From Snail Mail to E-Mail: The Steady Evolution of Service of Process

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I. INTRODUCTION

Today, the Internet has become a significant part of the everyday life of many Americans.1 Their daily routine includes using electronic mail, otherwise known as e-mail, allowing people
to send messages to each other from across the globe just by clicking a button on their computer. In fact, the primary reason people use the Internet is to write and receive e-mail: approximately 1.6 billion non-commercial e-mails were sent out daily in the United States at the turn of the century. Arguably, international use of e-mail may be much greater. In recent years, e-mails have constituted major pieces of evidence in litigation, and as a result, were important in recent cases. Consequently, there have been increasingly more cases where e-mail has played a significant role in determining the relevant issues.

The increasing use of e-mail has reached the federal court system, evidenced by the establishment of an efficient intranet system in 1999 which allows for expeditious e-mail communications between persons within the federal system and the ability to view time-sensitive materials. Indeed, in 2001, a

2 See John Shors, *The Peril of E-Mail*, BUS. REC., Mar. 2, 1998, at 10 (stating that average worker with Internet access received 25-50 e-mails per day and spent up to two hours deciphering and responding to them); see also Fred Galves, *Where the Not-So-Wild Things Are: Computers in the Courtroom, the Federal Rules of Evidence, and the Need for Institutional Reform and More Judicial Acceptance*, 13 HARV. J.L. & TECH. 161, 176 (2000) (concluding prevalence of computers in society produces more information, both at home and work, from computer programs, Internet, and e-mail). See generally Loudenslager, *supra* note 1, at 191-94 (highlighting implications of e-mail).


4 See Samuel A. Thumma & Darrel S. Jackson, *The History of Electronic Mail in Litigation*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 1, 2-3 (1999) (estimating number of domestic and international e-mail users); see also Conley, *supra* note 3, at 414 (stating that “over forty million people use the Internet worldwide”). See generally Trussell, *supra* note 1, at 179-80 (discussing spam in international e-mail).

5 See, e.g., United States v. Microsoft Corp., 253 F.3d 34, 73, 76 (D.C. Cir. 2001) (listing purported admissions and other evidence contained in Microsoft's internal e-mail); see also Thumma & Jackson, *supra* note 4, at 3-4 (examining cases where problems arose for parties due to permanence of inflammatory and incriminating e-mails). See generally Galves, *supra* note 2, at 177-93 (discussing use of computers in courtroom).

6 See, e.g., Microsoft Corp. 253 F.3d at 73 (referring to e-mail evidence); see also Thumma & Jackson, *supra* note 4, at 3-5 (summarizing role of e-mail in recent litigation, including as substantive evidence). See generally Conley, *supra* note 3, at 415-18 (outlining use of e-mail in litigation).

new electronic case filing system was introduced in some bankruptcy courts which, among other things, provided for the ability to send and view documents electronically. The purpose of this system is to help with case management by reducing the volume of paper records and making case files more accessible. This system was expanded in 2002 to appellate and district courts and currently provides both a new case management system and an ability to manage electronic filings. There have also been innovations in a new national e-mail system, including security features allowing only the intended recipient to read the e-mail message. Issues surrounding the implementation of these systems have included the balancing of public usefulness with the need for privacy in guaranteeing that these electronic documents are viewed only by those so intended. Overall, the federal judiciary has taken great steps forward in using the

One of these technological steps forward has been to allow service of process upon defendants via electronic means, specifically via e-mail, in certain situations.\footnote{See, e.g., Finegan, supra note 8, 1–7 (citing instance where court gave permission to electronically serve notice of court filings); see also Newman, supra note 7, at 1 (explaining various court responses to electronic service of process). See generally Conley, supra note 3, 402–25 (discussing e-mail's effect on service of process).} This Note will examine the evolution of service of process that has led to the acceptance of service via e-mail. Part II will discuss the history of service of process and its evolution from personal service in \textit{Pennoyer} to service by publication in \textit{Mullane}. Part III will consider service of process via newer technologies which were not contemplated under \textit{Mullane}. Part IV will then review separate developments in the federal and state systems involving electronic filings, including the \textsc{Federal Rule of Civil Procedure} 5. Part V will examine service of process via e-mail as elaborated by the Ninth Circuit in \textit{Rio Properties, Inc. v. Rio International Interlink}. It will also examine procedural rules such as \textsc{Federal Rule of Civil Procedure} 4(f) and The Hague Service Convention to further see which direction the law will develop.

This Note concludes that service of process via e-mail has been the natural response to the technological evolution and can be the most expedient method of maintaining justice where it is necessary. The concept of service of process has continuously evolved with technology. Courts have permitted service by electronic means only in limited circumstances and always where consistent with the 'reasonably calculated' standard of \textit{Mullane} because there needs to be a well-defined limit to the doctrine to ensure that due process requirements are met.
II. HISTORICAL DEVELOPMENT

Generally, while the purpose of service of process is to notify parties of a pending lawsuit, both personal jurisdiction and service of process are required for a court to extend its authority over a defendant. In Pennoyer v. Neff, the Court adopted the prevailing nineteenth century view that personal jurisdiction was territorial. It recognized that a basis for personal jurisdiction was best established by serving process on a party within the territorial borders of a forum, but also held that personal service of notice of an impending lawsuit need not be made within the boundaries of the forum so long as the defendant held property within those boundaries.

As the country expanded, this view became impractical and unable to satisfy the requirements of due process. By 1917, in


17 95 U.S. 714 (1877).

18 See James Wm. Moore, et al., MOORE'S FEDERAL PRACTICE, 108.01(2)(c) (3d ed. 1997) (explaining that, under Pennoyer standard, a party’s presence within a forum was prerequisite for existence of personal jurisdiction); see also Colby, supra note 15, at 340 (discussing conceptions of personal jurisdiction in nineteenth century); Conley, supra note 3, at 419–20 (discussing basis for Pennoyer holding).

19 See Pennoyer, 95 U.S. at 725–26 (describing differences between in rem and in personam jurisdiction, noting that rigid territorial requirements were necessary for personal jurisdiction); see also Colby, supra note 15, at 340–41 (outlining framework of personal jurisdiction and service of process beginning with Pennoyer); Conley, supra note 3, at 419–20 (quoting Pennoyer).

20 See Pennoyer, 95 U.S. at 727 (explaining that personal service was not required where defendant held property in forum state because it was believed that a person was always in possession of his property and that seizure would inform party of impending action); see also Colby, supra note 15, at 340–41 (reviewing rule extracted from Pennoyer); Conley, supra note 3, at 419–20 (quoting court’s analysis in Pennoyer).

21 See Conley, supra note 3, at 418–19 (noting changes enacted to meet evolving needs of increasingly nationally-focused, as opposed to locally- or regionally-focused, country); see also Colby supra note 15, at 341 (stating that anachronistic standards adopted under Pennoyer were reformulated to meet needs of mobile society). See generally Patrick J. Borchers, Jurisdictional Pragmatism: International Shoe’s Half-Buried Legacy, 28 U.C. DAVIS L. REV. 561, 567 (1995) (discussing service of process requirements after Pennoyer).
McDonald v. Mabee,22 the Court began to recognize that other forms of personal service were required by due process.23 There, Justice Holmes stated, "To dispense with personal service the substitute that is most likely to reach the defendant is the least that ought to be required if substantial justice is to be done."24 Shortly after this case, the state of Ohio enacted a statute permitting the court to authorize service through the mail.25 Personal jurisdiction requirements were becoming less stringent as the territorial nexus for personal jurisdiction became deemphasized to properly establish personal jurisdiction.26 An example of this is seen in Hess v. Pawloski,27 where the Court created what amounts to a legal fiction to establish personal jurisdiction over a non-resident motorist rather than vacate the in-state jurisdictional requirement completely.28 The constitutional basis for Pennoyer was noticeably kept in place,

22 243 U.S. 90 (1917) (voiding Texas statute which allowed service by publication in newspaper after defendant's final departure from state).
23 See McDonald, 243 U.S. at 91–93 (inferring that service of process via local publication could be proper where party intended to return to that locality despite holding such as improper under case facts); see also Conley, supra note 3, at 418 (citing McDonald as starting point of Supreme Court's trend in recognizing other methods of service). See generally Christopher D. Cameron, Death of a Salesman? Forum Shopping and Outcome Determination Under International Shoe, 28 U.C. DAVIS L. REV. 769, 811 (1995) (analyzing modern service of process in light of McDonald).
24 McDonald, 243 U.S. at 92 (arguing that substituted service must be method most likely to reach party).
25 See OHIO REV. CODE ANN. §4.1 (Banks-Baldwin 1996) (granting Ohio courts option to supplement in personam service with service by mail by 1919); see also Conley, supra note 3, at 419 (discussing development of service of process by mail). See generally Yvonne A. Tamayo, Are You Being Served?: E-Mail and (Due) Service of Process, 51 S.C. L. REV. 227, 236 (2000) (examining service of process via mail).
27 274 U.S. 352 (1927) (finding that personal jurisdiction exists where state exercises jurisdiction over non-resident motorists using their highways).
28 See Hess, 274 U.S. at 353–57 (empowering states to declare that use of highways by non-residents was equivalent to appointment of registrar as agent upon whom process could be served to establish personal jurisdiction); see also Taylor, supra note 26, at 1171–72 (analyzing how service of process doctrine had evolved between Pennoyer and Int'l Shoe). See generally Richard B. Cappalli, Locke as the Key: A Unifying and Coherent Theory of In Personam Jurisdiction, 43 CASE W. RES. L. REV. 97, 108 (1992) (evaluating Hess' impact on personal jurisdiction).
but the Court slowly began to expand its notion of personal
jurisdiction.\textsuperscript{29}

Nearly thirty years after Pennoyer, in \textit{International Shoe v. Washington},\textsuperscript{30} the Court articulated this expanded notion of
alternative forms of service when it permitted personal
jurisdiction over a defendant wherever there existed “minimum
contacts” between the party and the forum state.\textsuperscript{31} Speaking for
the Court, Justice Stone stated:

[D]ue process requires only that in order to subject a
defendant to a judgment \textit{in personam}, if he be not present
within the territory of the forum, he have certain minimum
contacts with it such that the maintenance of the suit does
not offend traditional notions of fair play and substantial
justice.\textsuperscript{32}

The Court also noted that a substituted form of service, as was
used here, would be adequate service where it “gives reasonable
assurance that the notice will be actual.”\textsuperscript{33} The Court finally held
that service of process by mail here was sufficient notice of the
impending lawsuit on a defendant over whom the court had
jurisdiction via his “systematic and continuous” business contacts
within the state.\textsuperscript{34} Service of process, it can be said, had evolved

\textsuperscript{29} See Taylor, \textit{supra} note 26, at 1171–73 (mentioning Supreme Court’s persistence in
asserting that Pennoyer’s standard, under which personal jurisdiction was to be
examined, remained useful even after \textit{Int’l Shoe}); see also Douglas A. Mays, Note, Burnham v. Superior Court: The Supreme Court Agrees on Transient Jurisdiction in
jurisdiction standard remains viable following \textit{Int’l Shoe}). See generally Friedrich K.
(commenting on Pennoyer’s continued authority).

\textsuperscript{30} 326 U.S. 310 (1945) (holding that due process requires only that defendants have
minimum contacts with the forum state such that the maintenance of the suit “does not
offend traditional notions of fair play and substantial justice”).

\textsuperscript{31} See \textit{Int’l Shoe}, 326 U.S. at 316 (recognizing that personal jurisdiction exists when
minimum contacts within forum are established); see also Juenger, \textit{supra} note 29, at 1030
(explaining \textit{Int’l Shoe}’s impact on Pennoyer’s authority). See generally Mays, \textit{supra}
note 29, at 1272 (explaining how service of process expanded beyond unbending territorial
limits following \textit{Int’l Shoe}).

\textsuperscript{32} \textit{Int’l Shoe}, 326 U.S. at 316 (recognizing that personal jurisdiction exists when
minimum contacts within forum are established).

\textsuperscript{33} \textit{Int’l Shoe}, 326 U.S. at 320; Colby, \textit{supra} note 15, at 343–44 (comparing substantive
and procedural requirements of personal service, and determining the standard under
which courts must issue notice for suit to be effective).

\textsuperscript{34} See \textit{Int’l Shoe}, 326 U.S. at 320 (validating personal service of notice by mail where
defendant was under personal jurisdiction of courts after satisfying minimum contacts
test); see also Colby, \textit{supra} note 15, at 343–44 (describing Court’s holding, stating that
service of notice via mail had been well established by 1945). See generally Tamayo, \textit{supra}
from a rigid, territorial standard under *Pennoyer* to a much more flexible approach under *International Shoe*.35

The concepts of service of process and personal jurisdiction became more and more flexible as more time passed.36 In *Mullane v. Central Hanover Bank*,37 the Court permitted service of process by newspaper publication on the unknown beneficiaries of a trust fund with unknown addresses.38 While the Court did admit a strong preference for personal service of written notice, it nonetheless admitted that other forms of notice could be permitted in certain circumstances.39 To that point, Justice Jackson stated, "An elementary and fundamental requirement of due process in any proceeding which is to be accorded finality is notice reasonably calculated, under all the circumstances, to apprise interested parties of the pendency of the action and afford them an opportunity to present their objections."40 The Court did note that in the odd particular situation where no method of service would satisfy this 'reasonably calculated' standard, parties need only resort to some

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35 See Colby, *supra* note 15, at 344 (explaining evolution of doctrine from *Pennoyer* to *Int'l Shoe*); see also Conley, *supra* note 3, at 419 (noting that doctrine of *Pennoyer* had begun to evolve). See generally Tamayo, *supra* note 25, at 230 (stating that "[i]n *Int'l Shoe* the United States Supreme Court relaxed the physical presence standard enunciated in *Pennoyer*").


37 339 U.S. 306 (1950) (striking down New York notice statute as inadequate because it did not provide for means of contacting those who could easily be informed by other methods).

38 See *Mullane*, 339 U.S. at 319 (holding that service of process via newspaper was adequate where not all addresses of beneficiaries were known); see also Dusenbery v. United States, 534 U.S. 161, 167 (2002) (citing *Mullane* as controlling when confronted with questions regarding adequate service of process methods). But see Willingway Hosp. v. Blue Cross & Blue Shield, 870 F. Supp. 1102, 1107 (D. Ga. 1994) (criticizing *Mullane* standard as abandoning procedural due process).


40 *Mullane*, 339 U.S. at 314.
form of service of process 'not substantially less likely' to provide notice than any other method of service of process.\textsuperscript{41}

Indeed, the purpose of the Court's holding was not to restrict the possible methods of service of process, but to ensure that the goal of service of process was met.\textsuperscript{42} As Justice Holmes stated, "the life of the law has not been logic: it has been experience... the substance of the law at any given time pretty nearly corresponds, so far as it goes, with what is then understood to be convenient."\textsuperscript{43} In sum, the fungible concept of service of process evolved as the Court established the modern standard for determining the constitutionality of service of process.\textsuperscript{44}

III. THE EVOLUTION INTO FURTHER TECHNOLOGIES

\textit{Mullane} provided the constitutional framework for proper notice.\textsuperscript{45} As technological capabilities have grown, and modern litigants have sought to use these new technologies to effectuate notice, \textit{Mullane} has continued to provide the standard under which this service has been permitted.\textsuperscript{46} A brief examination of

\textsuperscript{41} See id. at 315, 317 (reconciling situations where 'reasonably calculated' standard could not be met); see also Chacker, supra note 39, at 602 (delineating exceptions and nuances of 'reasonably calculated' standard under \textit{Mullane}). See generally Orlee Goldfeld, Note, Rule 45(B): Ambiguity in Federal Subpoena Service, 20 CARDOZO L. REV. 1065, 1085 (1999) (discussing notice requirement set forth under \textit{Mullane}).

\textsuperscript{42} See Conley, supra note 3, at 420 (articulating purpose of \textit{Mullane} as ensuring proper notice to meet requirements of due process); see also Colby, supra note 15, at 344–45 (stating that \textit{Mullane} requires methods of service meet that due process requirements); Goldfeld, supra note 41, at 1085 (noting that \textit{Mullane} set forth requirements for satisfying due process in service of process).

\textsuperscript{43} Conley, supra note 3, at 420 (quoting Oliver Wendell Holmes, Jr., THE COMMON LAW 1–2 (1881)).

\textsuperscript{44} See Colby, supra note 15, at 345 (observing standard under \textit{Mullane} was rationale utilized to eventually permit service of process via e-mail); see also Craig J. Knobbe, Tenth Circuit Surveys: Securities Law, 76 DEN. U.L. REV. 903, 904 n.10 (1999) (stating that \textit{Mullane} is "recognized as the keystone of modern philosophy regarding the notice requirement").

\textsuperscript{45} See Chacker, supra note 39, at 604 (describing how \textit{Mullane} set up the constitutional basis under which service of notice via newer technologies has been held proper); see also W. Alexander Burnett, Dunberry v. United States: Setting the Standard for Adequate Notice, 37 U. RICH. L. REV. 613, 626 (2003) (noting Dunberry court viewed \textit{Mullane} standard as appropriate in deciding whether method of delivery of notice used satisfies due process requirements); Colby, supra note 15, at 345 (discussing Court's use of \textit{Mullane} for determining whether notice is adequate to meet constitutional requirements).

\textsuperscript{46} See Chacker, supra note 39, at 604 (noting that modern cases which authorize service via new technologies have used \textit{Mullane}'s constitutional framework). See generally Colby, supra note 15, at 345 (stating that \textit{Mullane} sets forth the standard of constitutionality of service concerning forms of electronic service); Jennifer Mingus, \textit{E-Mail: A Constitutional (and Economical) Method of Transmitting Class Action Notice}, 47
some cases allowing service under newer technologies shows the continuation of the evolution of modern service of process.47

A. Telex

_New England Merchants National Bank v. Iran Power Generation and Transmission Co._48 was the first foray that federal courts made into accepting service of process through novel technologies.49 This case involved a group of American plaintiffs who were unable to effectively serve process on defendants due to the breakdown of relations between the United States and Iran in the late 1970's.50 The district court ordered service of process via telex, expanding its notion of modern communication methods.51 In its decision, the court stated:

Courts... cannot be blind to changes and advances in technology. No longer do we live in a world where communications are conducted solely by mail carried by fast sailing clipper or steam ships. Electronic communication via satellite can and does provide instantaneous transmission of notice and information. No longer must process be mailed to a defendant's door when he can receive complete notice at an electronic terminal inside his very office, even when the door is steel and bolted shut.52

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48 495 F. Supp. 73.

49 See _Chacker_, _supra_ note 39, at 604–05 (announcing that _New England Merchants_ is first adaptation of _Mullane_ to newer technologies for providing adequate service of process); _see also_ _Tamayo_, _supra_ note 25, at 248 (noting that court broke new ground by allowing service via telex).

50 See _New England Merchs._, 495 F. Supp. at 75–76 (observing that case was consolidation of 89 cases with substantially similar facts and issues, noting difficult political climate at time allowed it to be easier for defendants to avoid conventional methods of service).

51 See _id._ at 81–82 (allowing plaintiffs to send text of summons, notice of suit, and copy of pleadings via telex to defendants in both Farsi and English); _see also_ _Chacker_, _supra_ note 39, at 606 (examining principle put forward that new methods of communication could be effective in effectuating notice while staying within constitutional boundaries); _Tamayo_, _supra_ note 25, at 248 (explaining ground-breaking effect of establishing new and effective means of serving process through newer and more viable technologies).

This statement was a premonition of things to come, as the concept of service of process would continue to develop with newer technologies. Although telex soon became an outdated technology, there were a few other cases allowing service of process via telex.

B. Facsimile

After the court's ruling in *New England Merchants*, several commentators began to wonder how this ruling would apply to other technologies, such as the fax machine. However, it was many years before federal courts would speak up on the subject, although several state rules did broach the subject. Despite the dearth of case law on this subject, there have been some cases addressing the applicability of facsimile in other procedural contexts. In *Calabrese v. Springer Personnel of New York, Inc.*, a New York trial court looked at facsimile service of an

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53 See Chacker, *supra* note 39, at 607 (discussing link between foreshadowing in *New England Merchants* about responses to technology by courts and its actual evolution); see also Tamayo, *supra* note 25, at 249 (noting that eight years after *New England Merchants*, service evolved further by allowing service via fax). But see Colby, *supra* note 3, at 354–55 (noting that while some courts have allowed service via fax and e-mail, other federal courts have prohibited electronic service).

54 See, e.g., Cooper v. Church of Scientology, Inc., 92 F.R.D. 783 (D. Mass. 1982) (allowing service of process by telex where it met due process requirements); Harris Corp. v. Nat’l Iranian Radio & Television, 691 F.2d 1344 (11th Cir. 1982) (citing *New England Merchants* in finding that service of process by telex was proper).

55 See Chacker, *supra* note 39, at 607–08 (discussing development of expanding service of process consistent with expansion in technology); see also Henry G. Perritt, Jr., *Jurisdiction in Cyberspace*, 41 VILL. L. REV. 1, 32 (1996) (noting that possibility of service via other electronic means, such as fax, has surfaced since *New England Merchants*); David A. Sokastis, *The Long Arm of the Fax: Service of Process Using Fax Machines*, 16 RUTGERS COMPUTER & TECH. L.J. 531, 538–54 (1990) (arguing service via fax is reasonable and practical method for serving process upon parties and fits into constitutional framework of *Mullane* and *New England Merchants*).

56 See e.g., IDAHO R. CIV. P. 4 (announcing that service may be transmitted by facsimile machine or telegraph); MONT. CODE ANN. 25-3-501 (2003) (allowing any summons, writ, or order in any civil action or proceeding and all other papers requiring service to be transmitted by telegraph or telephone for such service in any place); UTAH R. CIV. P. 4 (providing for service by “telegaph or telephone” before recent amendments eliminated such service).

57 See Chacker, *supra* note 39, at n.62 (commenting on minimal case law discussing service of process via e-mail but noting other cases which may be relevant in examining service of process by electronic means); see also Perritt, *supra* note 55, at 33 (noting that individual Courts of Appeal allow filing of papers via facsimile).

58 534 N.Y.S.2d 83 (N.Y. Civ. Ct. 1988) (finding that service by facsimile met due process requirements); see also Tamayo, *supra* note 25, at 249 (discussing *Calabrese* among cases permitting service of process via newer technological approaches); Conley, *supra* note 3, at 422–23 (fitting reasoning used in *Calabrese* into “electronic terminal” concept stated earlier in *New England Merchants*).
order to answer interrogatories. The court allowed plaintiff's attorney to fax an order to defendant's attorney which required an answer to plaintiff's interrogatories be submitted to plaintiff within 20 days. Defendant issued concern over the fact that service by fax did not constitute reasonable service. However, the trial judge held the service to be permissible, and in doing so stated:

There could now ensue controversy as to whether the recipient's office is open, whether anyone is in charge, and whether the fax machine is in a conspicuous place. I refuse, however, to engage in such Augustinian folly. Of course the office is open when the fax machine is receiving. If an operator is present, of course there is delivery. If no operator is present, of course the fax machine, which is visited regularly, is in a conspicuous place.

He would further say:

[Fax] machines have been around for many years, but recently they have become so sophisticated and user-friendly that they have become overwhelmingly the method of choice for the transmission of documents in today's world. Indeed their use has become so widespread that business stationery now commonly carries a "fax" telephone number in addition to an ordinary one, and, in common usage [sic], "fax" has been converted into a verb as well as an adjective and noun.

The court here held that service of papers via fax was permissible, but Judge Lane's words could easily be applied to other technologies, including computers and e-mail.

59 See Calabrese, 534 N.Y.S.2d at 84 (holding service of discovery order made by facsimile valid).
60 See id. at 84 (employing judicial discretion allowed by law).
61 See id. at 84 (listing defendant's arguments against service via fax).
62 Id.
64 See e.g., Conley, supra note 3, at 423 (comparing current widespread use of computers with availability of fax machines to those of fifteen years ago to demonstrate evolution of service of process amongst technologies of fax and e-mail is smaller step); Terry W. Posey, Jr., You've Got Service: Rio Properties, Inc. vs. Rio International Interlink, 284 F.3d 1007 (9th Cir. 2002), 28 DAYTON L. REV. 403 (2003) (arguing e-mail is not permissible form of service of process under FED. R. CIV. P. 4(f)(3)). See generally Paul Fasciano, Note, Internet Electronic Mail: A Last Bastion for the Mailbox Rule, 25 Hofstra L. Rev. 971, 987–90 (1997) (discussing diminished importance of "mailbox rule" in light of new technologies such as electronic mail).
A federal court would finally speak on the subject of electronic service of process by facsimile in *In re International Telemedia Associates, Inc.*65 In this bankruptcy case, the plaintiff moved to serve his complaint on Diaz, a foreign defendant, by electronic means under FEDERAL RULE OF CIVIL PROCEDURE 4(f)(3).66 These electronic means included transmission by facsimile and e-mail.67 The defendant, Diaz, had refused to provide a permanent street address to plaintiff, instead only giving him a permanent fax number and an e-mail address for all further communication.68 The court summarized plaintiff's need for alternative methods of service by saying, "despite diligent efforts, the Trustee is left without any feasible methods for contacting Diaz except by facsimile transmission and electronic mail, Diaz's preferred methods of communication, and by mail to Diaz's last known address."69 The court thus allowed plaintiff to serve process on the defendant electronically, by e-mail and facsimile, noting that the defendant preferred communication through electronic means.70 The court echoed the sentiment from *New England Merchants*, stating:

The federal courts are not required to turn a blind eye to society's embracement of such technological advances . . . A defendant should not be allowed to evade service by confining himself to modern technological methods of communication not specifically mentioned in the Federal Rules . . . The practical reality recognized and given effect by the *New England Merchants* court in 1980 applies with

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65 245 B.R. 713 (2000) (holding that electronic service on defendant was permissible under FED. R. CIV. P. 4(f)(3)).

66 FED. R. CIV. P. 4(f)(3) (being incorporated under FED. R. OF BANKR. P. 7004 to apply in *In re Int'l Telemedia Assocs., Inc.*). *See generally In re Int'l Telemedia Assocs.*, 245 B.R. at 715 (discussing facts leading to plaintiff's request for court approval in allowing service electronically).

67 *See In re Int'l Telemedia Assocs., Inc.*, 245 B.R. at 715 (reviewing electronic means by which plaintiff attempted to serve foreign defendant whose whereabouts were not exactly known).

68 *See id.* at 718 (showing means by which defendant tried to hide from service of process).

69 *Id.* at 719 (noting that electronic service of process was only available means to contact defendant).

70 *See id.* at 721–22 (stating that electronic methods by which defendant was served were most likely to provide actual notice of impending lawsuit and met due process requirements under *Mullane*); *see also Chacker, supra note 39, at 609–10 (explaining how service of process was permitted by facsimile and e-mail and how due process requirements were met).
even greater force today.\footnote{In re Int'l Telemedia Assocs., Inc., 245 B.R. at 721–22; see Chacker, supra note 39, at 610 (highlighting how court echoed sentiment of New England Merchants in allowing service by technological means not explicitly elaborated in procedural rules).}

The court continued to embrace the advance of service by technology and planted the seed for service by e-mail.\footnote{See In re Int'l Telemedia Assocs., Inc., 245 B.R. at 721–22 (following New England Merchants by allowing service by electronic means where it was necessary to reach evasive defendant); see also Chacker, supra note 39, at 610 (comparing In re Int'l Telemedia Assocs., Inc., to New England Merchants in discussing expansion in service consistent with technological expansion).}

C. State Parallels

There have also been cases in state courts that have allowed service of process via electronic means.\footnote{See e.g., In re Marriage of Leisy and Miller, No. 49134-2-I, 2002 Wash. App. LEXIS 3164, at *1 (2002) (affirming order which allowed service of process via e-mail where defendant had consented to such service under Washington statute); Marolf Construction, Inc. v. Allen's Paving Co., 154 N.C. App. 723 (2002) (permitting service of process via fax or e-mail where parties had agreed such service was proper in prior arbitration agreement); Modan v. Modan, 327 N.J. Super. 44 (2000) (stating that had plaintiff been forthright about knowledge that defendant could be reached via e-mail while living abroad, court would have allowed notice to be sent via e-mail, as well as published, to defendant to ensure actual notice was effectuated).} These cases further elaborate that judiciaries around the country are employing technology more effectively to make case management easier and ensure that the parties to the lawsuits are more likely to receive proper service of process.

For example, in In re Marriage of Leisy and Miller,\footnote{No. 49134-2-I, 2002 Wash. App. LEXIS 3164, at *1 (2002) (finding that statutory requirements of service could be waived in favor of alternative means).} a state court in Washington held that the statutory requirements of personal service could be waived and service could be effectuated by substitute means.\footnote{See id. at *4–9 (permitting service of summons to be sent via e-mail where trial court had ordered such service in recognition of consent by defendant).} In this divorce case, plaintiff Susan Leisy had sent several e-mail messages to defendant Bruce Miller to discuss a matter regarding their separation and impending divorce, which Miller received.\footnote{See id. at *1–2 (reviewing facts leading up to trial court's allowance of service via e-mail).} In response to these e-mails and a phone call from Leisy's attorney, Miller faxed a letter to Leisy's attorney suggesting alternatives to divorce.\footnote{See id. at *2 (showing defendant's desire to remain married and avoid divorce and his responsiveness to plaintiff's attempts at contact).} Miller also responded to Leisy's e-mails, where he responded that he would
accept service of process via mail. And while he refused to divulge his address, he did provide a fax number, e-mail address, and post office box in Nebraska at which it would be best to communicate with him. Plaintiff Leisy then got a court order permitting service of process by mail, and even interlineating that such service should be sent via e-mail as well. After Leisy served in accordance with the court's order, the trial court dismissed Miller's motion for lack or proper service. The appellate court found that Miller's argument that the means of service did not comply with the state statute was irrelevant since he had consented to service by mail. And while the court ignores the specific argument that the service by e-mail itself was proper, it implies in its logical argument that it may have been proper since it was a means to which Miller stated he would consent to service in his letter to Leisy's attorney.

Another example of a case where alternative methods of service were allowed is Marolf Construction, Inc. v. Allen's

78 See id. at *2 (stating that defendant consented to service via mail). See generally 28 U.S.C. § 1391(e) (2002) (stating nationwide service of process by certified mail is appropriate when serving federal officials and agencies); Colby, supra note 15, at 344 (noting courts have recognized registered mail as method of traditional legitimate service of process).


80 See id. at *2-3 (reviewing superior court commissioner's order to serve process upon defendant by mail and e-mail since these methods were most likely to reach defendant).

81 See id. at *3 (reviewing procedural history of case).

82 See WASH. REV. CODE § 4.28.080(16) (outlining ways process may be served); see also In re Marriage of Leisy, 2002 Wash. App. LEXIS 3164, at *4 (summarizing Miller's argument that service of process was defective under Washington state statute).

83 See In re Marriage of Leisy, 2002 Wash. App. LEXIS 3164, at *5 (finding that service via mail and e-mail were valid where defendant consented to those methods of service). See generally Colby, supra note 15, at 370 (noting how parties that consent to receiving service of process through facsimile and e-mail impliedly consent to being served through such means); Michael Goldsmith & Vicki Rinne, Civil RICO, Foreign Defendants, and "ET", 73 MINN. L. REV. 1023, 1080 n.118 (1989) (asserting that defendants may consent to service of process by other methods which are not enumerated in statutes).

84 See In re Marriage of Leisy, 2002 Wash. App. LEXIS 3164, at *8 (noting that whether service by e-mail alone was proper or not was irrelevant).

85 See id. at *8. (noting logic of analogous situation of service to post office box, also prohibited by statute, could be used to permit service by e-mail). See generally Colby, supra note 15 (discussing how courts have recently permitted electronic service of process, including telex, fax, and e-mail); Goldsmith & Rinne, supra note 83 (discussing how defendant may consent to service of process by other methods than those enumerated in statutes).
Paving Co.  

There, a North Carolina appeals court held that service of process via such means as facsimile and e-mail were permitted since the parties had agreed to govern disagreements under the rules of the American Arbitration Association ("AAA"). In the case, a contract dispute had arisen between the two parties and the case manager for the AAA sent communications about the preliminary hearing by, amongst other methods, facsimile. Respondent argued that this service was improper and that the Uniform Arbitration Act controlled. Indeed, the statute provided, "Unless otherwise provided by the agreement: (1) The arbitrators shall appoint a time and place for the hearing and cause notification to the parties to be served personally or by registered mail not less than five days before the hearing." The petitioner argued that service was proper since the contract provided that the "Contractor shall have the option to . . . settle the matter by arbitration in Mecklenburg County, N.C. in accordance with the American Arbitration Association's Construction Industry Arbitration Rules, then in effect." The AAA rule at the time further provided, "The AAA, the parties, and the arbitrator may also use overnight delivery, electronic facsimile (fax), telex, and telegram. Where all parties and the arbitrator agree, notices may be transmitted by electronic mail.

86 572 S.E.2d 861 (N.C. Ct. App. 2002) (noting that parties may use e-mail to transfer notices where parties and arbitrator agree).
87 See Marolf Construction, 572 S.E.2d at 862–63 (explaining that service of process via alternative means not explicitly permitted under state trial rules where parties had expressly agreed in contract to be governed by procedural rules of the American Arbitration Association).
88 See Marolf Construction, 572 S.E.2d at 862 (discussing various methods utilized throughout the arbitration). See generally Clow Water Sys. Co. v. NLRB, 92 F.3d 411, 442–46 (1996) (discussing how facsimile communication during labor negotiations was unacceptable method of communication where traditional method of communication was by phone); Colby, supra note 15 (mentioning that courts have recently permitted electronic service of process, including telex, fax, and e-mail).
89 See Marolf Construction, 572 S.E.2d at 862 (laying out respondent's arguments that service of process given by facsimile was improper). See generally, N.C. GEN. STAT. § 1-567.6 (2001) (stating that notices of arbitration hearings must be served personally or via registered mail); John M. McCabe, Uniformity in ADR: Thoughts on The Uniform Arbitration Act and Uniform Mediation Act, 3 PEPP. DisP. RESOL. L.J. 317, 358 (2003) (discussing how notice of arbitration proceeding initiation is accomplished through certified or registered mail).
90 N.C. GEN. STAT. §1-567.6 (2001); see also Marolf Construction, Inc., 572 S.E.2d. at 862 (finding Uniform Arbitration Act inapplicable due to agreement).
91 Marolf Construction, 572 S.E.2d at 861 (stating that contract had explicitly provided for AAA's rules to govern case and thus service was proper).
(E-mail), or other method of communication."\textsuperscript{92} Looking at all of this in sum, the court affirmed the trial court order that service of process via the alternate means it was provided was proper under the circumstances since the parties had consented to it.\textsuperscript{93}

A third example of state courts speaking on the ability to serve process by alternate, electronic means is in \textit{Modan v. Modan}.\textsuperscript{94} In this divorce case, the New Jersey Superior Court, Appellate Division noted that had the plaintiff told the court that he had knowledge of an e-mail address, the trial court probably would have allowed him to serve process on his defendant wife via that e-mail address since she had moved back to Pakistan.\textsuperscript{95} After a short and unhappy marriage, plaintiff husband and his wife separated, and the plaintiff brought his wife to her brother's house in New York.\textsuperscript{96} Plaintiff then tried to negotiate a property settlement, but the defendant left the country for Pakistan and the negotiations failed.\textsuperscript{97} When the case was finally brought, defendant's attorney refused to accept service for her client, maintaining that it was necessary to serve her in Pakistan.\textsuperscript{98} Plaintiff nonetheless tried to serve her with process at her mother's New York address, but service was refused.\textsuperscript{99} Plaintiff contended that he believed this to be her address, but there was sufficient evidence to show that he knew she had moved to Pakistan, including phone calls and several e-mails made by defendant to plaintiff from Pakistan.\textsuperscript{100} Plaintiff moved for and

\textsuperscript{92} Id. at 862–63 (noting that language of AAA rule allows delivery of notice by alternative electronic means, notably e-mail, if both parties consent).

\textsuperscript{93} See id. at 863 (holding service of process through alternate means such as fax are adequate where parties have given prior consent to such service). \textit{See generally Colby, supra} note 15 (noting how parties who consent to receiving service of process through facsimile and e-mail have impliedly consented to being served through electronic means); \textit{Goldsmith \& Rinne, supra} note 83, at 1080 n.118 (asserting that defendant may consent to service of process by alternative methods than those enumerated within statutes).

\textsuperscript{94} 742 A.2d 611 (N.J. Super. Ct. 2000) (finding that service of notice could not be served via e-mail).

\textsuperscript{95} See \textit{Modan}, 742 A.2d at 613–14 (positing that if plaintiff had been forthright in his diligent inquiry about e-mails with his wife, he would likely have been permitted to serve notice of divorce suit through e-mail since publication of notice would not have fully satisfied due process requirements).

\textsuperscript{96} See id. at 612 (reciting facts leading to difficulties plaintiff faced in effectuating notice).

\textsuperscript{97} See \textit{id.} (delineating problems which led to this action).

\textsuperscript{98} See \textit{id.} (reviewing all events leading to attempts at service of process in question).

\textsuperscript{99} See \textit{id.} (reviewing facts of rejected attempts at service).

\textsuperscript{100} \textit{See Modan}, 742 A.2d 611, 611–12 (N.J. Super. Ct. 2000) (noting that while plaintiff may not have known defendant's exact address, he at least had knowledge of her e-mail address from which he could communicate with her while she was in Pakistan).
received an order from the trial court allowing notice by publication, but without notifying the trial court of his awareness of an e-mail address with which he could contact defendant. The appellate court overruled the trial court’s order since it was clear that the plaintiff did not use due diligence in finding defendant’s whereabouts since he had knowledge of his wife’s e-mail address. The court further noted that the plaintiff should have tried to serve process via e-mail as well as by publication to satisfy due process requirements and more likely effectuate notice.

D. Television

Before continuing on toward service of process via e-mail, it is also worthwhile to note a case where service of process was permitted by another modern means of communication: television. In Smith v. Islamic Emirate of Afghanistan, plaintiffs brought an action in the District Court for the Southern District of New York against defendants such as Osama bin Laden, al Qaeda, the Taliban, and the Islamic Emirate of Afghanistan for their alleged involvement in the disaster of September 11, 2001. Due to the fact that the whereabouts of

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101 See id. at 612 (pointing out that plaintiff was not forthright in his required ‘diligent inquiry’ to the court in his ability to communicate with defendant and that this led to granting of plaintiff’s motion for service via publication).

102 See id. at 613–14 (overruling trial court order which granted notice by publication since it would have been much more likely to notify defendant of lawsuit if plaintiff had used her e-mail address to follow up on her whereabouts).

103 See id. at 614 (positing that service of process via e-mail would have been proper under these circumstances since it was method of service most likely to give defendant notice of lawsuit).

104 See Smith v. Islamic Emirate of Afghanistan, 01 Civ. 10132 (HB), 2001 U.S. Dist. LEXIS 21712, at *1 (S.D. N.Y. 2001) (permitting service by television); see also Chacker, supra note 39, at 610 (describing Smith, where service was permitted to be served by television on defendants with unknown addresses and whereabouts); Melissa Sepos, TV, Newspaper Ads Will Be Used to Notify Bin Laden, LEGAL INTELLIGENCER, Jan. 7, 2002, at 3 (noting unusual methods of notification allowed to inform terrorists groups of civil suits filed against them).


106 See Smith, 2001 U.S. Dist. LEXIS 21712, at *1–2 (reviewing plaintiffs’ reasons for bringing action against noted parties); see also Chacker, supra note 39, at 610–11 (giving factual overview leading up to action brought against the alleged instigators of September 11 attacks); Sean D. Murphy, Contemporary Practice of the United States Relating to International Law: State Jurisdiction and Immunities: Terrorist-State Litigation in 2002-03, 97 AM. J. INT’L L. 966, 972 (2003) (commenting that plaintiff was successful in bringing suit against many different parties by presenting evidence of responsibility which was found “satisfactory to the court”).
bin Laden or al Qaeda were unknown, service of process upon these two defendants by traditional means would have been futile. 107 Because of this, the court authorized service of process upon these two parties by a coupled method of newspaper publication and television broadcast. 108 To fully satisfy due process requirements, plaintiffs were also required to supplement the publication notice with paid advertisements notifying defendants of the pending lawsuits on the relevant broadcast channels. 109 Further worth noting is that plaintiffs were not able to serve process via television on the Taliban or the Islamic Emirate of Afghanistan, each of whom had readily ascertainable addresses. 110 Nonetheless, in the interest of justice, the courts have allowed plaintiffs to effectuate service of process by unusual methods not entertained at the time of Mullane. 111

107 See Smith, 2001 U.S. Dist. LEXIS 21712, at *2–3 (outlining factors which caused plaintiffs to move for service of process by alternate means under FED. R. OF CIV. P. 4(f)(3)); see also Chacker, supra note 39, at 611 (showing challenges plaintiffs faced in bringing their lawsuit against defendants); Sepos, supra note 104, at 3 (noting that district court agreed that traditional methods of service, such as mail or personal delivery, would not be feasible for bin Laden and al Qaeda, and thereby requiring alternative means).

108 See Smith, 2001 U.S. Dist. LEXIS 21712, at *9–11 (listing reasons for allowing process to be served upon bin Laden via publication); see also Chacker, supra note 39, at 611 (noting that court authorized such unusual methods of process because defendants' whereabouts were unknown); Sepos, supra note 104, at 3 (recounting that notice of service ran in Heward, Anis, Kabul News, and the Kabul Times in Afghanistan, in the Pakistani paper Wahat, and on several broadcast stations such as Al Jazeera, Turkish CNN, and BBC World).

109 See Smith v. Islamic Emirate of Afghanistan, 01 Civ. 10132 (HB), 2001 U.S. Dist. LEXIS 21712, at *11 (S.D. N.Y. 2001) (requiring plaintiffs to rely on more than just notice by publication to properly effectuate service of process); see also Chacker, supra note 39 at 611 (noting that plaintiffs were required to pay for television advertisements); Sepos, supra note 104, at 3 (stating that plaintiff's lawyer estimated cost of service using television advertisements could be as much as $100,000).

110 See Smith, 2001 U.S. Dist. LEXIS 21712, at *13–14 (requiring personal service of process under Rule 4(f)(3) and not service by television upon Taliban and one of Islamic Emirate of Afghanistan's high ranking officials); see also Chacker, supra note 39 at 612 (discussing court's ruling that service by publication was not preferable upon defendants such as Taliban and Islamic Emirate of Afghanistan due to their known addresses); Sepos, supra note 104, at 3 (noting how Taliban and Islamic Emirate of Afghanistan were personally served through Mullah Abdul Salam Zaeef, Taliban's ambassador to Pakistan).

111 See Smith, 2001 U.S. Dist. LEXIS 21712, at *9–10 (positing that Osama bin Laden was aware civil suits would be filed against him after implementing plans to destroy the World Trade Center and suspecting jurisdiction would be found within United States due to state of disarray of Afghanistan's legal system); see also Chacker, supra note 39, at 610–12 (acknowledging unusual nature of method of service of process permitted but nonetheless admitting its necessity to allow plaintiffs to have an opportunity for recourse for their injuries). See generally Colby, supra note 15, at 337–38 (discussing Supreme Court's requirement, under Mullane, that service of process must be "reasonably calculated, under all the circumstances, to apprise interested parties of the pendency of the action and afford them an opportunity to present their objections").
IV. PARALLEL RULE DEVELOPMENTS

There have been parallel developments in the service of documents via electronic means in both the federal and state judiciary systems.112 The first support given to admitting electronic submissions in federal court came in 1996,113 with the amendments that introduced FEDERAL RULE OF CIVIL PROCEDURE 5(e)114 and FEDERAL RULE OF APPELLATE PROCEDURE 25(a)(2)(D).115 Both of these rules permit a court to allow, by local rule, "papers to be filed, signed, or verified by electronic means."116 The language in these rules has provided the inspiration for rules providing for other electronic service.117

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112 See Maria Perez Crist, The E-Brief: Legal Writing for an Online World, 33 N.M. L. REV. 49, 58–59 (2003) (introducing methods of writing legal briefs for electronic context with ancillary information regarding federal and state rules on filing papers electronically). See generally Colby, supra note 15, at 337–38 (arguing that electronic service will develop into universal standard); Tamayo, supra note 25, at 252 (commenting that service of process by electronic means may be superior to other methods because it is virtually unhindered by physical restraint).

113 See Crist, supra note 112, at 58 (discussing initial rule changes which began to allow electronic submissions to federal courts).

114 FED. R. CIV. P. 5(e).

Filing With the Court Defined. The filing of papers with the court as required by these rules shall be made by filing them with the clerk of court, except that the judge may permit the papers to be filed with the judge, in which event the judge shall note thereon the filing date and forthwith transmit them to the office of the clerk. A court may by local rule permit papers to be filed, signed, or verified by electronic means that are consistent with technical standards, if any, that the Judicial Conference of the United States establishes. A paper filed by electronic means in compliance with a local rule constitutes a written paper for the purpose of applying these rules. The clerk shall not refuse to accept for filing any paper presented for that purpose solely because it is not presented in proper form as required by these rules or any local rules or practices.

See generally Crist, supra note 112, at 59 (stating that electronic submissions received procedural support with the amendments to FED. R. CIV. P. 5(e) and FED. R. APP. P. 25(a)(2)(D)).


Electronic filing. A court of appeals may by local rule permit papers to be filed, signed, or verified by electronic means that are consistent with technical standards, if any, that the Judicial Conference of the United States establishes. A paper filed by electronic means in compliance with a local rule constitutes a written paper for the purpose of applying these rules.

See generally Crist, supra note 112, at 59 (stating that federal appellate rules were amended to permit local courts to create rules aimed at increasing efficiency). Cf. Clint F. Sare, CD-ROM Filings at Trial and Beyond, 1999 COMP. L. REV. & TECH. J. 1, 3 (1999) (noting that filings created on CD-ROM and use of electronic services may unfairly prejudice parties without such technology).

116 FED. R. CIV. P. 5(e); FED. R. APP. P. 25(a)(2)(D).

For example, many federal circuits have adopted local rules for the submission of electronic briefs, and some states even mandate the submission of briefs by computer disk.\textsuperscript{118}

Other rule changes have also been recently implemented. On December 1, 2001, amendments to the \textit{Federal Rules of Civil Procedure} were activated to allow parties to serve all pleadings (except for complaints) and other papers via electronic means where the party consents in writing.\textsuperscript{119} Rule 5(b)(2)(D) permits the service of these papers under Rule 5(a) by

Delivering a copy by any other means, including electronic means, consented to in writing by the person served. Service by electronic means is complete on transmission... If authorized by local rule, a party may make service under this subparagraph (D) through the court's transmission facilities.\textsuperscript{120}

This rule was put into effect to ease the crippling effect that paper has had on American courts in terms of maintaining storage space, difficulty of judicial access, and costs of personnel to manage and organize these papers.\textsuperscript{121} While parties are required to consent to service under Rule 5(b)(2)(D), this limitation is likely to recede as the courts begin to acknowledge

\textsuperscript{118} See, \textit{e.g.}, 1st Cir. Loc. R. 32(1) (declaring that parties represented by counsel must submit one copy of their brief, petition for rehearing, and all papers exceeding ten pages in length on a computer disk); 5th Cir. Loc. R. 31.1 (requiring parties to file one computer readable diskette copy of brief with clerk); see also Crist, \textit{supra} note 112, at n.58–59 (noting North Dakota Supreme Court's requirement that parties submit copies of briefs on computer disk).

\textsuperscript{119} See Fed. R. Civ. P. 5(b)(2)(D) (allowing service of papers and filings to be made upon parties electronically when written consent is given); see also Fed. R. Civ. P. 5(d), Advisory Committee's Note (discussing amendments to Rule 5 in matters concerning filing discovery requests). See generally Colby, \textit{supra} note 15, at 356 (noting relevance of rule changes to service via e-mail).

\textsuperscript{120} Fed. R. Civ. P. 5(b)(2)(D).

the universal use and appeal of electronic communication.\textsuperscript{122} Furthermore, the federal judiciary is working on implementing these electronic case management systems nationwide.\textsuperscript{123}

Another point worth noting is that other rule changes have been required to ensure that these rule changes survive a due process scrutiny and meet the purpose of service of process.\textsuperscript{124} These statutes include\textit{Federal Rule of Appellate Procedure 26(c)}\textsuperscript{125} and\textit{Federal Rules of Civil Procedure 6(e)},\textsuperscript{126} both of which extend the time allowed to file an answer due to the amendments made in the aforementioned rules.\textsuperscript{127} All of these rule changes together seem to show a trend in the federal courts

\textsuperscript{122} See Colby,\textit{ supra} note 15, at n.192 (predicting requirement that parties consent to service of process via electronic means of communication will recede); see also \textit{Fed. R. Civ. P. 5(b)}, Advisory Committee Notes (2001) (stating that “e]arly experience with electronic filing as authorized by Rule 5(d) is positive, supporting service by electronic means as well. Consent is required, however, because it is not yet possible to assume universal entry into the world of electronic communication.”). \textit{See generally} Tamayo,\textit{ supra} note 25, at 246–47 (discussing widespread popularity e-filing is gaining within courts).


\textsuperscript{124} See, e.g.,\textit{ 5th Cir. Loc. R. 31.1} (requiring parties to serve each party separately represented by counsel with disks); see also \textit{Fed. R. Civ. P. 5(b)(3)}, Advisory Committee Note (2001) (recommending that person attempting service must try again if there is actual knowledge that electronic service has failed). \textit{See generally} Colby,\textit{ supra} note 15, at n.193 (referring to rules which have been adapted to ensure time limits for responding to papers are fair under due process requirements).

\textsuperscript{125} \textit{Fed. R. App. P. 26(c).} This statute provides that three (3) additional days are to be added to the served party's response time when papers are served electronically when it says:

When a party is required or permitted to act within a prescribed period after a paper is served on that party, 3 calendar days are added to the prescribed period unless the paper is delivered on the date of service stated in the proof of service. For purposes of this Rule 26(c), a paper that is served electronically is not treated as delivered on the date of service stated in the proof of service.

\textit{See also} Colby,\textit{ supra} note 15, at n.194 for an analysis of various rule changes associated with permitting service of papers electronically in certain situations.

\textsuperscript{126} \textit{Fed. R. Civ. P. 6(e).} This rule provides for additional time to be added to the answering period after service has been made under Rule 5(b)(2)(B), (C), or (D). It states:

Whenever a party has the right or is required to do some act or take some proceedings within a prescribed period after the service of a notice or other paper upon the party and the notice or paper is served upon the party under Rule 5(2)(B), (C), or (D), 3 days shall be added to the prescribed period.

\textit{Id. See also} Lind,\textit{ supra} note 117, at 1236 for a review of various rule changes associated with permitting electronic service in federal courts.

\textsuperscript{127} See, e.g., \textit{Fed. R. Civ. P. (6)(e); Fed. R. App. P. (26)(c); see also} Colby,\textit{ supra} note 15, at n.193 (discussing rule changes affecting electronic service); Lind,\textit{ supra} note 117, at 1236 (listing changes to\textit{Federal Rules of Civil Procedure and other local rules}).
toward allowing electronic service more and more as technology progress.\(^{128}\)

There have also been similar movements in several state judiciary systems toward increased use of technology in serving process and other papers.\(^{129}\) For example, the state of Indiana has recently adopted new trial rules that allow the filing of papers electronically.\(^{130}\) Indiana Trial Rule 5(E) gives a definition of "filing with the court,"\(^{131}\) allowing the filing of documents by all forms of electronic transmission, including facsimile.\(^{132}\) This rule was enacted with the Uniform Electronic Transactions Act\(^{133}\) in mind which was designed to persuade governmental entities to use electronic records.\(^{134}\)

A steady progression can be seen in the evolution and increased flexibility of service of process.\(^{135}\) There has been a constant development, from the need for personal service to

\(^{128}\) See Crist, supra note 112, at 55 (stating that "[a]s technology becomes pervasive throughout society in general, it is understandable that the judiciary would expect similar advancements in the courts"); see also Tamayo, supra note 25, at 248 (suggesting that courts must progress as technology advances and will continue trend towards accepting electronic documents). See generally Colby, supra note 15, at n.194 (noting potential nationwide implementation of CM/ECF).

\(^{129}\) See, e.g., Crist, supra note 112, at n.59 (citing North Dakota district court requirement that case briefs be filed with electronic supplements as well as paper versions); see also Case Management / Electronic Case Files CM/ECF, available at http://www.uscourts.gov/cmecef/cmecefabout.html (last visited Aug. 24, 2004) (listing the district and bankruptcy courts currently using or implementing CM/ECF). See generally Colby, supra note 15, at 345–46 (noting effect increased use of e-mail has had on law in terms of service of process).

\(^{130}\) See IND. TRIAL R. 5(F)(2) (allowing electronic filings of pleadings, motions and other papers); see also Williams v. State of Indiana, 793 N.E.2d 1019, 1030 (2003) (allowing attorneys to certify in filing papers that copies were sent via fax to Supreme Court Administration office by fax or e-mail to other party's attorney). See generally Lind, supra note 117, at 1227 (reviewing changes in Indiana’s rules of civil procedure, including provision allowing electronic service of filings).

\(^{131}\) IND. TRIAL R. 5(E).

\(^{132}\) Id. (granting service of electronic filings by facsimile and all forms of electronic transmission); see also Williams, 793 N.E.2d at 1030 (requiring papers be filed by fax). See generally Lind, supra note 117, at 1227 (giving brief overview of modifications to Indiana Trial Rules).

\(^{133}\) IND. CODE § 26-2-8.

\(^{134}\) See IND. CODE § 26-2-8 (encouraging local government to use electronic record keeping systems); see also Lind, supra note 117, at 1227 (showing how Uniform Electronic Transactions Act is complemented by amendment to Indiana Trial Rule 5(E)). See generally Margaret Jane Radin, Humans, Computers, and Binding Commitment, 75 IND. L.J. 1125, 1142–43 (2000) (outlining overview of Uniform Electronic Transactions Act).

\(^{135}\) See Chacker, supra note 39, at 604–15 (listing technological devices and means through which courts have permitted service of process); see also Conley, supra note 3, at 417–24 (reviewing historical development of alternative forms of service of process). See generally Tamayo, supra note 25, at 246–51 (discussing electronic technology and litigation, including service of process).
create a basis for a rigid form of personal jurisdiction to a more flexible means of simply effectuating notice of a pending lawsuit.\textsuperscript{136} Courts have also been more ambitious in recent years in allowing plaintiffs to use new technologies to effectuate service and have an opportunity to have their claims heard in court.\textsuperscript{137} However, it can be clearly seen that this ambition has limits, and that the service must still be the means most reasonably calculated to reach defendants.\textsuperscript{138} Nonetheless, if the most reasonably calculated method of best effectuating service happens to be a facsimile or a television broadcast, we are likely to see such service.\textsuperscript{139} An examination of service of process via e-mail should thus fit the same standards.

V. SERVICE OF PROCESS VIA E-MAIL

A. Cases Rejecting E-Mail Service

There has been some resistance toward allowing service of process electronically.\textsuperscript{140} An example is seen in \textit{Columbia Ins. Co. v. Seescandy.com}.\textsuperscript{141} In one of the first published decisions

\textsuperscript{136} See Colby, supra note 15, at 338–46 (discussing effect of changes in technology and societal needs with expanding vision of service of process); see also Conley, supra note 3, at 417–20 (outlining historical rationale for service of process, from symbolic to practical). See generally Tamayo, supra note 25, at 228–29 (explaining how service of process is method by which court exercises physical power over defendant).

\textsuperscript{137} See supra PART III.


\textsuperscript{140} See, e.g., Columbia Ins. Co. v. Seescandy.com, 185 F.R.D. 573, 579 (N.D. Cal. 1999) (holding that e-mail service was not sufficient to comply with Federal Rules of Civil Procedure); Wawa, Inc. v. Christensen, No. 99-1454, 1999 U.S. Dist. LEXIS 11510, at *1, *4 (E.D. Pa. 1999) (holding that e-mail service on defendants was not approved method under Federal Rules of Civil Procedure); see also Colby, supra note 15, at 354–55 (listing cases where service of process via e-mail and facsimile were not permitted).

\textsuperscript{141} 185 F.R.D 573 (N.D. Cal. 1999).
addressing service of process by e-mail, the court refused to allow service of process via e-mail. The case involved a trademark dispute, and since defendants had registered for their Internet domain name under pseudonyms, the plaintiff did not have any idea whom to serve process. As a result, the plaintiff named John Doe defendants and attempted to serve process via e-mail, but received no response. The court rejected this attempt at service as improper, but offered little to no reasoning as to why it thought that service by e-mail did not comply with the FEDERAL RULES OF CIVIL PROCEDURE despite finding that plaintiff had made a reasonable and good faith attempt to identify defendants.

The court in WAWA Inc. v. Christensen also refused to permit service of process by e-mail. In that case, the plaintiff attempted to serve process on a Danish citizen by e-mail and

142 See Colby, supra note 15, at 355 (noting that Columbia Ins. Co. was one of the first published cases to address service of process by e-mail); see also Thumma & Jackson, supra note 4, at 23 (citing several cases prior to Columbia Insurance Co. that had dealt with electronic filing issues other than service of process). But see Tamayo, supra note 25, at 250 (indicating that there were at least three other U.S. cases which had addressed issue of service of process via e-mail).

143 See Columbia Ins. Co., 185 F.R.D. at 579–81 (concluding that service of process via e-mail was inadequate and that plaintiff needed to further investigate identity of defendants); see also Colby, supra note 14, at 355 (restating Columbia Insurance Co. holding that service of process by e-mail did not comport with Federal Rules of Civil Procedure); Tamayo, supra note 25, at 250–51 (noting Columbia Insurance Co. court's lack of explanation for decision).

144 See Columbia Ins. Co., 185 F.R.D. at 577 (stating defendants had registered website domain under Internet aliases making it difficult for plaintiff to identify proper defendants); see also Colby, supra note 15, at 355 (summarizing inability of plaintiff to identify proper defendants); Tamayo, supra note 25, at 250–51 (noting plaintiff could only find Internet pseudonyms under which defendants had registered their website).

145 See Columbia Ins. Co., 185 F.R.D. at 577–79 (observing that plaintiff sued unknown defendants and attempted to serve them via e-mail); see also Colby, supra note 15, at 355 (restate plaintiff's efforts where he could not find identity of defendants); Tamayo, supra note 25, at 251 (outlining plaintiff's efforts in trying to determine identity of defendants).

146 See Columbia Ins. Co. v. Seescandy.com, 185 F.R.D. 573, 579 (N.D. Cal. 1999) (finding that service of process via e-mail was improper without explanation). See generally Colby, supra note 15, at 355 (positing that insufficient explanation was given as to why service via e-mail was held improper); Tamayo, supra note 25, at 251 (indicating Columbia Insurance Co.'s holding that e-mail service was inadequate under Federal Rules of Civil Procedure).


148 See id. at *4 (pointing to discussion and recommendation by Judicial Conference Rules Committee regarding possible rule change to FED. R. CIV. P. Rule 4 allowing for service of process via e-mail); see also Colby, supra note 15, at 355–56 (examining reasoning in WAWA, Inc.). But see Rio Props., Inc. v. Rio Int'l Interlink, 284 F.3d 1007, 1018 (9th Cir. 2002) (distinguishing WAWA, Inc.).
regular mail.\textsuperscript{149} The court concluded that service by regular, certified mail was proper but that service by e-mail was improper without explanation, stating, "email [sic] is not a valid means for delivering a summons and complaint to a defendant."\textsuperscript{150} However, it was not long after this case was decided that federal courts began to allow plaintiffs to serve process on defendants via e-mail.\textsuperscript{151}

B. Cases Permitting E-Mail Services

The first federal case permitting service of process via e-mail was \textit{In re Telemedia Associates, Inc.},\textsuperscript{152} as was described above.\textsuperscript{153} This case provided the first constitutional analysis of the sufficiency of service by e-mail.\textsuperscript{154} In making its decision, the court noted that it was doing a sort of trailblazing,\textsuperscript{155} stating "any unspecified form of alternate service usually has its genesis in untried or formerly unapproved methodology."\textsuperscript{156} The court thought was a logical extension of previous case law to allow service by e-mail,\textsuperscript{157} stating that "[i]t would be akin to hiding

\textsuperscript{149} See WAWA, Inc., 1999 U.S. Dist. LEXIS 11510 at *4 (stating plaintiff attempted to serve defendant who was from Denmark via e-mail); see also \textit{In re Int'l Telemedia Assocs., Inc.}, 245 B.R. at 721, n.6 (distinguishing WAWA, Inc. on its facts); Colby, \textit{supra} note 15, at 356 (examining facts and holding of WAWA, Inc.).

\textsuperscript{150} \textit{WAWA, Inc.}, 1999 U.S. Dist. LEXIS 11510, at *4 (holding e-mail service improper since not explicitly permitted under Federal Rules of Civil Procedure); see also Chacker, \textit{supra} note 39, at n.88 (summarizing holding of WAWA, Inc.); Colby, \textit{supra} note 15, at 356 (examining \textit{WAWA, Inc.} holding). See, e.g., \textit{Rio Props., Inc.}, 284 F.3d at 1018 (endorsing service of process by e-mail, cognizant of medium's limitations); \textit{In re Int'l Telemedia Assocs., Inc.}, 245 B.R.713 at 720-21 (Bankr. N.D. Ga. 2000) (permitting service of process by e-mail). See generally Colby, \textit{supra} note 15, at 356 (discussing cases that allowed service of process via e-mail after WAWA, Inc.).

\textsuperscript{152} 245 B.R. 713 (Bankr. N.D. Ga. 2000); see also Colby, \textit{supra} note 14, at 356 (stating that line of cases allowing service of process via e-mail began shortly after WAWA, Inc.).

\textsuperscript{153} See \textit{supra} PART III.B.

\textsuperscript{154} See In re Telemedia Assocs., Inc., 245 B.R. at 718–22 (finding no other United States case considering notice via e-mail and holding that service of process via e-mail is constitutionally proper); see also Chacker, \textit{supra} note 39, at 612–13 (highlighting \textit{In re Telemedia Assocs., Inc.} as first case where service of process via e-mail was found to be constitutionally proper); Colby, \textit{supra} note 15, at 356 (stating \textit{In re Telemedia Assocs., Inc.} was first case to analyze constitutionality of service of process via e-mail).

\textsuperscript{155} See \textit{In re Telemedia Assocs., Inc.}, 245 B.R. at 719 (recognizing the breaking of new ground by allowing service of process by e-mail); see also Colby, \textit{supra} note 15, at 358 (pointing to court's recognition that it was moving beyond prior case law and furthering \textit{New England Merchants} line of cases). See generally Chacker, \textit{supra} note 39, at 612–13 (stating that \textit{In re Telemedia Assocs., Inc.} was first case dealing with service by e-mail).

\textsuperscript{156} \textit{In re Telemedia Assocs., Inc.}, 245 B.R. at 719.

\textsuperscript{157} See \textit{id.} at 722 (examining facts and finding that there was no reason not to allow service of process via e-mail since defendant preferred to communicate with plaintiffs by
one's head in the sand to ignore such realities and the positives of such advancements."\textsuperscript{158} From all of this, it appears that the court found that service of process via e-mail or facsimile can be constitutionally permissible even where the defendant does not expressly consent to service by such a manner.\textsuperscript{159}

Shortly after this case was decided, the United States District Court for the Eastern District of Pennsylvania decided similarly in \textit{Electronic Boutiques Holdings Corp. v. Zuccarini}.\textsuperscript{160} In this case, service on the defendant was made difficult due to his evasive behavior.\textsuperscript{161} Plaintiff argued that service via e-mail was proper because the defendant preferred communication through his e-mail address and thus sending notice via e-mail was likely to produce notice of the lawsuit.\textsuperscript{162} The court allowed service via e-mail here, dispelling any due process concerns by noting that the e-mail service was allowed because it was defendant's preferred means of communication.\textsuperscript{163}

\textbf{C. Rio Properties, Inc. v. Rio International Interlink}

A federal appellate court finally addressed the mounting district court authority allowing service of process via electronic or other new technological means in \textit{Rio Properties, Inc. v. Rio International Interlink}.\textsuperscript{164} Rio Properties was a Las Vegas casino


\textsuperscript{159} \textit{See id.} at 722 (allowing e-mail service of process); \textit{see also} Chacker, supra note 39, at 613 (concluding that court decided e-mail service of process was constitutional). \textit{See generally} Colby, supra note 15, at 360 (discussing English High Court case where service of process via e-mail was allowed where defendant had not consented to that method of service).

\textsuperscript{160} No. 00-4055, 2001 U.S. Dist. LEXIS 765, at *1 (E.D. Pa. 2001).

\textsuperscript{161} \textit{See id.} at *12–24 (observing that defendant made several maneuvers and deceptions in order to evade service); \textit{see also} Chacker, supra note 39, at 613–14 (stating that defendant was evasive and went out of his way to avoid service of process).

\textsuperscript{162} \textit{See Electronics Boutiques Holdings Corp.}, 2001 U.S. Dist. LEXIS 765 at *11–12 (mentioning that evasive defendant could be served by any means reasonably calculated to notify him); \textit{see also} Chacker, supra note 39, at 614 (outlining plaintiff's argument that service of process via e-mail would be proper upon this defendant).

\textsuperscript{163} \textit{See Electronics Boutiques Holdings Corp.}, 2001 U.S. Dist. LEXIS 765 at *11–13 (allowing service of process by alternative means); \textit{see also} Chacker, supra note 39, at 614 (referring to satisfaction of due process requirements where defendant preferred to communicate by e-mail).

\textsuperscript{164} 284 F.3d 1007 (9th Cir. 2002); \textit{see also} Chacker, supra note 39, at 614 (noting Rio Properties was first time issues of procedural due process and notice through modern
owner and operator with various registered trademarks protecting its rights in its casinos and other operations.\textsuperscript{165} Rio Properties registered the website domain www.playrio.com to advertise its renowned sports book and casino on the Internet.\textsuperscript{166} Rio International is a Costa Rican entity that operated an Internet gambling business that earned approximately $3 million annually.\textsuperscript{167} Rio International ran a website entitled www.riosports.com and put advertisements in racing forms and on the radio in Las Vegas as part of its marketing strategy.\textsuperscript{168} When Rio Properties learned of all of Rio International’s actions, they sent it a letter demanding it shut down the website.\textsuperscript{169} However, Rio International soon thereafter opened the website www.betrio.com, causing Rio Properties to begin a suit for trademark infringement.\textsuperscript{170} Rio Properties then tried to serve process on Rio International, but discovered they were unable to locate it in the United States or Costa Rica and were unable to serve process through an international courier which Rio International had set as their address upon registering the websites.\textsuperscript{171} In response to these difficulties, Rio Properties filed technology were tackled); Posey, Jr., \textit{supra} note 64, at 403 (stating \textit{Rio Properties} was the first time federal appellate court affirmed using e-mail to serve process).

\textsuperscript{165} See \textit{Rio Props. Inc.}, 284 F.3d at 1012 (identifying plaintiff in lawsuit); see also Chacker, \textit{supra} note 39, at 614–15 (stating plaintiff’s identity); Posey, Jr., \textit{supra} note 64, at 404 (discussing plaintiff’s occupation).

\textsuperscript{166} See \textit{Rio Props. Inc.}, 284 F.3d at 1012 (highlighting facts leading lawsuit); see also Posey, Jr., \textit{supra} note 64, at 404 (noting how plaintiff registered domain name ‘www.playrio.com’). \textit{See generally} Chacker, \textit{supra} note 39, at 614–15 (stating that plaintiff was casino’s owner).

\textsuperscript{167} See \textit{Rio Props. Inc.}, 284 F.3d at 1012 (naming defendant and describing its business); see also Chacker, \textit{supra} note 39, at 614–15 (identifying defendant as Costa Rican Internet gambling business); Posey, Jr., \textit{supra} note 64 at 404–05 (describing defendant’s business).

\textsuperscript{168} See \textit{Rio Props. Inc.}, 284 F.3d at 1012 (observing Rio International’s marketing strategy for bringing visitors to its website was by implying an association with Rio Properties); see also Colby, \textit{supra} note 15, at 361 (discussing defendant’s website); Posey, Jr., \textit{supra} note 64, at 404 (describing defendant’s marketing strategy).

\textsuperscript{169} See \textit{Rio Props. Inc. v. Rio Int'l Interlink}, 284 F.3d 1007, 1012 (9th Cir. 2002) (remarking on Rio Properties’ immediate reaction to Rio International’s marketing strategy); see also Colby, \textit{supra} note 15, at 361 (discussing how plaintiff took immediate action upon learning of Rio International’s website); Posey, Jr., \textit{supra} note 64, at 405 (noting that plaintiff sent defendant cease-and-desist letter upon learning of defendant’s website).

\textsuperscript{170} See \textit{Rio Props. Inc.}, 284 F.3d at 1012–13 (summarizing events which led to lawsuit); see also Colby, \textit{supra} note 15, at 361 (stating how defendant resumed its activity on another website); Posey, Jr., \textit{supra} note 64, at 405 (discussing how defendant quickly resumed its activities on another website).

\textsuperscript{171} See \textit{Rio Props. Inc.}, 294 F.3d at 1013 (indicating difficulties Rio Properties faced in attempting to effectuate service upon Rio International); see also Colby, \textit{supra} note 15, at 361 (discussing plaintiff’s difficulty in serving defendant with process); Posey, Jr., \textit{supra}
an emergency motion for alternate service of process, and the district court granted service via the e-mail address, email@betrio.com, provided on Rio International's website.\(^{172}\)

With the court order, Rio Properties served Rio International and the court denied Rio International's motion to dismiss for lack of personal jurisdiction and insufficient service of process.\(^{173}\) Rio International then filed an answer, but failed to meet with the court's discovery requirements, giving half-hearted and useless answers to interrogatories and discovery requests.\(^{174}\) The court finally granted preclusive sanctions on the defendant after its bad faith in discovery.\(^{175}\) Rio International then appealed the order challenging the sufficiency of service and jurisdiction.\(^{176}\) The Ninth Circuit affirmed the trial court's order, holding that service of process via e-mail satisfied due process requirements.\(^{177}\)

In its analysis of whether service of process by e-mail was proper, the Ninth Circuit first established the constitutional framework under which to allow the service, derived from \textit{Mullane}, that notice be 'reasonably calculated' to reach the parties to the lawsuit.\(^{178}\) They stated that, "this broad constitutional principle unshackles the federal courts from anachronistic methods of service and permits them entry into the

\(^{172}\) See \textit{Rio Props. Inc.}, 294 F.3d at 1013 (discussing district court's ruling that ordered service of process via e-mail); see also Colby, supra note 15, at 361 (stating that plaintiff was finally able to serve defendant via e-mail); Posey, Jr., supra note 64, at 405–06 (noting how court allowed plaintiff to serve defendant through e-mail).

\(^{173}\) See \textit{Rio Props. Inc.}, 284 F.3d 1007, 1013 (9th Cir. 2002) (recounting procedural steps taken).

\(^{174}\) See \textit{Rio Props. Inc.}, 284 F.3d. at 1013 (mentioning Rio International's bad faith conduct during discovery proceedings).


\(^{176}\) See \textit{Rio Props. Inc.}, 284 F.3d. at 1014 (following procedural stages of case).

\(^{177}\) See \textit{Rio Props. Inc.}, 284 F.3d 1007, 1016–19, 1023 (9th Cir. 2002) (analyzing and disposing of case). See generally Posey, Jr., supra note 64, at 404 (positing that e-mail and Internet options do provide viable alternatives for expeditious and efficient service of process).

\(^{178}\) See \textit{Rio Props. Inc.}, 284 F.3d. at 1016–19, 1023 (applying \textit{Mullane}'s 'reasonably calculated' standard to this case to determine whether service of process via e-mail was proper); see also Chacker, supra note 39, at 618 (noting how Ninth Circuit applied \textit{Mullane}'s 'reasonably calculated' standard); \textit{Mullane v. Central Hanover Bank}, 339 U.S. 306, 314 (1950) (stating that notice must be 'reasonably calculated' to reach defendants in order to be constitutional).
technological renaissance." The court then inquired as to whether the e-mail service here had met this due process threshold. Since Rio International set up a business model where it could only be reached by e-mail, the court concluded that the 'reasonably calculated' standard was more than satisfied since e-mailing service was the most likely method of effectuating notice on defendant.

However, the Ninth Circuit also recognized some of the limitations of service by e-mail. They listed three potential problems with service by e-mail: confirming receipt of the e-mail message, limited use of electronic signatures and verification requirements, and attaching and viewing exhibits. Because of these concerns, the court called for trial courts to balance them against the necessity of service by e-mail and the likelihood of the notice to reach the defendant.


180 See Rio Props. Inc. v. Rio Int'l Interlink, 284 F.3d 1007, 1017-19 (9th Cir. 2002) (demonstrating Ninth Circuit's application of 'reasonably calculated' standard to case).

181 See Rio Props. Inc., 284 F.3d at 1017-18 (commenting that Rio International made large profits and successfully set up its business to have its only means of communicating with businessmen be by e-mail).

182 See Rio Props. Inc., 284 F.3d 1007, 1018 (9th Cir. 2002) (finding that e-mail was method most likely to reach defendant, which was only constitutional requirement); see also Colby, supra note 15, at 363 (noting that court decided 'without hesitation' that e-mail service met Mullane's 'reasonably calculated' standard); Chacker, supra note 39, at 619 (summarizing Ninth Circuit's holding that e-mail service satisfied Mullane's 'reasonably calculated' standard).

183 See Rio Props. Inc., 284 F.3d at 1018 (recognizing some limitations in allowing service of process to be effectuated by e-mail); see also Colby, supra note 15, at 364 (remarking on some limitations of service of process by e-mail listed by Ninth Circuit); Posey, Jr., supra note 64, at 412-14 (explaining identified and previously unidentified e-mail limitations).

184 See Rio Props. Inc., 284 F.3d at 1018 (listing some concerns and limitations on service of process via e-mail); see also Chacker, supra note 39, at 619 (enumerating Ninth Circuit's ideas on limitations of service by e-mail); Colby, supra note 15, at 363-64 (debating Ninth Circuit's limitations and concerns about e-mail service).

185 See Rio Props. Inc. v. Rio Int'l Interlink, 284 F.3d 1007, 1018 (9th Cir. 2002) (mandating that trial courts balance limitations on service of process via e-mail against necessity of granting service of process by e-mail); see also Chacker, supra note 39, at 619 (noting that trial court has discretion in determining whether to grant service by e-mail, and that benefits of e-mail service should be balanced against limitations); Posey, Jr., supra note 64, at 407 (explaining need to balance limitations of e-mail service with its benefits).
D. Cases Following Rio Properties

Since the Ninth Circuit ruled permitting service of process by e-mail, there have been several cases in both federal and state courts where e-mail service has been permitted. The United States District Court for the Western District of New York spoke on the subject in Ryan v. Brunswick Corp., In a personal injury/products liability action, the plaintiff sued a New York bicycle distributor and the Taiwanese component manufacturer. When the plaintiff had difficulty serving the Taiwanese corporation by traditional means, the court moved sua sponte in allowing plaintiff to serve process electronically. The court relied on Rio Properties, noting that service can be effectuated by "other means" where "not prohibited by international agreement." However, the court also noted that service by these other means could not be effectuated on the whim of the plaintiff. They found that reasonable attempts at service must be made before electronic service can be effectuated. And while they "need not exhaust all possible


188 See id. at *1 (naming plaintiff, defendant, and cause of action leading to procedural question at issue).

189 See id. at *1, *1-3 (reviewing court's actions and reasons for allowing e-mail service of process); see also Chacker, supra note 39, at 626 (noting how other courts, outside Ninth Circuit, have cited to Rio Properties); Colby, supra note 15, at 365 (concluding that Ryan court held that parties could not whimsically seek to use other means of service).

190 Ryan, 2002 WL 1628933 at *2 (citing Rio Properties on premise that Rule 4(f)(3) provides basis for serving process by electronic means); see also FED. R. CIV. P. 4(f)(3) (allowing service by any means not prohibited by international agreement); Rio Props., Inc. 284 F.3d at 1014–19 (holding that service of process via e-mail was proper under Rule 4(f)(3) where due process required).

191 See Ryan v. Brunswick, No. 02-CV-133(E) F, 2002 WL 1628933, at *1, *2 (W.D. N.Y. 2002) (placing limitations on when electronic service of process may be authorized); see also Chacker, supra note 39, at 626 (debating Rio Props. Inc.'s applications beyond electronic mail); Colby, supra note 15, at 363 (restating to Ryan court that plaintiffs cannot "whimsically" seek to use electronic service of process).

192 See Ryan, 2002 WL 1628933, at *6–9 (requiring reasonable attempts at traditional methods of service to be made before alternate methods of service can be sought); see also Colby, supra note 15, at 363 (mentioning requirement that traditional service be attempted first before alternate service may be authorized). See generally
methods of service,” it must be a situation where the “court’s intervention is necessary to obviate the need to undertake methods of service that are unduly burdensome or that are untried but likely futile.”\textsuperscript{193} The court in Ryan expanded on the holding in Rio Properties, finding that the degree of evasiveness need not be as extreme to authorize electronic service.\textsuperscript{194}

A state court in New York also spoke on the issue of whether service of process via e-mail can be permitted in Hollow v. Hollow.\textsuperscript{195} In this divorce case, the plaintiff’s husband moved to Saudi Arabia to work for an engineering firm.\textsuperscript{196} The defendant then proceeded to e-mail his wife, and taunted her by insinuating that he was untouchable since he was in Saudi Arabia.\textsuperscript{197} The plaintiff then brought her divorce suit but was unable to personally serve defendant in Saudi Arabia.\textsuperscript{198} Therefore, plaintiff sought an order authorizing service of process by e-mail and an extension of time to serve process.\textsuperscript{199} The court authorized service of process via e-mail, citing Rio Properties and Posey, Jr., supra note 64, at 410 (suggesting that alternative service of process was generally either accepted or denied based in part on attempt in effectuating service of process upon defendant).

\textsuperscript{193} Ryan, 2002 WL 1628933 at *2 (elaborating as to where service of process by alternate methods can be properly effectuated); see Colby, supra note 15, at 366 (explaining court’s holding as expanding upon Rio Properties); see also Wright & Miller, FEDERAL PRACTICE & PROCEDURE: CIVIL 2D § 1134 (1990) (referring to Rule 4(f)(3) as tailored to fit circumstances to permit what due process requires).

\textsuperscript{194} See Ryan, 2002 WL 1628933 at *3 (authorizing appropriate means of service of process even though defendant was not as “elusive” as defendant in Rio Properties.); see also Rio Props Inc., Rio Props. Inc., 284 F.3d 1007, 1017 (9th Cir. 2002) (articulating that in proper circumstances, service of process reasonably calculated to provide constitutional requirements of notice and opportunity to respond may include court decision to enter “into the technological renaissance”); Colby, supra note 15, at 366 (noting that “degree of rascality” present in Rio Properties need not be present to authorize service of process by electronic means under Rule 4(f)(3)).

\textsuperscript{195} 747 N.Y.S.2d 704 (Sup. Ct. Oswego County 2002).

\textsuperscript{196} See id. at 705 (reviewing facts that eventually led to inability to serve defendant by traditional methods of service).

\textsuperscript{197} See id. (quoting defendant as saying “I am a resident of Saudi Arabia and there’s nothing anyone can do to me here.”).

\textsuperscript{198} See id. (noting that personal service was nearly impossible because defendant resided on a company-owned compound and that other traditional methods of service, such as letters, would have been far too expensive for relative value of divorce claim); see also Greene v. Lindsay, 456 U.S. 444, 454 (1982) (indicating that reasonableness of notice to be chosen must be measured with reference to viable existing traditional alternatives). See generally Colby, supra note 15, at 367–69 (discussing reasons why traditional means of service can be highly impractical).

\textsuperscript{199} See Hollow v. Hollow, 747 N.Y.S.2d 704, 705 (Sup. Ct. Oswego County 2002) (restating motions under which case was brought).
Despite recognition of the concerns about e-mail service listed in Rio Properties, the court found that e-mail service of process here was constitutionally adequate because the service was ‘reasonably calculated’ to reach the defendant. The court officially authorized the plaintiff to serve defendant notice to his last known e-mail address and by registered mail.

E. Authorizing E-Mail Service


RULE 4(f)(3) was designed to be a “catch-all” to permit service of process by means that are not listed explicitly in the FEDERAL RULES. It states that service of process on an individual in a foreign country may be effectuated “by other means not prohibited by international agreement as may be directed by the court.” The court used plain language analysis and found that service must thus not be prohibited by an international agreement and must be directed by the court. The court in Rio Properties further stated that service authorized under RULE 4(f)(3) has an equal legal basis as does any service under RULE

See id. at 706-08 (pointing to federal precedent in finding authority allowing service of process via e-mail). See generally Ryan v. Brunswick, No. 02-CV-133(E) F, 2002 WL 1628933, at *1, *9 (W.D.N.Y. 2002) (affirming that any alternative, court-approved methods must comport with due process requirements and that it is constitutionally permissible to authorize service via e-mail); Colby, supra note 15, at 369 (discussing rationale under which New York Supreme Court found e-mail service proper).

See Hollow, 747 N.Y.S.2d at 708 (permitting service of process by e-mail since it was method of service which most likely would reach defendant); see also Mullane v. Central Hanover Bank, 339 U.S. 306, 314 (1950) (stating that notice must be ‘reasonably calculated’ to reach defendants in order for it to be constitutional); Colby, supra note 15, at 369 (reviewing rationale under which court in Hollow allowed service via e-mail).

See Hollow, 747 N.Y.S.2d at 708 (specifying court-ordered methods of service plaintiff was allowed utilize).

See Fed. R. Civ. P. 4(f)(3) (allowing service of process by any means so long as directed by court); see also Philip A. Buhler, Transnational Service of Process and Discovery in Federal Court Proceedings: An Overview, 27 TUL. MAR. L.J. 1, 15 (2002) (describing Rule 4(f)(3) as catch-all for determining by what method service may be effectuated). But see Posey, Jr. supra note 64, at 407-08 (arguing that e-mail is not permissible alternative method of service under RULE 4(f)(3)).

FED. R. CIV. P. 4(f)(3).

See id.; see also Rio Props. Inc., 284 F.3d 1007, 1014 (9th Cir. 2002) (determining applicability of Rule 4(f)(3) on service of process by e-mail); Ryan v. Brunswick, 2002 WL 1628933, at *1, *9 (W.D.N.Y. 2002) (articulating that Court may authorize alternative means of service as long as they are directed by court and not forbidden by international agreement).
4(f)(1) or RULE 4(f)(2). Under the RULES, Congress further granted the trial court the discretion to determine when the facts of the case require alternate methods of service of process under RULE 4(f)(3).

2. International Agreements

One of the requirements of RULE 4(f)(3) is that the means of effectuating service not be prohibited by international agreement. RULE 4(f)(1) specifically mentions the Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents as one of these international agreements. The Supreme Court has said that the Hague Service Convention is the primary means of effectuating service internationally, and that

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206 FED. R. CIV. P. 4(f)(1) (authorizing effecting of service of process by any internationally agreed upon means meeting due process standards). See generally Prewitt Enters. v. OPEC, 353 F.3d 916, 921 (11th Cir. 2003) (averring that Rule 4(f) is rule of federal civil procedure that applies to international entities located outside of United States): Ryan, 2002 WL 1628933 at *2–3 (showing applicability of Rule 4(f) when foreign country is not party to Hague Convention or any other relevant international agreement reasonably calculated to give notice of service).

207 FED. R. CIV. P. 4(f)(2) (permitting service of process to be effected by means granted under foreign law as long as it meets due process requirements); see also Rio Props., Inc., 284 F.3d at 1015–16 (stating that Rule 4(f) was not intended as last resort means of service, but rather equal means of effectuating service); Buhler, supra note 203, at 15 (describing scope and applicability of Rule 4(f)(2)).

208 See Rio Props., Inc., 284 F.3d at 1016 (stating that whether service of process can be effectuated is to be determined by facts on case-by-case basis); see also Prewitt Enters., 353 F.3d at 921 (determining that plain language of Rule 4(f)(3) permits court to direct alternative means of service after reviewing circumstances of specific case).

209 See FED. R. CIV. P. 4(f)(3) (permitting service "by other means not prohibited by international agreement as may be directed by the court."). See generally Prewitt Enters., 353 F.3d at 921 (averring that Rule 4(f) applies to international entities located outside of the United States); Ryan, 2002 WL 1628933, at *2–3 (showing applicability of Rule 4(f) when foreign country is not party to Hague Convention or any other relevant international agreement reasonably calculated to give notice of service).

210 See FED. R. CIV. P. 4(f)(1) (setting forth procedures for service of summons and complaint on foreign defendants); see also Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters, Nov. 15, 1965, 20 U.S.T. 361 [hereinafter Hague Service Convention] (exemplifying reasonable standards of giving notice); Colby, supra note 15, at 350–51 (stating that "[s]o long as the authorized method of service is not prohibited by international agreement, it need not comply with foreign law.").

it is mandatory where it does apply. As the Hague Service Convention was adopted almost 40 years ago, it does not expressly confirm or deny the ability to use electronic media such as e-mail, the Internet, or facsimile, to effectuate notice. However, “if its letter is to be interpreted alongside its general spirit, as well as according to generally accepted definitions, Article 1 will most likely permit service upon electronic addresses”.

3. Public Policy

The court in *Rio Properties* noted that “when faced with an international e-business scofflaw, playing hide-and-seek with the federal court, email may be the only means of effecting service of process.” Indeed “service of process is not a game of hide and seek” but defendants can often be surprisingly evasive when it comes to avoiding courts. Paraphrasing what was stated

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212 See Volkswagenwerk Aktiengesellschaft v. Schlunk, 486 U.S. 694, 705 (1988) (noting that Supreme Court has found Hague Service Convention to be primary tool used in serving process on defendants abroad); see also Colby, supra note 15, at 351 (emphasizing that courts can reference Hague Service Convention in determining whether to permit electronic service of process); Kim, supra note 211, at 689 (agreeing that Hague Service Convention is used often with cases involving transnational litigation).

213 See Colby, supra note 15, at 351 (predicating “[t]he Hague Convention neither explicitly authorizes nor explicitly prohibits service of process by e-mail.”); see also Conley, supra note 3, at 413–14 (affirming that Hague Service Convention does not expressly state service of process via e-mail is proper); Charles T. Kotuby, Jr., *The Hague Convention on Service and Evidence and Their Applicability to Internet-Related Litigation*, 20 J.L. & COM. 103, 111 (2000) (positing that dated nature of Hague Service Convention precludes any possibility that there would be express permission allowing electronic service of process but that spirit of agreement would allow electronic service where it was best method of service available).

214 Kotuby, supra note 213, at 114.

215 *Rio Props. Inc.*, 284 F.3d 1007, 1018 (9th Cir. 2002).

216 See *Electronics Boutique*, 2001 U.S. Dist. LEXIS 765, at *1, *29 (E.D. Pa. 2001). This concept of defendants being difficult to locate can be seen from the deposition of the defendant Zuccarini, who abandoned his residence to avoid service of process. The following took place at deposition:

Q. 957 Bristol Pike is not your residence?
A. No, it's not. It's my legal address. I have a lease on the apartment and that's where I have - some things are sent there which I get.

Q. Do you intend to live [at the Andalusia address] in the future?
A. I don't think so, no. I don't think I will.

Q. Then it presumably is not your legal address.
A. It's my legal address. I don't have an address. If I don't live in one permanent place, you know, I can't - if I move somewhere different every week, I can't change my address every week on all my credentials. That's a lease I have an apartment on, that's where my tax returns are filed. It's the address I use.
earlier in *New England Merchants*, as technology grows, courts should not be afraid to use this technology where defendants are hiding from service.\(^{217}\) Service of process by e-mail can be a valuable tool in keeping scofflaws from hiding behind their computers and force them to have their day in court.\(^{218}\)

Currently, courts have held that service of process can be effectuated by e-mail where foreign defendants are evasive.\(^{219}\) However, one commentator has suggested that electronic service be permitted in domestic cases.\(^{220}\) While noting the ongoing evolution that modern service of process has and is undertaking,\(^{221}\) Colby urges that RULES 4(e) and 4(h) should be

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\(^{217}\) See *e.g.*, *New England Merchs. Nat'l Bank*, 495 F. Supp. 73, 81 (S.D.N.Y. 1980) (believing that courts should be open to electronic service where defendants attempt to evade service); *Broadfoot v. Diaz*, 245 B.R. 713 (Bankr. N.D. Ga. 2000) (concluding that traditional means of service may not work with defendants evading service). See generally Colby, *supra* note 15, at 364 (arguing that courts should accept alternative means of service of process when defendants are difficult to find).

\(^{218}\) See *Rio Props Inc.*, 284 F.3d at 1018 (asserting that e-mail may be only means of effectuating service of process in response to challenges of digital age); see also Colby, *supra* note 14, at 381–82 (concluding that courts must adapt to electronic age in same way public has embraced it). See generally Tamayo, *supra* note 25, at 246–52 (explaining increased use of e-mail in litigation process).

\(^{219}\) See *e.g.*, *Rio Props., Inc.*, 284 F.3d 1007, 1018 (9th Cir. 2002) (allowing e-mail service on evasive foreign defendant). *But see Columbia Ins. Co. v. Seeescandy.com*, 185 F.R.D. 573 (N.D. Cal. 1999) (holding e-mail service of process not appropriate). See generally Tamayo, *supra* note 25, at 252–54 (predicting future use of e-mail service of process).

\(^{220}\) See Colby, *supra* note 15, at 372–82 (arguing that service of process be permitted in certain domestic cases). See generally Kotuby, *supra* note 213, at 111 (hinting at necessity of electronic service as technology changes); Tamayo, *supra* note 25, at 256 (posing need for service of process via e-mail).

\(^{221}\) See Colby, *supra* note 15, at 373 (summarizing evolution of service of process and arguing it is still evolving with modern technology); see also Kotuby, *supra* note 213, at 111 (pondering adjusting service of process techniques because of technological advances). See generally; Tamayo, *supra* note 25, at 248 (recognizing courts must be aware of changes and advances in technology and to apply such technology in service of process).
amended to allow service of documents by e-mail and fax where the court directs.\textsuperscript{222} He also argues that there is no need to differentiate between an evasive defendant in or out of the country.\textsuperscript{223} However, this argument assumes that the costs of serving plaintiffs abroad and domestically are similar.\textsuperscript{224} Colby also argues that e-mail could be used to serve waivers and subpoenas with greater ease.\textsuperscript{225} Overall, Colby argues that service of process by e-mail is an evolving concept that should be expanded.\textsuperscript{226}

Orders permitting expanded electronic service may leave a troublesome legacy.\textsuperscript{227} In particular, the court in \textit{Rio Properties} failed to take into account the deficiencies of a new technology in their broadly-outlined balancing test.\textsuperscript{228} They also did not mention whether complementary forms of notice are required

\textsuperscript{222} See Colby, \textit{supra} note 15, at 376 (reviewing over proposed amendments to Federal Rules of Civil Procedure that would allow service of documents by e-mail or fax). \textit{See generally} Conley, \textit{supra} note 3, at 414 (noticing that Hague Service Convention does not textually prohibit service of process by e-mail or fax); Kotuby, \textit{supra} note 213, at 111 (establishing need to discuss service in regards to technology advancement).

\textsuperscript{223} \textit{See}, e.g., \textit{Rio Props. Inc.}, 284 F.3d 1007, 1023 (9th Cir. 2002) (affirming e-mail service of process on evasive defendants); Banco Inverlat, S.A. v. www.inverlat.com, 112 F. Supp. 2d 521, 523 (E.D. Va. 2000) (permitting service by e-mail on domestic defendant); \textit{see also} Colby, \textit{supra} note 15, at 377 (arguing for electronic service of process in domestic cases).

\textsuperscript{224} \textit{See generally} Paul D. Carrington, \textit{Virtual Civil Litigation: A Visit to John Bunyan's Celestial City}, 98 COLUM. L. REV. 1516, 1534 (expressing possible costs of civil litigation); Kent Sinclair, \textit{Service of Process: Rethinking the Theory and Procedure of Serving Process Under Rule 4(c)}, 73 VA. L. REV. 1183, 1212 n.163 (1987) (stating mail service can cost as little to less than one percent of costs of regular service); Tamayo, \textit{supra} note 25, at 256 (noting that Rule 4 proposes fee shifting proposal which would be superfluous because of waiver rules).

\textsuperscript{225} See Colby, \textit{supra} note 15, at 378–79 (furthering argument that electronic service should evolve to allow more documents and judicial orders to be served). \textit{See generally} Kotuby, \textit{supra} note 213, at 120 (mentioning purpose of Hague Service Convention was to simplify and expedite service procedures); Tamayo, \textit{supra} note 25, at 252 (assuring e-mail is more reliable tool).

\textsuperscript{226} See Colby, \textit{supra} note 15, at 378–79 (arguing that service of process via e-mail should be expanded). \textit{See generally} Conley, \textit{supra} note 3, at 414 (noting that application of Hague Service Convention may broaden in future); Tamayo, \textit{supra} note 25, at 252–53 (arguing e-mail could revolutionize service of process).

\textsuperscript{227} See Chacker, \textit{supra} note 39, at 623–24 (posing that district courts could have problems with lack of clearly defined standards in \textit{Rio Properties} holding); \textit{see also} \textit{Rio Props. Inc.}, 284 F.3d at 1007 (failing to provide clear test for subsequent courts to follow). \textit{See generally} Colby, \textit{supra} note 15, at 364 (interpreting standard set out in \textit{Rio Properties}).

\textsuperscript{228} \textit{See} \textit{Rio Props. Inc.}, 284 F.3d 1007, 1018–1019 (9th Cir. 2002) (neglecting to elaborate on balancing test). \textit{See generally} Chacker, \textit{supra} note 39, at 624 (noting problems with holding in \textit{Rio Properties}); Posey, Jr., \textit{supra} note 64, at 408 (arguing \textit{Rio Properties} did not set out any standard with specificity).
when sending service of process via e-mail.229 Any court looking to expand service by e-mail should be careful to keep within the standard outlined in Mullane to ensure that justice is being achieved and that the service will best achieve notice of a lawsuit. Consent has played a large part in the evolution of electronic service, and it must be remembered that service via e-mail, while potentially useful where defendants are evasive, is also risky where circumstances do not show it to be worthwhile.

VI. CONCLUSION

There has been a clear evolution of service of process, from the days where personal service in the forum was required, to service by publication, mail, telex, facsimile, and now e-mail. Service by e-mail has been directed by the courts where foreign defendants have tried to evade service of process and avoid their day in court. It may be wise to enact statutory language to shore up the limits of this type of service. Precedent has shown that courts are uneasy about allowing service of process by e-mail, and indeed, this type of service should be allowed, but only where the courts have directed it and as an alternate means of service where traditional means of service have failed at bringing about justice. This should be enough to let defendants know that they cannot hide behind their computers and avoid service of process.

229 See Rio Props. Inc., 284 F.3d at 1018-19 (failing to clarify components of balancing test used). See generally Chacker, supra note 39, at 624 (listing some problems that exist for courts in determining whether electronic service should be permissible); Posey, Jr. supra note 64, at 408 (claiming Rio Props Inc. sets poor precedent).