases: A Need for Specific Rules}, 43 SUFFOLK U. L. REV. 393, 394 (2010). While citing \textit{O'Keefe} as the closest thing that the federal criminal justice system has to a landmark case or rule in regard to e-discovery, this is the full extent of the authors’ discussion of this particular case. \textit{Id.} at 399. Thus, even though their article advocates for specialized e-discovery rules, the authors are not explicitly critical of \textit{O'Keefe}'s proposition that it is unnecessary to reinvent the wheel when it comes to e-discovery in criminal actions.


\(^{64}\) Id. at 26–27.
C. Rationale and Respect

Although this article seeks to promote an alternative view to the blanket adoption of the Civil Rules to solve e-discovery problems in criminal actions, it does not disagree with the ultimate order Judge Facciola reached as a result of applying the Civil Rules. To wit, it has been said that his ruling “provide[d] a thoughtful and well reasoned opinion” for all the parties.65 The authority of a judge to modify discovery procedures when appropriate in a criminal action lies in Fed. R. Crim. P. 16(d)(1), which states, “At any time the court may, for good cause, deny, restrict, or defer discovery or inspection, or grant other appropriate relief.”66 Thus, Judge Facciola was well within the bounds of his authority to look to the Civil Rules as he did. Another approach that judges have taken under Rule 16(d)(1), instead of adopting the Civil Rules, is to design their own procedures that are tailored to the needs of the case at bar—an approach taken in United States v. Gonzalez.67 In Gonzalez, the district court judge set forth her own procedures relevant to the production of ESI in a criminal action.68 The order made no reference to O’Keefe, despite being filed one year afterward.69 One can only speculate as to whether this served as a rejection of its rationale.

While using the Civil Rules may have yielded the correct result in O’Keefe, the rationale for looking to these rules generally is somewhat more suspect:

In criminal cases, there is unfortunately no rule to which the courts can look for guidance in determining whether the production of documents by the government has been in a form or format that is appropriate. This may be because the “big paper” case is the exception rather than the rule in criminal cases. Be that as it may, Rule 34 of the Federal Rules of Civil Procedure speak[sic] specifically to the form of production. The Federal Rules of Civil Procedure in their present form are the product of nearly 70 years of use and have been consistently amended by advisory committees consisting of judges, practitioners, and distinguished academics to meet perceived deficiencies. It is foolish to disregard them merely because this is a criminal case, particularly where, as is the case here, it is far better to use these rules than to reinvent the wheel when the production of documents in criminal and civil cases raises the same problems.70

This article will conclude that the wheel is worth reinventing and will set forth a few illustrative sample amendments to the Criminal Rules.

Even after the new amendments to the Civil Rules pertaining to ESI went into effect on December 1, 2006, judges have been left alone to solve thorny issues both inside and outside the text of the rules.71 Thus, when influential judges such as Judge Facciola hand down opinions addressing new wrinkles in the law of e-discovery, they are “treated like papal encyclical[s].”72 Apart from his substantive contributions, he is

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65 Id. at 19.
68 See id.
69 Id.
71 Jason Krause, Rockin’ Out the E-Law: A Few Federal Judges are Becoming Stars as They Create New E-Discovery Rules, ABA J., July 2008, at 48, 49–51 (discussing the significant role a few judges have had in effecting the rules of e-discovery).
72 Id. at 49.
regarded by many in the legal community as one of the few judges with such a “deep understanding of e-discovery.”

Although this article puts forth an academic disagreement with Judge Facciola’s commentary in a single case, it is important to point out not only his substantial contributions to the field of e-discovery, but the fact that few are more qualified to speak on such issues than he. Deservedly considered a “rock star” in the field, Judge Facciola has authored several influential and highly regarded opinions on the topic of e-discovery apart from O’Keefe, including McPeek v. Ashcroft and Citizens for Responsibility and Ethics in Washington v. Executive Office of the President.

III. BREAKING (DOWN) THE RULES

The principles underlying the Civil Rules and the Criminal Rules are undoubtedly different. The fact that the two areas warrant their own set of procedural guidelines is itself a testament to the substantive dissimilarity between criminal and civil law. Specifically, as Chief Justice Warren E. Burger once observed, “in criminal cases, finality and conservation of private, public, and judicial resources are lesser values than in civil litigation.” It is not the purpose of this article to fully analyze this intuitive conjecture; however, as it is a major premise on which this article rests, it is worth a brief consideration.

The logical starting points in explaining the differing principles behind the rules are perhaps the most overlooked: Rule 1 of the Civil Rules and Rule 2 of the Criminal Rules. These two sections set out the scope and purpose of their respective body of rules. Rule 1 of the Civil Rules states in relevant part, “[the Civil Rules] should be construed and administered to secure the just, speedy, and inexpensive determination of every action and proceeding,” and Rule 2 of the Criminal Rules states, “[the Criminal Rules are] to be interpreted to provide for the just determination of every criminal proceeding, to secure simplicity in procedure and fairness in administration, and to eliminate unjustifiable expense and delay.”

Providing the “purpose” of their respective procedural guidelines, Rules 1 and 2 often aid courts in the interpretation of other corresponding rules. From a comparative standpoint, however, the sentiments of Rule 1 and Rule 2 appear strikingly similar. Both focus on ensuring ends that are just and reached in a fast and inexpensive manner.

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73 See Losey, supra note 51.
76 FED. R. CIV. P. 1 (emphasis added).
77 FED. R. CRIM. P. 2 (emphasis added).
79 Rule 2 of the Criminal Rules also discusses simplicity and fairness, which are facially absent from Rule 1 of the Civil Rules. These two terms, however, have been interpreted to be important (albeit overtly absent) features of Rule 1. See FED. R. CIV. P. 1 advisory committee's note (1993) (stating courts have an obligation to “exercise the authority conferred by these rules to ensure that civil litigation is resolved not
Thus, taken alone, Rules 1 and 2 do not provide conclusive answers to this inquiry, and one must appeal to additional authority.

¶29 In fact, the parallels between the stated purposes of the Civil Rules and Criminal Rules were acknowledged by the Advisory Committee notes to the 1944 adoption of Fed. R. Crim. P. Rule 2.80 This would appear to go against the assertion that the Civil Rules and Criminal Rules are guided by differing principles. However, although the Rules’ purposes are largely shared (i.e. justice, speed, low cost), their distinct differences in underlying principles are made apparent by the differing relative value civil and criminal law respectively place on these purposes.

¶30 A rough cardinal ranking of the distinct values placed on justice, cost, and speed in criminal and civil cases can be derived by observing a few of the core differences between criminal and civil law. Civil actions aim to settle disputes between private parties, with the purpose of obtaining some sort of legal or equitable remedy.81 Criminal actions seek to measure the guilt of a defendant related to alleged proscribed conduct.82 The intuitive distinction between criminal and civil law that follows from these different goals has been acknowledged since the adoption of the United States Constitution.83 In fact, the “Bill of Rights clearly reflects this division: more than half its protections apply primarily to the criminally accused.”84 Such constitutional assurances for criminal defendants are necessary. In civil cases, money is usually all that is at stake. In criminal actions, however, a defendant has “at stake interest of immense importance, both because of the possibility that he may lose his liberty upon conviction and because of the certainty that he would be stigmatized by the conviction.”85

¶31 For example, criminal defendants enjoy robust rights to a jury trial under the Sixth Amendment. By contrast, civil litigants have limited rights to a jury under the Seventh Amendment (rights for actions at law, not at equity) in federal court and lack such Seventh Amendment rights in state court, where the availability of a civil jury trial is a function of state law.86 In describing the nature of the Sixth Amendment, the United States Court of Appeals for the Third Circuit eloquently stated:

The language of the Sixth Amendment does not admit of any indication that the absolute right to a jury trial in criminal cases can be modified by reasons of efficiency or public policy arguments. This reading of the Sixth Amendment comports with and is supported by the uniformly accepted notion that in criminal cases there is no mechanism only fairly, but also without undue cost or delay”) (emphasis added). See also United States v. F. & M. Schaefer Brewing Co., 356 U.S. 227, 241 (1958) (“Simplicity and speed, when consonant with effective protection of the interests of the parties, are touchstones for the interpretation of all the Rules . . . .”) (emphasis added).

80 See FED. R. CRIM. P. 2 advisory committee’s note.
84 Id. 85 In re Winship, 397 U.S. 358, 363 (1970).
available to the government comparable to making a motion for directed verdict or summary judgment in civil cases. Indeed, no matter how strong and even overwhelming the evidence is, and although a judge can grant a judgment of acquittal in favor of the defendant before or even after the jury renders its verdict . . . a criminal defendant in federal courts can be convicted only by the verdict of a jury.87

Additionally, under the Sixth Amendment, the right to a speedy trial88 (which should not be understood as being an efficiency factor89), confrontation of witnesses, compulsory process, and assistance of counsel are available in “all criminal prosecutions.”90 Both the substantive and procedural discrepancies between criminal and civil law are also well noted by the Federal Rules of Evidence, which prescribe fourteen rules instructing the courts to rule on evidentiary matters differently in civil and criminal actions.91

In granting these and other unique rights only to criminal defendants, the subordination of efficiency is far more apparent in the criminal context than in civil cases, because “[o]ur system of criminal justice prides itself on the ability to assure that no innocent person is convicted wrongfully, rather than on swift and immediate action. . .

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87 United States v. Pelullo, 14 F.3d 881, 895 (3d Cir. 1994) (emphasis added).
88 A criminal defendant’s speedy trial rights may be particularly relevant when ESI is concerned. The production of ESI is often an arduous and time consuming endeavor, especially when working with large amounts of data which must be culled down, searched for relevant files, reviewed for privilege, etc. Civil trials are not unaccustomed to significant delay, especially when complex discovery is concerned. In criminal cases, however, it appears that there may be an inherent tension between the prosecution’s thorough search and production of ESI and a defendant’s right to a speedy trial. It is difficult to speculate exactly how a court will apply a defendant’s speedy trial rights to e-discovery requests, as any such inquiry is approached by the court on a case-by-case basis. See Barker v. Wingo, 407 U.S. 514, 530 (1972) (establishing a four-factor balancing test for evaluating defendants’ claims of deprivation of Sixth Amendment speedy trial rights).

89 The right to a speedy trial contained in the Sixth Amendment should not be confused with the efficiency factor of speed. In terms of efficiency, speed refers to those policies that push litigants through the courts for the purpose of conserving judicial resources, often to their detriment. The speedy trial right, however, is offered for the benefit of a criminal defendant, not for any other purpose rooted in efficiency. See generally id. at 514.
90 U.S. CONST. amend. VI.
91 See FED. R. EVID. 201, 404, 408, 410, 412, 413, 414, 609, 612, 704, 706, 803, 804, 1101.
. When faced with a choice between the need to prevent the innocent from possible wrongful conviction and efficient judicial administration and finality, [the courts] have consistently favored the former."\textsuperscript{92}

Thus, because we provide criminal defendants with myriad tools for trial which civil litigants lack, there is a greater emphasis on "just determination" at the expense of efficiency factors (i.e. cost and time) in criminal actions. To be sure, the degree of subordination varies greatly between cases and factual applications; however, the presence of the subordination of efficiency considerations, even if slight, is a defining characteristic of criminal law. Accordingly, although Rule 1 of the Civil Rules requires courts adjudicating civil matters to take "just determination" seriously, Rule 2 of the Criminal Rules and the implicit dictates of the Constitution oblige criminal courts to take justice very, very seriously.

Due to this differing weight given to the \textit{just}, \textit{inexpensive} and \textit{speedy} factors, it is clear that any approach to the treatment of ESI in criminal actions should bear distinct characteristics reflective of these values. Thus, the \textit{carte blanche} imputation of the portion of the Civil Rules dealing with e-discovery to criminal procedure unduly ignores these differences and may achieve an end premised on a level of efficiency that would offend the hallmark values of criminal law.

\textbf{IV. DIFFERENT GAME, DIFFERENT RULES}

\textit{A. Rule 34(b)(2)(E)(iii): More Bytes at the Apple}

Under the Civil Rules, a responding party need not produce the same electronically stored information in more than one form.\textsuperscript{93} The policy behind this provision seems sound—allowing a requesting party only one bite at the apple promotes efficiency both in reducing the amount of money spent on production and encouraging carefully calculated requests to produce. In criminal actions, however, application of this strict rule may conceivably undermine a "just determination" of the case.

Suppose Don Defendant, on trial for bribery of an official, receives production of emails and Microsoft Word files from the government (because they are material as per Fed. R. Crim. P. 16(a)(1)(E)) in PDF format. This production appears sufficient until, at a later point in the discovery process, it becomes apparent that metadata contained in the native files may yield custodian information that will contradict the government’s theory of the case.\textsuperscript{94} Don’s attorney would like to make a request for the repeated production of the ESI, but in a jurisdiction adopting the Civil Rules in criminal actions, he may have extreme difficulty.

Don’s attorney could argue that the government’s production was not reasonably usable under Fed. R. Civ. P. 34(b)(2)(E)(ii). However, since the PDF images were reasonably usable to the extent that the data could be analyzed without difficulty (albeit without metadata), this argument will fail. In addition, any second request for the same ESI in a different format may be denied pursuant to Rule 34(b)(2)(E)(iii).

\textsuperscript{92} Pelullo, 14 F.3d at 893.
\textsuperscript{93} FED. R. CIV. P. 34(b)(2)(E)(iii).
\textsuperscript{94} See BRECHER & CHILDRESS, supra note 34.
This situation, in which the initial production of ESI in an electronic image format appeared sufficient until the usefulness of metadata was later revealed, similarly arose in In re Classicstar Mare Lease Litigation.\textsuperscript{95} In Classicstar, the defendant company GeoStar complied with a court order by producing financial information in electronic image formats that could be successfully loaded into commonly used litigation management software.\textsuperscript{96} Later in the course of discovery, the plaintiffs found that the native format of the files would allow them to “query various search reports and extract the desired information in a fraction of the time” that it would otherwise take them using the produced electronic images.\textsuperscript{97} The court concluded that since GeoStar’s production was calculated to be reasonably usable to the plaintiffs and production in the native proprietary accounting software format was not practical without plaintiffs’ purchase of such software, GeoStar complied with Rule 34(b)(2)(E)(ii).\textsuperscript{98} The court acknowledged that in light of Rule 34(b)(2)(E)(ii) and Rule 34(b)(2)(E)(iii)’s protection against repeated production in a second electronic format, GeoStar complied with the Civil Rules. Still, the court nonetheless ordered the additional production in native format.\textsuperscript{99} GeoStar had previously made written overtures expressing its willingness to produce in native format, and the court held it to its promise, conveniently avoiding the harsh consequences of Rule 34(b)(2)(E)(iii).\textsuperscript{100}

Notwithstanding the written communication from GeoStar that eventually saved the Classicstar plaintiffs’ hides, had the court ruled purely according to Rule 34(b)(2)(E)(iii), the second production may have been blocked. In fact, there appears to be some level of judicial reluctance in applying the “one bite at the apple” dictate of Rule 34(b)(2)(E)(iii). In Aguilar v. Immigration & Customs Enforcement Division, metadata became relevant to the requesting party’s case, but only after ESI had already been produced:

\begin{quote}
[B]y the time the Plaintiffs first informed the Defendants of their desire for metadata . . . the Defendants’ document collection efforts were largely complete and they had already produced many of their electronic documents in PDF format without accompanying metadata. In these circumstances, the Plaintiffs face an uphill battle in their efforts to compel the Defendants to make a second production of their ESI.\textsuperscript{101}
\end{quote}

However, the court ultimately ruled:

Nevertheless, because the metadata could potentially have some relevance . . . I will grant the Plaintiffs’ motion to compel the production of metadata . . . but on the condition that the Plaintiffs pay all costs associated with a second production.

\textsuperscript{95} In re Classicstar Mare Lease Litig., No. 07-cv-353-JMH, 2009 WL 260954 (E.D. Ky. Feb. 2, 2009).
\textsuperscript{96} Id. at *1.
\textsuperscript{97} Id. at *3.
\textsuperscript{98} Id.
\textsuperscript{99} Id. at *4.
\textsuperscript{100} Id. at *3–4.
of these documents. See Fed. R. Civ. P. 34(b)(2)(E)(iii) (party need not produce the same ESI in more than one form).\textsuperscript{102}

It would seem that the court in Aguilar allowed for production in a second electronic format, despite a rule to the contrary. While simultaneously quoting the strict language of 34(b)(2)(E)(iii), the court allowed repeated production and deferred to a cost shifting scheme absent from the text of the rule or accompanying Advisory Committee notes.\textsuperscript{103} Aguilar's approach offered a more workable standard and, perhaps, is an indication that courts are cognizant of the rule's potentially draconian effects, even in a civil action. In fact, few courts have denied repeated production of ESI while citing Rule 34(b)(2)(E)(iii).\textsuperscript{104} Additionally, the Advisory Committee notes for Rule 34(b)(2)(E)(iii) feature an interpretation that is far more reasonable than the text of the rule, but is perhaps itself contradictory: “[w]hether or not the requesting party specified the form of production, Rule 34(b) provides that the same electronically stored information ordinarily need be produced in only one form.”\textsuperscript{105} The addition of the word “ordinarily” as a modifier severely weakens the harshness of the Rule, and unlike most Advisory Committee notes, which supplement the text of Rules or give examples of their application, this one seemingly contradicts Rule 34(b)(2)(E)(iii)'s apparent one-and-done

\textsuperscript{102} Id. at 362.

\textsuperscript{103} A court is certainly allowed to shift costs. See Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 358 (1978) (“Under those rules, the presumption is that the responding party must bear the expense of complying with discovery requests, but [a judge] may invoke the district court's discretion under Rule 26(c) to grant orders protecting him from ‘undue burden or expense’ in doing so, including orders conditioning discovery on the requesting party's payment of the costs of discovery.”).

\textsuperscript{104} See supra Part IV.B. However, this remedy does not appear in the mechanical application of the Rule, nor its corresponding Advisory Committee notes, so cost shifting in this case appears highly discretionary. Compare with the Advisory Committee notes to Rule 26(b)(2), which expressly allow a cost shifting scheme (by providing factors to guide this analysis) instead of a bar on production. See FED. R. CIV. P. 26 advisory committee's note (2006); infra Part IV.B.

\textsuperscript{105} Additionally, Rule 34(b)(2)(E) states that provisions such as subsection (iii) apply “unless otherwise stipulated or ordered by the court.” It can consequently be argued that a court may avoid applying Rule 34(b)(2)(E)(iii) entirely, even if the Civil Rules were to be applied to a criminal case, by resorting to its discretion. While this is certainly true, it is especially important in the criminal context to not rely on the discretion of a court.

While it is conceivable that courts will always apply Rule 34(b)(2)(E)(iii) equitably, specialized rules will eliminate the need to rely on the prudence of a judge. Procedures should be applied predictably and uniformly as often as possible, especially when dealing with criminal matters. This is particularly true when dealing with cutting-edge legal issues that require some level of technological savvy. Absent explicit instruction, courts may fail to exercise their discretion in the application of new, technical provisions such as Rule 34(b)(2)(E)(iii), not due to a lack of compassion for a defendant, but rather ignorance that exercising their discretion is even necessary.

\textsuperscript{106} See, e.g., Armor Screen Corp. v. Storm Catcher, Inc., No. 07-81091-Civ., 2008 WL 5262707 (S.D. Fla. Dec. 17, 2008) (finding that Plaintiff did not have to reproduce in hard copy data which it had already produced in native format pursuant to Rule 34(b)(2)(E)(iii)); Bellinger v. Astrue, No. CV-06-321, 2009 U.S. Dist. LEXIS 71727 (E.D.N.Y. Aug. 13, 2009) (“[P]laintiff's counsel has apparently already familiarized herself with defendant's email production in paper form, and it would therefore be redundant and wasteful to require defendant to produce the emails again in electronic form; indeed, a party need not produce the same electronically stored information in more than one form.”).

\textsuperscript{105} FED. R. CIV. P. 34 advisory committee's note (2006) (emphasis added).
requirement. That said, it does not appear to have been cited in any opinions, despite the fact that it seems *Classicstar* and *Aguilar* could have relied on the Advisory Committee notes as a more elegant way to circumvent the stiffness of Rule 34(b)(2)(E)(iii).

The pro-efficiency characteristics of Rule 34(b)(2)(E)(iii) make it a poor fit for use in criminal actions. The discussed civil cases demonstrate that there are instances in which the need for metadata only reveals itself after the producing party may have already turned over ESI in a non-metadata-bearing format.

Despite the disparate application of this rule in civil actions, there is no guarantee that criminal courts will use their discretion to apply Rule 34(b)(2)(E)(iii) leniently. The court in *O’Keefe* was somewhat unclear as to whether it would apply the rule strictly, but appeared to imply that it would:

But if, as occurred here, electronically-stored information is demanded but the request does not specify a form of production, the responding party must produce the electronically-stored information in the form in which it is ordinarily maintained or in a reasonably usable form or forms. Fed. R. Civ. P. 34(b)(2)(E)(ii). Additionally, a party "need not produce the same electronically stored information in more than one form." Fed. R. Civ. P. 34(b)(2)(E)(iii).

If one were to apply these rules to this case, it appears that the government's production of the electronically stored information in PDF or TIFF format would suffice, unless defendants can show that those formats are not "reasonably usable" and that the native format, with accompanying metadata, meet the criteria of "reasonably usable" whereas the PDF or TIFF formats do not.

After citing Rule 34(b)(2)(E)(iii), the court stated that the government’s production would suffice as long as it satisfied Rule 34(b)(2)(E)(ii). The court does not overtly declare that repeated production of ESI in native format would be blocked pursuant to

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106 Of the combined eleven cases found on Westlaw and LexisNexis which cite to Rule 34(b)(2)(E)(iii), none make reference to this passage of the advisory committee notes to Rule 34. See *In re Classicstar Mare Lease Litig.*, No. 07-cv-353-JMH, 2009 WL 260954, *3–4* (E.D. Ky. Feb. 2, 2009); *Aguilar*, 255 F.R.D. at 362; United States v. *O’Keefe*, 537 F. Supp. 2d 14, 23 (D.D.C. 2008); *Armor Screen Corp.*, 2008 WL 5262707; *Bellinger*, 2009 U.S. Dist. LEXIS 71727; *Secure Energy, Inc.* v. *Coal Synthetics*, No. 4:08CV01719, 2010 U.S. Dist. LEXIS 13532 (E.D. Mo. Feb. 17, 2010) (“Here, Defendants state that Plaintiffs did not identify the requested form of ESI, and Defendants fulfilled their discovery obligations by producing the drawings in paper and portable document format.”); *AccessData Corp.* v. *ALSTE Techs.* GmbH, No. 2:08cv569, 2010 WL 318477 (D. Utah Jan. 21, 2010) (“ALSTE contends that it should not be ordered to produce the documents again because the rule does not require it to produce the same electronically stored information in more than one form.”); *Green v. Fluor Corp.*, No. 08-176-FJP-SCR, 2009 WL 1668376 (M.D. La. June 11, 2009) (“Moreover, because under Rule 34(b)(2)(E)(ii) a party need not produce the same electronically stored information in more than one form, the defendants have no right to view the same photograph in the plaintiff’s email account.”); *Sanbrook v. Office Depot*, No. C 07-5938, 2009 WL 840019 (N.D. Cal. Mar. 30, 2009) (“Defendant must also produce any responsive information that it maintains in electronic form if that information has not otherwise been produced.”); *White v. Graceland College Ctr. for Prof’l Dev. & Lifelong Learning, Inc.*, 586 F. Supp. 2d 1250, 1263 (D. Kan. 2008) (“The Rule also provides that a party need not produce the same electronically stored information in more than one form.”); *QuinStreet, Inc.* v. *Ferguson*, No. C08-5525RJB, 2009 WL 1789433 (W.D. Wash. June 22, 2009) (“Mr. Ferguson points out that under Fed.R.Civ.P. 34(b)(2)(E)(iii), he does not have to produce the emails in more than one form.”).

107 *O’Keefe*, 537 F. Supp. 2d at 23 (emphasis added). By saying “these rules,” the court references both Rule 34(b)(2)(E)(ii) and Rule 34(b)(2)(E)(iii), which appears to imply that the court would in fact block repeated production in native format under 34(b)(2)(E)(iii), and the only other way to compel this production would be to claim noncompliance with Rule 34(b)(2)(E)(ii).
Rule 34(b)(2)(E)(iii). Rather, the court instructed the defendants that the only way to get production of native files would be to prove that the previous electronic images were not reasonably usable, so the O'Keefe court all but asserted that it would strictly apply 34(b)(2)(E)(iii). Thus, even if the defendants could have proved that the lynchpin of their defense was contained somewhere in metadata, it is unclear that the court would have allowed such production, cost shifting or not.

In the civil realm it is more palatable to enforce Rule 34(b)(2)(E)(iii) and attribute its negative consequences to a lack of foresight and poor lawyering. In criminal actions, when a defendant’s life and liberty are on the line, this is a less acceptable outcome.

Accordingly, in criminal actions, this article recommends a version of Rule 34(b)(2)(E)(iii) which allows for the repeated production of ESI, while putting the burden on the responding party to show that it is not reasonable:

A party need not produce the same electronically stored information in more than one form as long as it can show that a secondary request is clearly duplicative or made in bad faith. After this second production, any additional production of the same electronically stored information in a different form will require that the requesting party show that production is not duplicative and is reasonable.108

This version of the rule will allow criminal defendants the ability to acquire the production of ESI with metadata, even if the need for such information only reveals itself after the responding party has already completely or substantially produced. By placing this “safety value” into the text of the rule itself, criminal defendants will be afforded a more just manner of production without divine intervention (Classicstar) or use of the court’s discretion (Aguilar). Additionally, this will likely negate the need for (or help anchor) ineffective assistance of counsel claims that may occur in the future once e-discovery issues are more prevalent in criminal actions.109

B. 26(b)(2)(B) and 26(b)(2)(C): Who Picks Up the Tab?

As a general proposition, the party responding to a discovery request will usually bear the cost of production.110 However, when production will present an “undue burden or expense” to the responding party, a court may shift the cost of production to the requesting party.111 When ESI is concerned, the 2006 amendments to the Civil Rules provide specific standards to guide a court’s cost shifting inquiry112 in Rules 26(b)(2)(B) and 26(b)(2)(C).113 Rule 26(b)(2)(B) states that a responding party need not produce ESI,  

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108 This last sentence shifts the burden to the requesting party (usually the defendant) after production has already been made for a second time in an electronic form. Without this shifted burden, it is possible that defendants could demand repeated production of the same ESI in different forms to either cause delay or annoyance. It is instructive to a court that, although the initial threshold for the secondary production of ESI is intentionally low so as not to shut out a defendant from receiving potentially helpful discovery, this deference is not to be abused.

109 This point will be explored further in Part V.


111 Id. (citing FED. R. CIV. P. 26(c)).

112 Unlike the case of Rule 34(b)(2)(E)(iii), which a court can read as shielding against repeated production of the same ESI (despite the court’s action in Aguilar, see supra Part IV.A), the advisory committee notes to Rules 26(b)(2)(B) and 26(b)(2)(C) expressly endorse courts to shift costs (by providing balancing factors) to assuage the inequity of having to produce not reasonably accessible ESI. See FED. R. CIV. P. 26 advisory committee’s note (2006).

113 Before the passage of the 2006 amendments, the test articulated in Zubulake v. UBS Warburg LLC,
if it can show that it is not reasonably accessible because of undue burden or cost. ¹¹⁴ A court may nonetheless order such discovery, if the requesting party can show good cause, considering the limitations of Rule 26(b)(2)(C). ¹¹⁵ These factors include determining whether (1) the discovery sought is unreasonably cumulative or duplicative; (2) the party seeking discovery has had ample opportunity to obtain the information by other discovery in the action; or (3) the burden or expense of the proposed discovery outweighs its likely benefit. ¹¹⁶ This third factor could be particularly troubling in application to a criminal action.

Rule 26(b)(2)(C) invites the court to consider several factors in determining whether the burden outweighs the benefit of production, including the amount in controversy and the parties’ resources. ¹¹⁷ In a criminal action, what would the proxy for the “amount in controversy” be—the potential period of incarceration? Ordering discovery that would cost $200,000 when the amount in controversy is only $100,000 in a civil action is clearly illogical. In a criminal action, how high must the cost of production be in order to outweigh the “loss of life or liberty in controversy”? Additionally, considering a criminal defendant’s resources in evaluating a request for discovery is obviously inappropriate, as it may afford a wealthier defendant a greater chance to obtain broader e-discovery than a less wealthy defendant. ¹¹⁸

Despite the technical difficulties of translating this rule, the mere inclusion of these types of factors indicates the presence of efficiency considerations permeating the underlying principles of this cost shifting scheme. To wit, it has been said that the rationale behind cost shifting in discovery has roots in market economics—a requesting party will only pay for the cost of discovery if it is worthwhile and its value will be offset by expected gains. ¹¹⁹ One cannot expect a criminal defendant to perform this calculus with his or her liberty and reputation as variables.

Thus, it appears worth articulating a version of these rules that would subordinate efficiency factors and apply specifically to criminal actions. Cost shifting in civil actions is a difficult proposition requiring the balancing of many factors. Application to a criminal action may prove even more difficult given several practical concerns. While we do not want to make prosecution (especially of defendants in “big paper” cases, as seen in O’Keefe and white collar crime) too costly to the government, it also would be

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²¹⁷ F.R.D. 309 (S.D.N.Y. 2003), was used to guide a court’s cost shifting analysis. Although cost shifting is not explicit in the text of either rule, the Advisory Committee notes adopt a test clearly influenced by Zubulake’s seven factor test. It has been noted, however that Rule 26(b)(2)(B) articulated a slightly broader standard, which is seen as more favorable to a responding party than the Zubulake test because the Rule protects a responding party from onerous searches of accessible data and Zubulake does not. Since then, some courts have continued to apply the Zubulake test, whereas others apply the standard found in the Rules. Some commentators have said that the “continued application of the Zubulake accessibility test . . . frustrates the purposes of the 2006 amendments by favoring the requesting party more than Rule 26(b)(2)(B).” See Bradley T. Tennis, Comment, Cost Shifting in Electronic Discovery, 119 Yale L.J. 1113 (2010).

¹¹⁵ Id.
¹¹⁷ Id.
¹¹⁸ Not that this is not arguably the case already, but procedural rules should not encourage disparate outcomes for defendants with disparate resources.
unacceptable if the cost of defending oneself were prohibitive due to the application of an improper cost shifting regime.

A proposed solution to the production of not reasonably accessible ESI would feature give and take—an extremely high threshold for a criminal defendant to reach before successfully compelling discovery, in exchange for eliminating cost shifting almost entirely:

If the government claims the ESI requested by a defendant is not reasonably accessible because of undue burden or cost, then in order to compel discovery, the defendant must (1) identify the specific nature of the information sought, (2) demonstrate that this information is reasonably likely to have high probative value at trial, and (3) show that the information is likely to be contained at the location in which discovery is sought.

By adding these three barriers to compelling discovery of not reasonably accessible data, the only requests that will withstand this level of scrutiny will be those that are carefully calculated and meritorious. If a defendant can successfully convince a court that a specific piece of potentially highly probative admissible ESI is likely to be in a particular location, the request should be granted, with the government bearing the cost. The fact that requests must be compelling, well calculated, and specific should mitigate the ills of having the government bear all of the cost of producing not reasonably accessible data. These requirements eliminate the potential for frivolous requests or government-funded fishing expeditions, while also protecting a criminal defendant from the prospect of having to make a market calculation (i.e. whether the cost of production is worth more or less than jail time).

Criminal defendants would also be protected from discovery requests for ESI from the government that they consider not reasonably accessible:

A protective order shall be granted to a criminal defendant who files a motion pursuant to Rule 702 of the Federal Rules of Evidence if the court determines that the

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120 Compulsory production required of the government, such as exculpatory evidence pursuant to Brady v. Maryland, 373 U.S. 83 (1963), is intentionally left out of the cost shifting scheme. It does not seem appropriate for materials that the government has in its possession and is required to turn over to a defendant to ever be subject to shifting. However, it is not clear when this would practically arise, as it is unlikely the government would be aware of exculpatory material that is also not reasonably accessible.

121 Note that this is a higher standard for the relevance of discovery than contained in FED. R. CRIM. P. 16(a)(1)(E).

122 The location of highly probative ESI may refer to either a physical location (e.g. hard drives and backup tapes) or a “logical” location within a specific electronic physical medium (e.g. a database or logical disk partition). Whether a defendant would have to identify either a physical location, logical location, or both, would depend upon the nature and quantity of ESI in a given case. For example, in a situation with twenty backup tapes, a court may only require identification of a specific tape. Conversely, if there is only one backup tape in a given case that is not reasonably accessible, a court could require identifying a specific file or directory.

123 Whether data is or is not reasonably accessible is necessarily a question for experts. Accordingly, any such motion should have a technical basis, which is a similar to the approach that Judge Facciola took in O’Keefe in regard to search terms, as he keenly observed that, “[g]iven this complexity, for lawyers and judges to dare opine that a certain search term or terms would be more likely to produce information than the terms that were used is truly to go where angels fear to tread. This topic is clearly beyond the ken of a layman and requires that any such conclusion be based on evidence that, for example, meets the criteria of Rule 702 of the Federal Rules of Evidence.” United States v. O’Keefe, 537 F. Supp. 2d 14, 24 (D.D.C. 2008).
motion sufficiently establishes that the production of ESI requested from the defendant is not reasonably accessible.

¶58 This approach is a policy choice incorporating the spirit and values of criminal law and is by no means the only solution, or even the best.\textsuperscript{124} Although the government will bear the brunt of the cost of requests for not reasonably accessible ESI, this approach will encourage efficiency by requiring prosecutors and investigators to establish the proper infrastructure to manage e-discovery, as is similarly suggested for serial civil litigants.\textsuperscript{125}

\section*{V. CONCLUSION}

¶59 Apart from the previously mentioned benefits of applying e-discovery rules specifically tailored to the underlying principles of criminal law, there may be additional practical benefits. First, it would serve to put members on both sides of the criminal bar on notice that e-discovery currently is and will increasingly be a concern in criminal actions. At the moment, there is no guarantee that lawyers stepping into criminal court even know what e-discovery is. Thus, even if one were to disagree with this article’s conjecture that criminal-specific e-discovery rules will at times lead to more equitable outcomes, it is hard to deny the virtue of putting criminal “paper lawyers”\textsuperscript{126} on notice of the new wave of discovery. Additionally, promulgating criminal e-discovery rules will benefit criminal defendants in that widespread awareness of e-discovery rules would lead to more competent counsel and consequently minimize ineffective assistance of counsel claims pursuant to \textit{Strickland v. Washington}.\textsuperscript{127}

Because of the difference in values underlying the Civil Rules and the Criminal Rules, it is not preferable to directly adopt the civil e-discovery rules in criminal actions in lieu of crafting specialized rules taking these values into account. Although the technical problems involved in the production of ESI are shared in criminal and civil actions, the criminal law’s relative subordination of efficiency factors may in fact dictate different solutions to these problems than would the civil law. This article consequently takes a respectfultly different approach than the court did in \textit{United States v. O'Keefe} and instead follows the logic of Dr. Wernher von Braun, who recognized that although the prospect may be daunting, it is sometimes appropriate to reinvent the wheel—literally or otherwise.

\begin{footnotesize}
\begin{enumerate}
\item For another proposed approach see Garrie & Gelb, \textit{supra} note 62, at 413–14.
\item \textit{LOSEY, \textit{supra} note 16, at 15–38.}
\end{enumerate}
\end{footnotesize}