

# FINDING SOMETHING MORE IN TARGETED CYBERSPACE ACTIVITIES

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## I. INTRODUCTION

There was a time when the Internet was novel.<sup>1</sup> However, cyberspace interactions are no longer something we do on the periphery of our lives. They are interwoven with, integral to, and inextricably part of our lives.<sup>2</sup> These new cyberspace interactions might lead to additional findings of specific personal jurisdiction where there is specific, directed, and targeted cyberspace interactions.

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1. The author, for one, remembers a day with no e-mail, no texting, no cell phones, no personal computers, no Internet Service Providers, no social media, no media streaming, no ability to upload or share digital content, no access to global search engines, no digital wallets, no e-Commerce, and no ubiquitous digital online experience. Granted, there were also fewer worries about invasion of privacy, identity theft, cyberbullying, phishing, spamming, and lack of human-to-human personal interactions between family and friends.

2. Over eighty percent of many countries' populations are now online, and those people spend the majority of their time online using social networks (22%), searching (21%), reading content (20%), communicating (19%), and experiencing multimedia sites (13%). *How People Spend Their Time Online*, GO-GULF (Feb. 2, 2012), <http://www.go-gulf.com/blog/online-time>. That experience is less and less unidirectional and more and more multi-party interactional. "Websites, as you know them, are dead. They are but one piece in a much more complex framework that spans mobile, social, other web-based services, and even TVs. That framework is your digital presence." *Websites Are Dead. Long Live Digital Presence*, CONTENT MARKETING INST., <http://contentmarketinginstitute.com/education/white-paper-library/websites-are-dead-long-live-digital-presence-white-paper> (last visited Dec. 26, 2015). If a company does not "get a handle on it, [or does not] make the changes . . . need[ed] in how [it] engages with users and customers through digital touchpoints, the future of [its] business is in jeopardy." *Id.* Communication with customers is a "24/7/365" proposition being "driven by Facebook, Twitter, and mobile devices." *Id.*

“[T]echnological progress has [often] increased the flow of commerce between States, [and, as such,] the need for jurisdiction over nonresidents has undergone a similar increase.”<sup>3</sup> While much of the digital world is expanding in size and scope, at the same time, it has interestingly become even more customized and personalized. Indeed, recent trends in new mobile and web technologies have enabled targeting activities<sup>4</sup> to become so specific, so directed, and so customized that these activities may support additional findings of specific personal jurisdiction over non-present, remote defendants.

### A. Cyberspace

Cyberspace is more than just a freeway on which we travel from point to point—it is the arena in which we live, the forums in which we conduct business, the channels that we use for recreation and enjoyment, and the media by which we communicate and entertain ourselves. Being online is so ubiquitous that people of all ages<sup>5</sup> and companies of all sizes<sup>6</sup> are not

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3. *Hanson v. Denckla*, 357 U.S. 235, 250–51 (1958). Almost prescient, the *Hanson* opinion was written in 1958 at the very dawn of computing and digital technology. The Court noted that in response to technology changes, “the requirements for personal jurisdiction over nonresidents ha[d] evolved from the rigid rule of *Pennoyer v. Neff*, to the flexible standard of *International Shoe Co. v. Washington*.” *Id.* at 251 (citations omitted). The Court was quick to add that it would be a fallacy to assume that technology advances would lead to “the eventual demise of all restrictions on the personal jurisdiction of state courts,” as such guarantees provide protection from unconstitutionally “inconvenient or distant litigation.” *Id.* (citing *Vanderbilt v. Vanderbilt*, 354 U.S. 416, 418 (1957)). “However minimal the burden of defending in a foreign tribunal, a defendant may not be called upon to do so unless he has had the ‘minimal contacts’ with that State that are a prerequisite to its exercise of power over him.” *Id.* (citing *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 319 (1945)).

4. A series of predictions by experts relating to digital marketing included one prediction identified as “Marketing Campaigns Will Be More Data-Driven & More Hyper-Targeted.” Sujan Patel, *6 Predictions About the State of Digital Marketing in 2015*, FORBES (Nov. 5, 2014, 7:35 AM), <http://www.forbes.com/sites/sujanpatel/2014/11/05/6-predictions-about-the-state-of-digital-marketing-in-2015>. Other predictions included: “Content Will Be More Important Than Ever”; “Marketing Channels Will Be Even More Connected”; “Mobile Will Take Over”; and “The Laggards Will Finally Adopt” (meaning that “[d]igital [m]arketing will start to be accepted by traditionally late arrivals to new technology, specifically business to business manufacturers”). *Id.*

5. *Teen and Young Adult Internet Use*, PEW RES. CTR., <http://www.pewresearch.org/millennials/teen-internet-use-graphic/> (last visited Jan. 29, 2016).

A new Pew Internet Project report reveals that 93% of teens ages 12–17 go online, as do 93% of young adults ages 18–29. Three quarters (74%) of all adults ages 18 and older go online. Over the past ten years, teens and young adults have been consistently the two groups most likely to go online, even as the internet population has grown and even with documented larger increases in certain age cohorts (e.g. adults 65 and older).

just using online tools, they are incorporating online interactions into their daily activities. Our ever-increasing use of social media is no longer just a passive and unilateral activity on our part. It has become an active and interactive exchange of information leading to a specialization and customization of our digital experience.<sup>7</sup> Customization of digital interactions is not only possible in cyberspace, but essential to its efficient and effective use. The way one person experiences a digital opportunity may be wholly different from the experience of another person.<sup>8</sup>

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*Id.* Grandparents are now Skyping with their young grandchildren. Susan Adcox, *Skype with Grandchildren of All Ages*, ABOUT PARENTING, <http://grandparents.about.com/od/longdistancegrandparents/a/Using-Skype-To-Connect-With-Grandchildren.htm> (last updated Sept. 5, 2015).

6. The previous barriers of establishing websites are falling with business presence being created using social media accounts and interactions. Newtek, *How Much Is Online Presence Helping Small Business?*, FORBES (Nov. 25, 2013, 11:19 AM), <http://www.forbes.com/sites/thesba/2013/11/25/how-much-is-online-presence-helping-small-business/>.

7. Social media is a broad term used to describe a wide range of communication technologies that enable social interaction through emerging technologies. Virtual social interaction only broadens and expands our interactions.

The need for interactivity online didn't really start with social media, but through social media's success, it became undeniably clear. On social media channels like Facebook or Twitter—even on older channels like websites, blogs, and email accounts—personal, relevant interactions between businesses and/or consumers have become the new normal. Because it's possible, and because it's been proven to be effective[,] . . . creating interesting and engaging experiences online is a necessity.

Andrew Moravick, *Social Media and Interactive Content: Why Businesses Need to Engage*, SOC. MEDIA TODAY (Mar. 11, 2013), <http://www.socialmediatoday.com/content/social-media-and-interactive-content-why-businesses-need-engage>.

8. Mat Honan, *I Liked Everything I Saw on Facebook for Two Days. Here's What It Did to Me*, WIRED (Aug. 11, 2014, 6:30 AM), <http://www.wired.com/2014/08/i-liked-everything-i-saw-on-facebook-for-two-days-heres-what-it-did-to-me/>; Elan Morgan (Schmutzie), *I Quit Liking Things on Facebook for Two Weeks. Here's How It Changed My View of Humanity*, MEDIUM (Aug. 13, 2014), <https://medium.com/@schmutzie/i-quit-liking-things-on-facebook-for-two-weeks-heres-how-it-changed-my-view-of-humanity-29b5102abace>; Mark Sherbin, *The Static Website Is Dead—Long Live Personalized Content*, CONTENT MARKETING INST. (Oct. 5, 2012), <http://contentmarketinginstitute.com/2012/10/the-static-website-is-dead-long-live-personalized-content/>. “Content personalization takes a variety of forms . . .” Sherbin, *supra*. Digital experience providers can customize the content they present to each user based on the user's location (differences between Florida and Alaska); interests (differences between a researcher, critic, or consumer); behavior (previous interactions and loyalty programs); or point of reference (coming from a partner, coming from a general ad, coming from a targeted ad, or coming from a blog). *Id.* This personalized information “can be measured with or without visitor opt-in.” *Id.* Visitor opt-in means that the user has willingly supplied information via a profile, a login, a survey, or other “social identification channels like Facebook Connect that [provides] access to profile information.” *Id.* Without visitor opt-in, the website must rely on predictive data points that require no action or disclosure by the visitor, but instead utilize content that is personalized using inferences

Online social media has grown significantly.<sup>9</sup> Social media use has grown to include all cyberspace interactions, both personal and commercial.<sup>10</sup> Forbes reports that:

94% of all businesses with a marketing department used social media as part of their marketing platform[,] . . . 85% of all businesses that have a dedicated social media platform as part of their marketing strategy reported an increase in their market exposure[,] . . . [and] 58% of businesses that have used social media marketing for over 3 years reported an increase in sales over that period.<sup>11</sup>

While, to some degree, social media use can still be thought of as being traditional, generic, broadcast advertising, the real power and success of social media advertising has been in the personalization, customization, and targeting activities enabled through advertiser-initiated online activities.<sup>12</sup>

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based on anonymous data. *Id.*; see also Honan, *supra* (changing the way a user interacted with Facebook changed that user's experience of Facebook); Morgan, *supra* (showing similar results).

9. As of September 2014, 71% of online adults use Facebook; 23% of online adults use Twitter; 26% use Instagram; 28% use Pinterest; and 28% use LinkedIn. *Social Networking Fact Sheet*, PEW RES. CTR., <http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/> (last visited Jan. 29, 2016). Additionally, 74% of women were users of social networking sites, compared with 62% of men, and the use of social networking sites among young adult internet users aged 18–29 jumped significantly. *Id.* The rise of smartphones has put social networking at one's fingertips. *Id.* "Fully 40% of cell phone owners use a social networking site on their phone, and 28% do so on a typical day." *Id.*

10. Jessica Bosari, *The Developing Role of Social Media in the Modern Business World*, FORBES (Aug. 8, 2012, 12:26 PM), <http://www.forbes.com/sites/moneywisewomen/2012/08/08/the-developing-role-of-social-media-in-the-modern-business-world/>.

Social media, although a relatively recent phenomenon, is becoming an increasingly important part of any business's marketing and client base development platform. The perception of social media marketing has shifted quickly—no longer viewed as a trendy or passing fad, having a flexible and well-managed presence in each of the "big three" (Facebook, Twitter, and Google+) has become a must for any business seeking to secure a place in both the traditional and digital marketplace.

*Id.*

11. *Id.*

12. Kathy Juve, *The Power of Social Media in Customer Service*, BUS. 2 COMMUNITY (Aug. 20, 2013), <http://www.business2community.com/social-media/the-power-of-social-media-in-customer-service-0589471>.

Communicating via social media channels has become routine for many people and an activity that is now done out of habit. When businesses harness the power of social [media] to interact with customers, and in addition, tailor that interaction to a customers' preferences, they have the ability to meet the customer's needs, predict what they want next and surpass their expectations.

### B. Targeting

Early courts “distinguished between active and passive web sites and held that remote, passive web sites did not accord personal jurisdiction [in] the [plaintiff’s] forum.”<sup>13</sup> *Zippo Manufacturing Co. v. Zippo Dot Com, Inc.* is the leading case that established a test for Internet-based jurisdiction by creating a sliding scale based on whether the interaction by a website was active or passive.<sup>14</sup> The court in *Zippo* laid out the sliding-scale test for determining whether website operators avail themselves of a forum state based on their conduct over the Internet.<sup>15</sup>

At one end of the spectrum are situations where a defendant clearly does business over the Internet. If the defendant enters into contracts with residents of a foreign jurisdiction that involve the knowing and repeated transmission of computer files over the Internet, personal jurisdiction is proper. At the opposite end are situations where a defendant has simply posted information on an Internet [w]eb site which is accessible to users in foreign jurisdictions. A passive [w]eb site that does little more than make information available to those who are interested in it is not grounds for the exercise [of] personal jurisdiction.<sup>16</sup>

In the middle of the *Zippo* sliding scale lie websites with some other “interaction.”<sup>17</sup> “The middle ground is occupied by interactive [w]eb sites

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*Id.*

13. Joel R. Reidenberg, *Technology and Internet Jurisdiction*, 153 U. PA. L. REV. 1951, 1955 (2005).

14. 952 F. Supp. 1119, 1124 (W.D. Pa. 1997). In *Zippo*, the opinion distinguished between active and passive websites, noting “[a] passive [w]eb site that does little more than make information available to those who are interested in it is not grounds for the exercise [of] personal jurisdiction.” *Id.* (citing *Bensusan Rest. Corp. v. King*, 937 F. Supp. 295 (S.D.N.Y. 1996), *aff’d*, 126 F.3d 25 (2d Cir. 1997)). Early cases turned on the use of the terms active and passive as a means to facilitate, or complicate, the jurisdictional analysis. Martin H. Redish, *Of New Wine and Old Bottles: Personal Jurisdiction, the Internet, and the Nature of Constitutional Evolution*, 38 JURIMETRICS J. 575, 591 (1998). Because early web technologies were very static, “it [was] difficult to understand how [even] the affirmative act of opening a [w]eb page c[ould] accurately be described as a ‘passive’ act . . . [and] [t]he simple act of establishing a [w]eb page on the Internet c[ould not], standing alone, be deemed to constitute purposeful availment.” *Id.* at 591–92.

15. Chris Rojao, Comment, *Buy It Now: Establishing Personal Jurisdiction over Out-of-State Defendants Who Conduct Business Through Online Intermediaries*, 43 SETON HALL L. REV. 1075, 1082–85 (2013).

16. *Zippo*, 952 F. Supp. at 1124 (first citing *CompuServe, Inc. v. Patterson*, 89 F.3d 1257 (6th Cir. 1996); and then citing *Bensusan Rest. Corp.*, 937 F. Supp. 295).

17. *Id.*

where a user can exchange information with the host computer. In these cases, the exercise of jurisdiction is determined by examining the level of interactivity and commercial nature of the exchange of information that occurs on the [w]eb site.”<sup>18</sup>

Where the facts demonstrate there is some level of customization or targeting, the courts have held that an argument can be made for establishing personal jurisdiction. One such example of targeting is intentional and directed advertising toward a given state. In 2009, uBID brought a suit under the Anti-Cybersquatting Consumer Protection Act<sup>19</sup> against GoDaddy, an Arizona-based domain name registration and web hosting company, for allowing its customers to register domain names confusingly similar to uBID’s domain name.<sup>20</sup> The district court found that because the disputed domain names were created and registered at the initiative of some Illinois residents, GoDaddy did not expressly aim its conduct at Illinois, nor did it know any harm would be suffered by uBID in Illinois.<sup>21</sup> However, on appeal, the Seventh Circuit refused to sustain GoDaddy’s assertion that it was exclusively an Arizona company.<sup>22</sup>

The court reasoned that through “GoDaddy’s extensive marketing in Illinois and sales to Illinois customers,” GoDaddy “thoroughly, deliberately, and successfully exploited the Illinois market.”<sup>23</sup> “GoDaddy . . . aired many television advertisements on national networks, including six . . . years of Super Bowl ads.”<sup>24</sup> Thus, all of its marketing had successfully reached Illinois consumers, and GoDaddy had hundreds of thousands of customers in Illinois resulting in millions of dollars of revenue annually from Illinois customers.<sup>25</sup> The court refused

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18. *Id.* (citing *Maritz, Inc. v. Cybergold, Inc.*, 947 F. Supp. 1328 (E.D. Mo. 1996)).

19. 15 U.S.C. § 1125(d) (2012).

20. *uBID, Inc. v. GoDaddy Grp., Inc.*, 623 F.3d 421, 423–25 (7th Cir. 2010).

21. *Id.* at 425.

22. *Id.* at 427.

23. *Id.* The court did not find that GoDaddy’s conduct satisfied general personal jurisdiction, noting that while “its contacts [were] extensive and deliberate, they [were] limited to the marketing and sale of registrations for Internet domain names . . . and the hosting of websites accessible from Illinois.” *Id.* at 425–26. The court held that, while there was conduct specific to those activities, such conduct was insufficient for establishing general personal jurisdiction which would give the courts power over GoDaddy in Illinois for claims unrelated to domain registration, such as slip and fall cases or employment dispute cases. *Id.* at 426. “There is no reason for GoDaddy to expect, as it goes about its business of selling domain names in Illinois, that it is thereby exposing itself to such lawsuits in Illinois.” *Id.*

24. *Id.* at 427.

25. *Id.*

to be swayed by GoDaddy's portrayal of itself "as a mindless collection of servers" only allowing "unilateral activity."<sup>26</sup>

One key finding from the *GoDaddy* opinion is that personal jurisdiction was found despite the fact that most of GoDaddy's customers entered into transactions online without any human interaction.<sup>27</sup> The Seventh Circuit pointed out that GoDaddy had designed its system that way.<sup>28</sup> The court reasoned that GoDaddy could not, with a straight face, "point to its hundreds of thousands of customers in Illinois" and assert that such sales were all the idea of GoDaddy's users.<sup>29</sup> The Seventh Circuit concluded that the company had spent millions of dollars and recruited sufficient customers from Illinois that it could not disavow any intentional conduct toward Illinois consumers.<sup>30</sup> GoDaddy had targeted its customers with advertising and had done much more than passively invite the customers to come and do business.<sup>31</sup>

With ever-increasing advances in web technologies, even organizations with relatively unsophisticated digital access points can no longer claim to be merely "passive [w]eb site[s]," never reaching the level of interaction necessary for a finding of personal jurisdiction.<sup>32</sup>

The key issue is whether there is support for the proposition that if a remote defendant can personally and specifically target a plaintiff, especially for commercial reasons, that defendant ought to reasonably expect to be subject to personal jurisdiction in the plaintiff's forum state. Basically, a defendant cannot have it both ways: all the benefits of online targeting without any of the responsibilities that come with those benefits. In short, a targeting defendant cannot have its cake and eat it too.

### C. *Personal Jurisdiction and Technology*

Much has been written and debated about personal jurisdiction issues associated with the Internet.<sup>33</sup> However, online activity today is

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26. *Id.* at 427–28.

27. *Id.* at 428–29.

28. *Id.* at 428. GoDaddy seemed to be catering to the tech savvy consumer that was realizing it was sometimes easier to respond to a company's invitation to do business through its interactive website than in person or over the phone with a human agent of the company.

29. *Id.*

30. *Id.* at 428–29.

31. *See id.*

32. *See* *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

33. *See, e.g.*, Damon C. Andrews & John M. Newman, *Personal Jurisdiction and Choice of Law in the Cloud*, 73 MD. L. REV. 313 (2013); Yvonne Beshany & Sean Shirley, *Cyber-*

more than the interactive world of web pages. Building above the interconnected infrastructure of the Internet, new and sophisticated information sharing and collaboration systems have been created using the lower level communication protocols of the Internet.<sup>34</sup> First there was the World Wide Web,<sup>35</sup> then came Web 2.0,<sup>36</sup> and currently our global

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*Jurisdiction: When Does Use of the Internet Establish Personal Jurisdiction?*, 63 ALA. LAW. 36 (2002); Thomas A. Dickerson, Cheryl E. Chambers & Jeffrey A. Cohen, *Personal Jurisdiction and the Marketing of Goods and Services on the Internet*, 41 HOFSTRA L. REV. 31 (2012); Susan Nauss Exon, *A New Shoe Is Needed to Walk Through Cyberspace Jurisdiction*, 11 ALB. L.J. SCI. & TECH. 1 (2000); Saad Gul, *Maryland Personal Jurisdiction Law in the Cyberspace Context*, 45 U. BALT. L.F. 1 (2014); Kevin F. King, *Personal Jurisdiction, Internet Commerce, and Privacy: The Pervasive Legal Consequences of Modern Geolocation Technologies*, 21 ALB. L.J. SCI. & TECH. 61 (2011); Daniel Klerman, *Rethinking Personal Jurisdiction*, 6 J. LEGAL ANALYSIS 245 (2014); Juliet M. Moringiello & William L. Reynolds, *The New Territorialism in the Not-So-New Frontier of Cyberspace*, 99 CORNELL L. REV. 1415 (2014); Stephen J. Newman, *Proof of Personal Jurisdiction in the Internet Age*, in 59 AMERICAN JURISPRUDENCE PROOF OF FACTS 3D 1 (2015) (originally published in 2000); TiTi Nguyen, *A Survey of Personal Jurisdiction Based on Internet Activity: A Return to Tradition*, 19 BERKELEY TECH. L.J. 519 (2004); Russell J. Weintraub, *A Map Out of the Personal Jurisdiction Labyrinth*, 28 U.C. DAVIS L. REV. 531 (1995); Dennis T. Yokoyama, *You Can't Always Use the Zippo Code: The Fallacy of a Uniform Theory of Internet Personal Jurisdiction*, 54 DEPAUL L. REV. 1147 (2005); Michael E. Allen, Note, *Analyzing Minimum Contacts Through the Internet: Should the World Wide Web Mean World Wide Jurisdiction?*, 31 IND. L. REV. 385 (1998); Brian D. Boone, Comment, *Bullseye!: Why a "Targeting" Approach to Personal Jurisdiction in the E-Commerce Context Makes Sense Internationally*, 20 EMORY INT'L L. REV. 241 (2006); Andrew E. Costa, Comment, *Minimum Contacts in Cyberspace: A Taxonomy of the Case Law*, 35 HOUS. L. REV. 453 (1998); Jason Green, Comment, *Is Zippo's Sliding Scale a Slippery Slope of Uncertainty? A Case for Abolishing Web Site Interactivity as a Conclusive Factor in Assessing Minimum Contacts in Cyberspace*, 34 J. MARSHALL L. REV. 1051 (2001); Michelle R. Osinski, Note, *Personal Jurisdiction and Internet Torts: Michigan District Courts Require "Something More" than Simply Registering Someone Else's Trademark as a Domain Name and Posting a Web Page on the Internet to Subject a Defendant to Personal Jurisdiction*, 80 U. DET. MERCY L. REV. 249 (2003); Michael S. Rothman, Comment, *It's a Small World After All: Personal Jurisdiction, the Internet and the Global Marketplace*, 23 MD. J. INT'L L. & TRADE 127 (1999); Zachary Schaengold, Comment, *Personal Jurisdiction over Offenses Committed in Virtual Worlds*, 81 U. CIN. L. REV. 361 (2012); Sasha Segall, Note, *Jurisdictional Challenges in the United States Government's Move to Cloud Computing Technology*, 23 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1105 (2013); Richard S. Zembek, Comment, *Jurisdiction and the Internet: Fundamental Fairness in the Networked World of Cyberspace*, 6 ALB. L.J. SCI. & TECH. 339 (1996).

34. *What's the Difference Between the Internet and the Web?*, COMPUTER HIST. MUSEUM, <http://www.computerhistory.org/revolution/networking/19/314> (last visited Jan. 29, 2016). The Internet connects computers together. *Id.* The higher layers connect people, companies, organizations, and other entities and agents. *Id.*; see also *WWW Definition*, TECHTERMS, <http://techterms.com/definition/www> (last visited Jan. 29, 2016).

35. The term WWW (World Wide Web) is not just a synonym for the Internet. *WWW Definition*, *supra* note 34. "The World Wide Web, or just 'the Web,' as ordinary people call it, is a subset of the Internet." *Id.* The web was animated by the invention and use of the human friendly Hyper-Text Transfer Protocol (HTTP) and Hyper-Text Markup Language



society is experiencing what is being called Web 3.0.<sup>37</sup> This new cyberspace world is more than just point-to-point or client-server connections. It is a highly sophisticated set of interactions and interconnected, online digital communications.

This Note focuses on the unique issues associated with recent trends in targeting activities that can occur in cyberspace. Several assertions are presented to support the argument that targeted interactions are sufficient for a finding of specific personal jurisdiction for non-resident defendants in today's culture of pervasive and ubiquitous cyberspace interactions. This Note looks at the past, present, and future of specific personal jurisdiction based in Internet, web, digital, and other cyberspace conduct. First, a brief review of personal jurisdiction is presented, looking back at the historical jurisprudence of personal jurisdiction. It is critical to note that the core principles and foundations of personal jurisdiction are bedrock and do not change.<sup>38</sup> Second, personal jurisdiction is considered in terms of the present digital interactions of the early twenty-first century. While the precepts of personal jurisdiction may not change, the nature of interactions in the digital age of ubiquitous online and mobile interactions do change. These advances renew the discussion of what establishes constitutionally sufficient interaction for a finding of personal jurisdiction. Finally, this Note explores new and evolving technologies that are only recently beginning to emerge and, while still being only novel and nascent, these technologies may prove to be the interwoven and inextricable aspects of the next and future generations.

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(HTML). HTTP “is the method used to transfer [HTML] [w]eb pages to” an end user’s computer mobile device. *Id.*

36. Web 2.0 is

[a]n umbrella term for the second wave of the World Wide Web, which was coined in a conference on the subject in 2004 . . . . Sometimes called the “New Internet” as well as “Internet 2.0,” Web 2.0 is not a specific technology; rather, it refers to two major paradigm shifts. The one most often touted is “user-generated content,” which relates more to individuals. The second, which is equally significant, but more related to business, is “cloud computing.”

*Definition of Web 2.0*, PC MAG., <http://www.pcmag.com/encyclopedia/term/56219/web-2-0> (last visited Jan. 29, 2016).

37. See, e.g., Sravana Mitra, *From E-Commerce to Web 3.0: Let the Bots Do the Shopping*, WIRED, <http://www.wired.com/2014/09/e-commerce-to-web-3-0/> (last visited Jan. 29, 2016). For the curious geek and nerd in most people, *Wired Magazine* offers one definition for Web 3.0: “Web 3.0 results from combining content, commerce, community and context, with personalization and vertical search. Or, to put it in a handy phrase: Web 3.0 = (4C + P + VS).” *Id.*

38. Jurisdiction is based on the foundational due process principles established in the U.S. Constitution. See U.S. CONST. amends. V, XIV.

## II. PERSONAL JURISDICTION: PAST

Personal jurisdiction is a simple “yes” or “no” determination of whether a “court may enter judgment against a particular defendant in a particular case.”<sup>39</sup> The determination of personal jurisdiction is not based on the substance of the dispute but rather the characteristics of the parties and the type of dispute.<sup>40</sup> Personal jurisdiction is the “court’s power to bring a person into its adjudicative process.”<sup>41</sup> Questions of personal jurisdiction are always one-sided since, by definition, a court always has consensual personal jurisdiction over the plaintiff.<sup>42</sup> While the question of personal jurisdiction is both a state long-arm statutory question as well as a constitutional question, this Note limits itself only to the constitutional due process issues.<sup>43</sup>

From the perspective of the defendant, the basic premise underlying personal jurisdiction is the defendant’s reasonable anticipation of being haled into court by the plaintiff to defend a cause of action brought by the plaintiff.<sup>44</sup> Determining personal jurisdiction “requires an analysis of the

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39. Frederic M. Bloom, *Jurisdiction’s Noble Lie*, 61 STAN. L. REV. 971, 979 (2009).

40. Factors that the courts look at include physical location, presence, nature and type of contacts, types of contracts, consent, or adjudicative burdens, but never substance. *Id.* “Personal jurisdiction is indifferent to the character of the underlying dispute . . .” *Id.*

41. *Personal Jurisdiction*, BLACK’S LAW DICTIONARY (4th pocket ed. 2011).

42. Andrews & Newman, *supra* note 33, at 331.

43. One of the requirements for a court to exercise personal jurisdiction over an out-of-state defendant is that the state must have statutory authority that grants the court jurisdiction over the out-of-state defendant. See JOSEPH W. GLANNON, ANDREW M. PERLMAN & PETER RAVEN-HANSEN, CIVIL PROCEDURE: A COURSEBOOK 174 (1st ed. 2011). State statutes that define the reach of a state to an out-of-state defendant are called “long-arm statutes.” *Id.* Today, almost all states have long-arm statutes that allow the state to exercise jurisdiction over an out-of-state defendant. The name long-arm statute comes from the purpose of these statutes, which is to reach into another state and exercise jurisdiction over an out-of-state defendant. Many long-arm statutes simply state that the state’s authority for asserting personal jurisdiction extends to the maximum possible jurisdiction allowed by constitutional due process requirements. *Id.* This Note does not consider the impact of long-arm statutes in the unique context of cyber activities for two reasons. The first reason is that many states’ long-arm statutes simply extend to the maximum possible jurisdiction allowed by constitutional due process. The second reason is that the analysis of personal jurisdiction under the U.S. Constitution is sufficiently sophisticated and complex that a discussion of statutory authority in addition to the constitutional authority is more than can be undertaken in this Note alone. It is best left to other treatises to explore the subtleties of each state’s laws.

44. Cook Assocs., Inc. v. Lexington United Corp., 407 N.E.2d 944, 947 (Ill. App. Ct. 1980) (citing World-Wide Volkswagen Corp. v. Woodson, 444 U.S. 286, 297 (1980)). The test is whether the defendant’s contacts with the forum state are “continuous and systematic.” Int’l Shoe Co. v. Washington, 326 U.S. 310, 317 (1945).

relationship among the defendant, the forum, and the litigation.”<sup>45</sup> That relationship can be general or specific. If the relationship is general, the relationship is so substantial that the defendant could reasonably anticipate being haled into court there to defend any cause of action.<sup>46</sup> If the relationship is specific, even with only an indirect connection with the forum state, the defendant could reasonably anticipate being haled into court there to defend the alleged cause of action.<sup>47</sup> This Note explores only those interactions that would lead to a finding of specific personal jurisdiction.<sup>48</sup>

### A. *Physical Presence*

The courts have struggled to clearly define the types of activities that are sufficient for a finding of personal jurisdiction over the non-resident defendant.<sup>49</sup> At one point, personal jurisdiction required the defendant’s physical presence within the actual territory of the forum state.<sup>50</sup> Personal jurisdiction has been upheld when there is a volitional and intentional choice by the defendant to enter a state.<sup>51</sup> The Supreme Court has upheld physical presence in a forum state as the basis for personal

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45. *Cook*, 407 N.E.2d at 957 (citing *Rush v. Savchuk*, 444 U.S. 320 (1980); *Shaffer v. Heitner*, 433 U.S. 186 (1977)).

46. *Perkins v. Benguet Consol. Mining Co.*, 342 U.S. 437, 447 (1952) (citing *Int’l Shoe*, 326 U.S. at 318).

47. *Cook*, 407 N.E.2d at 947 (citing *Int’l Shoe*, 326 U.S. 310).

48. The very idea of targeted activities must, out of necessity, look at specific actions between the defendant and the plaintiff rather than any general conduct undertaken by the defendant.

49. See *Weintraub*, *supra* note 33, at 531–32. “As a result, the threshold determination of personal jurisdiction has become one of the most litigated issues in state and federal courts . . .” *Id.* at 531.

50. *Pennoyer v. Neff*, 95 U.S. 714, 714 (1877), *overruled in part by Shaffer*, 433 U.S. 186. One author has stated this concept as follows: “Under conventional territorial laws, jurisdiction is predicated upon the physical and geographical location of both a particular court and the litigants before it.” *Zembek*, *supra* note 33, at 341–42. It is also possible to exercise personal jurisdiction over the defendant’s property if it was located within the state: “It is in virtue of the State’s jurisdiction over the property of the non-resident situated within its limits that its tribunals can inquire into that non-resident’s obligations to its own citizens, and the inquiry can then be carried only to the extent necessary to control the disposition of the property.” *Pennoyer*, 95 U.S. at 723. This *in rem* approach is not addressed further in this Note but is explored in depth in Michael Xun Liu, Note, *Jurisdictional Limits of In Rem Proceedings Against Domain Names*, 20 MICH. TELECOMM. & TECH. L. REV. 467 (2014).

51. See *Hess v. Pawloski*, 274 U.S. 352, 356–57 (1927) (reasoning that non-resident motorist statutes allowed states to have personal jurisdiction over out-of-state residents).

jurisdiction even when an out-of-state individual enters the forum state for just a brief time.<sup>52</sup>

*B. Minimum Contacts*

In *International Shoe Co. v. Washington*, the Supreme Court revised the personal jurisdiction requirements to include a “minimum contacts” alternative, allowing for a finding of personal jurisdiction even if a defendant was not physically present if the defendant “h[ad] certain minimum contacts with [the forum] such that the maintenance of the suit does not offend ‘traditional notions of fair play and substantial justice.’”<sup>53</sup>

The Supreme Court has not defined a bright-line rule to determine the minimum contacts necessary to satisfy the test.<sup>54</sup> It is an analysis that must be done based on the facts of each case; the determination “cannot be simply mechanical or quantitative” and depends on “the quality and nature of the activity in relation to the fair and orderly administration of the laws which it was the purpose of the due process clause to insure.”<sup>55</sup>

*International Shoe* and its progeny have revealed a three-part test to determine if specific personal jurisdiction is constitutional: (1) does “the defendant purposefully avail[] itself of the privilege of conducting [business in] the forum”; (2) does the cause of action arise out of the defendant’s activities in the forum; and (3) is the exercise of jurisdiction fundamentally fair?<sup>56</sup>

Establishing minimum contacts is only one of the prongs—a finding of personal jurisdiction also requires a showing that personal jurisdiction over the defendant is fundamentally fair.<sup>57</sup> The Supreme Court has listed five factors used to determine whether a finding of personal jurisdiction is fundamentally fair: (1) “the burden on the defendant”; (2) “the forum State’s interest in adjudicating the dispute”; (3) “the plaintiff’s interest in obtaining convenient and effective relief”; (4) “the interstate judicial system’s interest in obtaining the most efficient resolution of

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52. *Burnham v. Superior Court of Cal.*, 495 U.S. 604, 610–11 (1990) (citing *Potter v. Finch*, 2 Root 63, 67 (Conn. 1793); *Barrell v. Benjamin*, 15 Mass. 354 (1819)).

53. *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 316 (1945) (quoting *Milliken v. Meyer*, 311 U.S. 457, 463 (1940)). However, “[d]espite these indicia of fairness, the ultimate inquiry remains whether it is ‘unfair to hale an out-of-state defendant to another state.’” *Zembek*, *supra* note 33, at 352 n.66.

54. *Nguyen*, *supra* note 33, at 522–23.

55. *Int’l Shoe*, 326 U.S. at 319.

56. *Nguyen*, *supra* note 33, at 521–22.

57. *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 476–78 (1985).

controversies”; and (5) “the ‘shared interest of the several States in furthering fundamental substantive social policies.’”<sup>58</sup>

These five factors of fundamental fairness can be used to show that personal jurisdiction would be constitutional even with “a lesser showing of minimum contacts than would otherwise be required.”<sup>59</sup> On the other hand, even with a showing of minimum contacts, these factors may reveal that rendering personal jurisdiction is unreasonable.<sup>60</sup>

### C. *Cyberspace Tests*

Cyber activities pose special problems when applying the three-element minimum contacts test to a defendant’s activities.<sup>61</sup> Courts must determine the relationships between cyberspace and the traditional world of print, broadcast, and personal interactions.<sup>62</sup> While not physical, cyberspace contact is still real and “not some mystical incantation capable of warding off the jurisdiction of courts built from bricks and mortar.”<sup>63</sup>

Absent any non-digital activities, courts must decide what level of digital online activity meets the minimum threshold.<sup>64</sup> This case-by-case, factor-based approach makes it difficult to determine personal jurisdiction in cases arising out of cyberspace contacts creating “[a] broad band of gray” and a “complicate[d] . . . jurisdictional inquiry” for cyber-based actions extending well beyond existing paradigms.<sup>65</sup> Out of

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58. *Id.* at 477 (quoting *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 292 (1980)).

59. *Id.* (citing *Keeton v. Hustler Magazine, Inc.*, 465 U.S. 770, 780 (1984); *Calder v. Jones*, 465 U.S. 783, 788–89 (1984); *McGee v. Int’l Life Ins. Co.*, 355 U.S. 220, 223–24 (1957)).

60. *Id.* at 477–78 (citing *World-Wide Volkswagen*, 444 U.S. at 292).

61. Nguyen, *supra* note 33, at 523.

62. *See id.* *See uBID, Inc. v. GoDaddy Group, Inc.*, 623 F.3d 421, 427–29 (7th Cir. 2010), for the court’s analysis of the relationship between broadcast advertising and the presence of an interactive website for domain name registration.

63. *Gorman v. Ameritrade Holding Corp.*, 293 F.3d 506, 510 (D.C. Cir. 2002).

Just as our traditional notions of personal jurisdiction have proven adaptable to other changes in the national economy, so too are they adaptable to the transformations wrought by the Internet. In the last century, for example, courts held that, depending upon the circumstances, [electronic transactions] could be the basis for personal jurisdiction notwithstanding the defendant’s lack of physical presence in the forum.

*Id.* at 510–11 (footnotes omitted) (citing *Metro. Life Ins. Co. v. Robertson-Ceco Corp.*, 84 F.3d 560, 572 (2d Cir. 1996); *Mich. Nat’l Bank v. Quality Dinette, Inc.*, 888 F.2d 462, 466 (6th Cir. 1989)).

64. Nguyen, *supra* note 33, at 523.

65. Zembek, *supra* note 33, at 354–55.

necessity, other tests have been developed to evaluate personal jurisdiction in cyberspace cases.<sup>66</sup> These are explored in some detail below.

### 1. The *Zippo* Sliding Scale Test

In *Zippo*, a federal court held “that the likelihood that personal jurisdiction can be constitutionally exercised is directly proportionate to the nature and quality of commercial activity that an entity conducts over the Internet. This sliding scale is consistent with well-developed personal jurisdiction principles.”<sup>67</sup>

The *Zippo* sliding scale test has traditionally been used to decide personal jurisdiction in Internet cases. The greater the commercial nature and level of interactivity, the greater the possibility that the website owner, or other responsible agent,<sup>68</sup> has purposefully availed itself of the forum state’s jurisdiction.<sup>69</sup> A key element of the analysis is intent and purpose.<sup>70</sup> Where there is no intent to direct conduct at specific users, the website is passive because it simply makes generic information available to all users.<sup>71</sup> “Creating a site, like placing a product into the stream of commerce, may be felt nationwide—or even worldwide—but, without more, it is not an act purposefully directed toward the forum state.”<sup>72</sup> The *Zippo* sliding scale essentially separates websites into three classes: passive sites where there is no basis for specific personal jurisdiction; active sites where there is sufficient activity to find specific personal jurisdiction; and middle-ground websites where personal jurisdiction is evaluated by the level of interaction and the purpose of that interaction, including its commercial nature.<sup>73</sup>

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66. Nguyen, *supra* note 33, at 533–34.

67. *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

68. *Lane v. Vacation Charters, Ltd.*, 750 F. Supp. 120, 124 (S.D.N.Y. 1990).

69. Nguyen, *supra* note 33, at 529–30.

70. *See Zippo*, 952 F. Supp. at 1124. “Traditionally, when an entity intentionally reaches beyond its boundaries to conduct business with foreign residents, the exercise of specific jurisdiction is proper.” *Id.* (citing *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 475 (1985)).

71. *Id.*

72. *Bensusan Rest. Corp. v. King*, 937 F. Supp. 295, 301 (S.D.N.Y. 1996) (citing *Asahi Metal Indus. Co. v. Superior Court of Cal.*, 480 U.S. 102, 112 (1987) (plurality opinion)), *aff’d*, 126 F.3d 25 (2d Cir. 1997). In *World Wide Volkswagen Corp. v. Woodson*, the opinion notes that when a defendant makes a conscious choice to conduct business with the residents of a forum state, “it has clear notice that it is subject to suit there” and that commercial benefit is more than just fortuitous or coincidental. 444 U.S. 286, 297 (1980).

73. *Zippo*, 952 F. Supp. at 1124.

## 2. The *Calder* Effects Test

The *Calder* “effects test” is applied when there might be less than full interactivity, but where an action is targeted at a particular forum or individual.<sup>74</sup> In *Calder v. Jones*, a Florida website was found to have intentionally targeted a California resident in the entertainment business even though that plaintiff never had any actual contact, direct or indirect, with the website.<sup>75</sup> The Court held that personal jurisdiction was proper in California because of the effects of the defendants’ conduct in that state, finding that “[the defendants’] intentional, and allegedly tortious, actions were expressly aimed at California.”<sup>76</sup>

The effects test can be applied to Internet cases to examine whether the activities are directed at parties or entities within the forum state. “Jurisdiction over [the Florida defendants] is therefore proper in California based on the ‘effects’ of their Florida conduct in California.”<sup>77</sup> The *Calder* effects test introduced the notion that personal jurisdiction can be found even when the Internet activities did not rise to the level of minimum contacts that would be needed under other tests.<sup>78</sup>

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[I]f the sale of a product of a manufacturer or distributor . . . is not simply an isolated occurrence, but arises from the efforts of the manufacturer or distributor to serve directly or indirectly, the market for its product in other States, it is not unreasonable to subject it to suit in one of those States . . . .

*World-Wide Volkswagen*, 444 U.S. at 297.

74. *Smith v. Trans-Siberian Orchestra*, 728 F. Supp. 2d 1315, 1323–24 (M.D. Fla. 2010). This effects test requires “a defendant have ‘(1) committed an intentional tort (2) that was directly aimed at the forum, (3) causing an injury within the forum that the defendant should have reasonably anticipated.’” *Id.* at 1323 (quoting *Oldfield v. Pueblo de Bahia Lora, S.A.*, 558 F.3d 1210, 1220 n.28 (11th Cir. 2009)); *see also Calder v. Jones*, 465 U.S. 783, 788–89 (1984); *Licciardello v. Lovelady*, 544 F.3d 1280, 1286 (11th Cir. 2008). “Applying the test to intentional tort cases is justified [because] states have a special interest in exercising jurisdiction over those who commit intentional torts causing injury to their residents.” *Smith*, 728 F. Supp. 2d at 1323–24.

75. 465 U.S. at 784–89.

76. *Id.* at 789.

77. *Id.*

78. *Calder* states:

The Due Process Clause of the Fourteenth Amendment to the United States Constitution permits personal jurisdiction over a defendant in any State with which the defendant has “certain minimum contacts . . . such that the maintenance of the suit does not offend ‘traditional notions of fair play and substantial justice.’” In judging minimum contacts, a court properly focuses on “the relationship among the defendant, the forum, and the litigation.” The plaintiff’s lack of “contacts” will not defeat otherwise proper jurisdiction, but they may be so manifold as to permit jurisdiction when it would not exist in their absence. Here, the plaintiff is the focus of the activities of the defendants out of which the suit arises.

*Id.* at 788 (alteration in original) (citations omitted) (first quoting *Milliken v. Meyer*, 311 U.S. 457, 463 (1940); *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 316 (1945); then quoting

### 3. Stream of Commerce and Something More

The stream of commerce theory behind personal jurisdiction was discussed at length in *Asahi Metal Industry Co. v. Superior Court of California*.<sup>79</sup> However, the waters within the stream of commerce theory remain muddled. In *J. McIntyre Machinery, Ltd. v. Nicastro*, the holding was not clear as to whether a defendant must direct its activities with respect to its products toward the forum in order to be subject to personal jurisdiction or whether personal jurisdiction could be supported if it was merely foreseeable that a defendant's products might enter the forum.<sup>80</sup> While the Court clarified some helpful limits on general personal jurisdiction in *Goodyear Dunlop Tires Operations, S.A. v. Brown*,<sup>81</sup> unfortunately the Court did not clarify specific jurisdiction under the stream of commerce theory. However, most seem to agree that if there is

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Shaffer v. Heitner, 433 U.S. 186, 204 (1977); Rush v. Savchuk, 444 U.S. 320, 322 (1980); then citing Keeton v. Hustler Magazine, Inc., 465 U.S. 770, 777–78 (1984); and then citing McGee v. Int'l Life Ins. Co., 355 U.S. 220 (1957)).

79. 480 U.S. 102 (1987). Justice O'Connor is known for leading a plurality opinion analyzing what is required in order for a defendant to be subject to jurisdiction in a forum relating to its products under the stream of commerce theory. She argued that it was not enough that a defendant merely could have predicted that its products would enter the forum by randomly following the stream of commerce. *See id.* at 112 (plurality opinion). Rather, the defendant must have taken some act with respect to its products to purposefully direct them toward the forum in order to support a finding of personal jurisdiction. *Id.* Justice Brennan thought that mere awareness of a product in a stream of commerce that reached a certain forum state would be sufficient for a finding of personal jurisdiction. *Id.* at 116–17 (Brennan, J., concurring). Justice Stevens argued that purposeful availment could be determined by the volume, value, or hazardous characteristics of the product(s) that reached the forum state. *Id.* at 122 (Stevens, J., concurring). In the plurality opinion, Justice O'Connor explained that “[t]he placement of a product into the stream of commerce, without more, is not an act of the defendant purposefully directed toward the forum State.” *Id.* at 112 (plurality opinion). Some courts interpreting *Asahi* have applied the O'Connor plurality, *see, e.g.*, Boit v. Gar-Tec Prods., Inc., 967 F.2d 671, 682–83 (1st Cir. 1992), and others have applied the Brennan plurality. *See, e.g.*, Ruston Gas Turbines, Inc. v. Donaldson Co., 9 F.3d 415, 420 (5th Cir. 1993) (applying the Brennan plurality in *Asahi*); Dehmlow v. Austin Fireworks, 963 F.2d 941, 947 (7th Cir. 1992) (also applying the Brennan plurality in *Asahi*).

80. 131 S. Ct. 2780 (2011) (plurality opinion). A four-Justice plurality seemingly held that a defendant must target a forum with its products in order to be subject to personal jurisdiction there for lawsuits relating to its products under a stream of commerce theory, and the mere fact that a defendant may have predicted that its products would wind up in the forum is not enough to subject the defendant to personal jurisdiction for such lawsuits. *Id.* at 2788. However, without a clear majority, the waters remain muddled.

81. 131 S. Ct. 2846, 2853–54 (2011).



something more, then specific personal jurisdiction would be supported as long as such jurisdiction is also fundamentally fair.<sup>82</sup>

The question in *Asahi* turns on whether specific jurisdiction requires both awareness and something more or whether specific personal jurisdiction is supported by mere awareness alone.<sup>83</sup> Where there is something more, these two questions really become one, using simple conjunctive simplification.<sup>84</sup> That is, if one approach posits that mere awareness is sufficient for a finding of personal jurisdiction while the other argument requires both awareness and something more, then with an assertion of something more, specific personal jurisdiction would be fully supported no matter which theory is offered. Said another way, if something more can be demonstrated, then the only remaining question is whether there is awareness of product placement in the stream of commerce.

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82. The *McIntyre* plurality and concurrence “agree that, at a minimum, the limitations of Justice O’Connor’s test should be applied, although the plurality would apply an even stricter test, the parameters of which were not precisely defined. Therefore, the ‘stream-of-commerce plus’ test[, the O’Connor plurality test from *Asahi*.] now commands a majority of the Court.” *Smith v. Teledyne Cont’l Motors, Inc.*, 840 F. Supp. 2d 927, 931 (D.S.C. 2012) (footnote omitted); *see also* *N. Ins. Co. of N.Y. v. Constr. Navale Bordeaux*, No. 11-60462-CV, 2011 WL 2682950, at \*5 (S.D. Fla. July 11, 2011). On the other hand, some courts hold that even after *McIntyre*, the Brennan test from *Asahi* still can control. Recently, the court in *Service Solutions U.S., LLC v. Autel U.S. Inc.* held that *McIntyre* left the law on the steam of commerce theory unchanged and that *Asahi* still applies. No. 13-10534, 2013 WL 5701063, at \*3–4 (E.D. Mich. Oct. 18, 2013). Similarly, in *Ainsworth v. Moffett Engineering, Ltd.*, the Fifth Circuit held that, because *McIntyre* did not produce a majority opinion, the holding may be viewed as the position taken by the Justices who concurred on the narrowest grounds. 716 F.3d 174, 178 (5th Cir. 2013); *see also* *AFTG-TG, LLC v. Nuvoton Tech. Corp.*, 689 F.3d 1358, 1363 (Fed. Cir. 2012) (holding that *Asahi* still applies). This Note focuses on evaluating technology for the “something more” that is required by the O’Connor test from *Asahi*.

83. *Asahi*, 480 U.S. at 110 (plurality opinion). Justice O’Connor’s plurality opinion asserted that “the Due Process Clause . . . require[s] something more than that the defendant was aware of its product’s entry into the forum State through the stream of commerce.” *Id.* at 111. In other words, merely being able to foresee that one’s product would reach the distant forum is insufficient for jurisdiction. Instead, jurisdiction requires conduct be “purposefully directed” toward the forum with something more. *Id.* at 112. In a concurrence written by Justice Brennan, he suggested that the purposeful availment requirement was easier to satisfy than the stronger test suggested by Justice O’Connor. *See id.* at 117 (Brennan, J., concurring). Justice Brennan suggested that simply putting one’s products into this stream with awareness of the potential impact on the forum state was enough for jurisdiction. *Id.* The difference is the “something more” required by Justice O’Connor. This Note asserts that with intent, awareness, and personally targeted commercially-oriented conduct (the required “something more”), there would be a sufficient foundation for finding specific personal jurisdiction.

84. DANIEL W. CUNNINGHAM, A LOGICAL INTRODUCTION TO PROOF 24 (2012).

The next Section covers the idea that specific targeting in online activity is that “something more” that is required for finding personal jurisdiction.

*D. Something More and Technology*

One problem with finding personal jurisdiction based on websites is the fact that traditional websites are generally available to all without being specifically targeted to any one person or organization.<sup>85</sup> Some bloggers’ goals are to reach and affect the entire planet.<sup>86</sup> There is even translation software that can automatically translate a blog.<sup>87</sup> However, that does not mean that each blogger specifically targets every person on the planet. Published web pages are generally accessible globally, and it is likely the intent of many web page authors to reach the widest audience possible. But, like traditional broadcast media, just because these bloggers can reach everyone does not necessarily mean they are targeting anyone in particular.<sup>88</sup> Currently, there seems to be no clarity

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85. Generic web pages present a unique challenge when determining personal jurisdiction because, unlike phone calls, chatroom conversations, or faxes (which are all two-way or multi-way communications with identifiable communicators with discoverable locations), images or words posted to a website are not electronic communications in the traditional sense because they are not generally directed at a particular person or even a particular forum.

86. Andrew Sullivan, *Why I Blog*, ATLANTIC (Nov. 2008), <http://www.theatlantic.com/magazine/archive/2008/11/why-i-blog/307060/>. Blogging is a form of global self-publishing, made possible by online web technology. *Id.*

It is the spontaneous expression of instant thought . . . . It is accountable in immediate and unavoidable ways to readers and other bloggers, and linked via hypertext to continuously multiplying references and sources. Unlike any single piece of print journalism, its borders are extremely porous and its truth inherently transitory. The consequences of this for the act of writing are still sinking in.

*Id.*

87. *Make Your Blog Available in Many Languages—How to Add a Translation Tool to Your Blog*, TOP TEN REVIEWS, <http://translation-software-review.toptenreviews.com/make-your-blog-available-in-many-languages-how-a-translation-tool.html> (last visited Jan. 29, 2016). Less than thirty percent of people online speak English. *Id.* An English-speaking blogger can write in English and then add automatic translation software links to her blog so that readers who do not speak English can still read the blog. *Id.* Adding such a link by the blogger would constitute some amount of targeting to anyone that speaks the languages serviced by the translation software. However, that form of targeting is still general and not individualized.

88. See *Internet Sols. Corp. v. Marshall*, 39 So. 3d 1201, 1205 (Fla. 2010). The Florida Supreme Court introduced a new test that enabled the courts to determine if web content “placed on the [w]eb and accessible in Florida constitutes an ‘electronic communication into Florida’ that has been ‘published’ in Florida. *Id.* at 1215. The court reasoned that “given [the] pervasiveness [of the Web], an alleged tortfeasor who [merely] posts allegedly defamatory material on a website has intentionally made the material almost instantly

on the issue of whether digital content available to many actually targets the entire audience or is just merely available to them.<sup>89</sup>

Courts have generally not found that a website that merely is available and generally advertises to all states, but specifically targets none, has sufficient contacts to subject the advertiser to jurisdiction in the plaintiff's home state.<sup>90</sup> Rather, in any case where personal jurisdiction has been found, "there has been 'something more' to indicate that [a] defendant purposefully (albeit electronically) directed [her] activity in a substantial way to the forum state."<sup>91</sup> For example, in one case where the defendant had a contract with the plaintiff and the defendant's employees had actually visited the plaintiff's state, those actions constituted the required "something more" and rose sufficiently beyond generic Internet advertising to support a finding of specific personal jurisdiction.<sup>92</sup> Another court reasoned that a defendant "should not be permitted to take advantage of modern technology through an Internet [w]eb page . . . and simultaneously escape traditional notions of jurisdiction."<sup>93</sup>

Some courts have found something more in a high number of "hits" received by a web page by residents in the forum state.<sup>94</sup> But where there

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available everywhere the material is accessible." *Id.* at 1214–15. However, that tortfeasor has not necessarily published the material in Florida. *Id.* at 1215. The court made a distinction between being accessible by someone in Florida and being accessed by someone in Florida. *Id.* The court finally held that "[w]hen the posting is then accessed by a third party in Florida, the material has been 'published' in Florida and the poster has communicated the material 'into' Florida, thereby committing the tortious act of defamation within Florida." *Id.* This case reasoned that, for there to be personal jurisdiction in Florida, the tortious material must actually be accessed by a party in Florida. *Id.*

89. For two cases holding for purposeful availment of the benefits of a forum state simply by publishing a website available to all states and intended to reach all Internet users, see *Maritz, Inc. v. Cybergold, Inc.*, 947 F. Supp. 1328, 1334 (E.D. Mo. 1996) and *Inset Systems, Inc. v. Instruction Set, Inc.*, 937 F. Supp. 161, 165 (D. Conn. 1996). For an example of a case going in the opposite direction, see *Bensusan Restaurant Corp. v. King*, 937 F. Supp. 295, 301 (S.D.N.Y. 1996), *aff'd*, 126 F.3d 25 (2d Cir. 1997). However, there seems to be some consolidation around the idea that some targeting is required to support a finding of personal jurisdiction.

90. *Cybersell, Inc. v. Cybersell, Inc.*, 130 F.3d 414, 418 (9th Cir. 1997).

91. *Id.* *Inset Systems* is a case where personal jurisdiction was found based on generic advertising on the Internet plus something more in the use of a domain name ("INSET.COM") and a toll-free phone number ("1-800-US-INSET") that was "directed" at the in-state plaintiff. 937 F. Supp. at 163, 165. The court reasoned that the use of the trademark was a specific targeting rather than a general act. *Id.* at 165.

92. See *Burger King Corp. v. Rudzewicz*, 471 U.S. 462 (1985).

93. *EDIAS Software Int'l, L.L.C. v. BASIS Int'l Ltd.*, 947 F. Supp. 413, 420 (D. Ariz. 1996).

94. *Heroes, Inc. v. Heroes Found.*, 958 F. Supp. 1 (D.D.C. 1996). An example of a case where there was not something more is *Pres-Kap, Inc. v. System One, Direct Access, Inc.*,

was nothing more (no targeting in the forum state, no business in the state, no contracts in the state, no sales in the state, no phone calls from the state, no messages sent over the Internet to the state, or no money changing hands on the Internet from or through the state), there was no specific personal jurisdiction because there was no “invoking the benefits and protections [of the law] of the forum state.”<sup>95</sup>

But where there is more, as in cases involving the use of new technologies, courts have found specific personal jurisdiction.<sup>96</sup> Technology can create a form of targeting by enabling conduct that constitutes something more in “actions that ‘are performed for the very purpose of having their consequences felt in the forum state.’”<sup>97</sup> Thus, technology-based conduct can satisfy the *Zippo* test, the *Calder* effects test, and the *Asahi* “something more” test.

For example, spam e-mail is clearly something more.<sup>98</sup> When spam e-mail (unsolicited bulk e-mail or “UBE”)<sup>99</sup> is sent, the sender purposefully avails herself of the privilege of conducting affairs in the forum state “by (i) intentionally sending scores of emails to [specific] email addresses . . . and (ii) transmitting the emails to the targeted [recipients].”<sup>100</sup> However,

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636 So. 2d 1351 (Fla. Dist. Ct. App. 1994). In that case, the court declined finding jurisdiction where the defendant consumer subscribed to the plaintiff’s travel reservation system but was solicited and serviced in state by the supplier’s local representative. *Id.* at 1353. All substantial activity in the interaction between the plaintiff and the defendant occurred within the defendant’s home state. *Id.*

95. *Cybersell*, 130 F.3d at 419–20.

96. *See, e.g.,* *Wetherbee v. Mayor*, No. 14-cv-13891, 2015 WL 144591, at \*3–4 (E.D. Mich. Jan. 12, 2015). An interactive website that redirected the user to a “companion website that may use user information for further [commercial activity]” was sufficient to find specific personal jurisdiction because that “website engage[d] in a level of interactivity that distinguish[ed] it from those which merely passively post information.” *Id.* at \*3 n.5 (citing *Neogen Corp. v. Neo Gen Screening, Inc.*, 282 F.3d 883, 890 (6th Cir. 2002)).

97. *Dudnikov v. Chalk & Vermilion Fine Arts, Inc.*, 514 F.3d 1063, 1078 (10th Cir. 2008) (quoting *Finley v. River N. Records, Inc.*, 148 F.3d 913, 916 (8th Cir. 1998)).

98. *See, e.g., Verizon Online Servs., Inc. v. Ralsky*, 203 F. Supp. 2d 601, 604 (E.D. Va. 2002).

99. *Id.*

100. *Aitken v. Commc’ns Workers of Am.*, 496 F. Supp. 2d 653, 659 (E.D. Va. 2007). The essential nature of spamming is intentional and targeted. The senders know, or reasonably should know, that the targeted recipients will receive the mail because the Internet e-mail servers are designed to do exactly that. The spammer may not avoid personal jurisdiction “by simply pleading ignorance as to where these servers [sic] were physically located,” nor by pleading ignorance of the e-mail recipient’s location. *Verizon*, 203 F. Supp. 2d at 620. A contrary result would permit spammers to escape jurisdiction simply by turning a blind eye to the natural consequences of their actions even where the spammers might not have known the precise locations of their targets. Basically, personal jurisdiction is appropriate in any forum where spam e-mail is received. *Internet Doorway, Inc. v. Parks*, 138 F. Supp. 2d 773, 779–80 (S.D. Miss. 2001). A state may exercise personal jurisdiction over a defendant who “directs electronic activity into the State . . . with the manifested intent of

the spammers are only liable for their direct acts; they are not liable for the acts of third parties, such as e-mail that is forwarded.<sup>101</sup> Additionally, when fraudulent material is sent into the forum state with the purpose of inducing plaintiff's reliance, such conduct has been sufficient to support a finding of specific personal jurisdiction.<sup>102</sup>

The remainder of this Note explores targeting issues that arise from current Web 2.0 and emerging Web 3.0 technologies.

### III. PERSONAL JURISDICTION: PRESENT

People generally do not hate advertising; they hate irrelevant advertising.<sup>103</sup> Until recently, only larger companies with huge budgets (Amazon leading the way) were able to personalize advertising, and only the mega websites with a significant amount "of traffic were able to customize the visit to the visitor."<sup>104</sup> Obviously the question of privacy versus relevant advertising is not a simple "yes" or "no," black or white, binary, or on/off switch, but a continuum of issues, concerns, and technologies that run into and around those issues and concerns.<sup>105</sup> Even

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engaging in business or other interactions within the State." *ALS Scan, Inc. v. Dig. Serv. Consultants, Inc.*, 293 F.3d 707, 714 (4th Cir. 2002).

101. *Reliance Nat'l Indem. Co. v. Pinnacle Cas. Assurance Corp.*, 160 F. Supp. 2d 1327, 1333 (M.D. Ala. 2001). A defendant does not purposefully avail herself of the forum state when e-mails are forwarded to the plaintiff by third parties. *Id.* "E-mails are bound to be copied and sent to all corners of the world; it does not follow that the author opens himself up to jurisdiction similarly." *Id.*

102. *See Finley*, 148 F.3d at 916–17.

103. "People don't hate ads. They hate irrelevant ads." Andy Crestodina, *Personalized Marketing Campaigns: Meet the New Normal*, COFACTOR (June 24, 2014), <http://www.cofactordigital.com/blog/personalized-marketing-campaigns-meet-normal/>.

"Advertisers know a lot about us, . . . but research has shown that relevance is actually a bigger concern"; a majority of "consumers' desire for personalized content far outweighs their fears about privacy." *Id.* In fact, sixty-four percent believe it is more important for a company to present them with relevant offers compared with thirty-six percent who are more concerned with privacy and do not want any of their online activity tracked. *Id.*

104. *Id.*

105. *Online Users Say They Want More Relevant Ads, but with Privacy Controls Attached*, MARKETINGCHARTS (Nov. 8, 2013), <http://www.marketingcharts.com/online/online-users-say-they-want-more-relevant-ads-but-with-privacy-controls-attached-38009/>. About six in ten survey respondents would be agreeable at some level

about receiving relevant advertising based on some of their [I]nternet surfing activity if the companies providing the ads were required to: [(i)] [a]llow the users, at any time, to opt out of having their information collected . . . ; [(ii)] [p]articipate in enforcement programs and submit to public sanctions if they fail to meet their obligations; and [(iii)] [e]nsure that they don't collect or use any of the users' sensitive financial or medical data.

*Id.*

small businesses that, until recently, were blocked out of the ability to target their customers are now able to do so, relatively inexpensively.<sup>106</sup> This change is due to hosted services and service integration tools that allow individuals and small businesses to personalize their online marketing campaigns; “[t]he game has changed and [all can] play.”<sup>107</sup> Even a small business owner who has no other means of online digital marketing or no other footprint in cyberspace other than Facebook can use her personal Facebook account for customized and targeted marketing to either a narrow or wide audience.<sup>108</sup>

There are many other technologies that are being used to target specific users and could be considered something more when doing a personal jurisdiction analysis.

#### A. *Personally Relevant*

Google is the most used online services company on the planet.<sup>109</sup> Google requires that users accept a terms of service agreement to use any

106. Crestodina, *supra* note 103.

107. *Id.*

108. Kristi Hines, *8 Tactful Ways to Use Your Personal Facebook Account as a Marketing Tool*, KISSMETRICS, <https://blog.kissmetrics.com/tactful-facebook-marketing/> (last visited Jan. 29, 2016). One blogger writes:

Facebook personal profiles are not for business use. With that said, plenty of people use their personal profiles to interact with their target audience through sharing blog posts, industry news, and events. . . . [S]et up your personal profile for marketing [with] eight things you can do with your personal profile that can't be done with Facebook business pages.

*Id.*

109. *The Top 500 Sites on the Web*, ALEXA, <http://www.alexa.com/topsites> (last visited Jan. 29, 2016). Alexa is a self-proclaimed global pioneer in the world of cyberspace analytical insight, providing robust and accurate web analytics. *About Us*, ALEXA, [http://www.alexa.com/about?ax\\_atid=1328bf9c-448b-444f-ba6d-3a120bba5e90](http://www.alexa.com/about?ax_atid=1328bf9c-448b-444f-ba6d-3a120bba5e90) (last visited Jan. 29, 2016). As of January 2016, Alexa ranked the top ten web services providers as: (1) Google.com (“[S]earch the world’s information, including webpages, images, . . . videos [and more].”); (2) Facebook.com (“A social utility that connects people, to keep up with friends, upload photos, share links and videos.”); (3) Youtube.com (“[Video sharing] to get your videos to the people who matter to you.”); (4) Baidu.com (“The leading Chinese language search engine, provides a ‘simple and reliable’ search experience . . . .”); (5) Yahoo.com (“A major internet portal and service provider offering search results [and] customizable content . . . .”); (6) Amazon.com (“Amazon.com seeks to be Earth’s most customer-centric company, where customers can find and discover [goods and services that they desire] . . . .”); (7) Wikipedia.org (“A free encyclopedia built collaboratively . . . .”); (8) Qq.com (“China’s largest and most used Internet service portal . . . .”); (9) Google.co.in (“Indian version of th[e] popular search engine.”); (10) Twitter.com (“Social networking and microblogging service utili[z]ing instant messaging . . . .”). *The Top 500 Sites on the Web, supra*.

of Google's digital and online services.<sup>110</sup> It is important to note that a key section of the terms of service agreement reveals to the end user that Google will use a person's private content to provide improved service.<sup>111</sup> The pertinent section of the terms of service agreement reads: "Our automated systems analyze your content (including emails) to provide you personally relevant product features, such as customized search results, tailored advertising, and spam and malware detection. This analysis occurs as the content is sent, received, and when it is stored."<sup>112</sup> The agreement also adds the following: "If you have a Google Account, we may display your Profile name, Profile photo, and actions you take on Google or on third-party applications connected to your Google Account . . . in our Services, including displaying in ads and other commercial contexts."<sup>113</sup> Google "respect[s] the choices [an end user] make[s] to limit sharing or visibility settings."<sup>114</sup>

There are several issues that affect personal jurisdiction and purposeful availment through these customized and targeted interactions. First, Google is a large, publicly held company whose cyber presence is not just a "passive website," nor is it even just a website. Rather, Google provides diverse products that interact with each other to provide a sophisticated and interconnected suite of services.<sup>115</sup> The terms

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110. *Terms of Service*, GOOGLE, <http://www.google.com/intl/en/policies/terms/> (last modified Apr. 14, 2014).

By using our Services, you are agreeing to these terms. Please read them carefully.

Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services.

*Id.*

111. *Id.*

112. *Id.*

113. *Id.*

114. *Id.*

115. *About Google: Products*, GOOGLE, <http://www.google.com/about/products/> (last visited Jan. 29, 2016). Google products include the following:

- Web:
  - Web Search ("[s]earch billions of web pages")
  - Google Chrome ("[a] browser built for speed, simplicity and security")
  - Toolbar ("[a]dd a search box to [any] browser")
  - Bookmarks ("[a]ccess your bookmarks and starred items")
- Mobile:
  - Mobile ("[g]et Google products on your mobile phone")
  - Maps ("[v]iew maps, your location and get directions on your phone")
  - Search ("[s]earch Google wherever you are")
- Business:
  - AdWords ("[a]ttract more customers and only pay for results")

of service agreement actually refers to the many products and services

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- Google Apps for Work (“[g]et email, docs, storage and more, customized for your business”)
  - Google Cloud Platform (“[b]uild and host applications and websites, store and analyze data on Google’s scalable infrastructure”)
  - Media:
    - YouTube (“[w]atch, upload and share videos”)
    - Google Play (“[y]our music, movies, books, and . . . apps”)
    - Books (“[s]earch the full text of books”)
    - Image Search (“[s]earch for images on the web”)
    - News (“[s]earch thousands of news stories”)
    - Video Search (“[s]earch for videos on the web”)
    - Picasa (“[f]ind, edit and share your photos”)
  - Geo:
    - Maps (“[v]iew maps and [get] directions”)
    - Earth (“[e]xplore the world from your computer”)
    - Panoramio (“[e]xplore and share photos of the world”)
  - Specialized Search:
    - Custom Search (“[c]reate a customized search experience for your community”)
    - Patent Search (“[s]earch the full text of US Patents”)
    - Google Shopping (“[s]earch for stuff to buy”)
    - Finance (“[b]usiness info, news and interactive charts”)
    - Scholar (“[s]earch scholarly papers”)
    - Trends (“[e]xplore past and present search trends”)
  - Home & Office:
    - Gmail (“[f]ast, searchable email with less spam”)
    - Drive (“[c]reate, share and keep all your stuff in one place”)
    - Docs (“[o]pen, edit, and create documents”)
    - Sheets (“[o]pen, edit, and create spreadsheets”)
    - Slides (“[o]pen, edit, and create presentations”)
    - Forms (“[b]uild free surveys”)
    - Drawings (“[c]reate diagrams and flow charts”)
    - Sites (“[c]reate websites and secure group wikis”)
    - Calendar (“[o]rganize your schedule and share events with friends”)
    - Translate (“[i]nstantly translate text, web pages, and files between over 50 languages”)
    - Voice (“[o]ne number for all your phones, online voicemail and cheap calling”)
    - Google Wallet (“[m]ake your [smart] phone your wallet”)
    - Google Cloud Print (“[p]rint anywhere, from any device”)
    - Google Keep (“[s]ave what [is] on your mind”)
  - Social:
    - Google+ (“[r]eal-life sharing, rethought for the web”)
    - Blogger (“[s]hare your life online with a blog—it [is] quick, easy and free”)
    - Groups (“[c]reate mailing lists and discussion groups”)
    - Hangouts (“[c]onversations that come to life”)
  - Innovation:
    - Code (“[d]eveloper tools, APIs and resources”).

*Id.*



that the company provides, self-described as being so “very diverse [that] . . . sometimes additional terms or product requirements . . . may apply.”<sup>116</sup>

Second, many of the Google services require an account, which provides Google with even more personal information than the typical anonymous web user.<sup>117</sup> An account has some basic private information supplied by the user (name, password, contact information, credit cards, recovery information, and photo), but perhaps the most personally revealing information associated with an account is the information that Google collects from the users as they use the services.<sup>118</sup> This information includes device information, mobile network information including phone number, server logs, search queries used, phone call information (including phone numbers, time, date, and duration of calls), actual location, history of actual location, GPS information, cookies, and application identifiers.<sup>119</sup> This information can be shared with other

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116. *Terms of Service*, *supra* note 110. The agreement states that, as other services are used, the terms of those usage agreements are incorporated into the original service agreement. *Id.* (“Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services.”).

117. *See id.* (“You may need a Google Account in order to use some of our Services. You may create your own Google Account, or your Google Account may be assigned to you by an administrator, such as your employer or educational institution.”).

118. *Welcome to the Google Privacy Policy*, GOOGLE, <http://www.google.com/policies/privacy/> (last modified Aug. 19, 2015).

119. *Id.*

- Device information includes:
  - “device-specific information (such as your hardware model, operating system version, unique device identifiers, and mobile network information including phone number . . . [where] Google may associate . . . device identifiers or phone number[s] with your Google Account”
- Log information includes:
  - server logs (Google “automatically collect[s] and store[s] certain information in server logs” including details of how the service is used)
  - search queries used
- Telephony log information includes:
  - phone numbers and time and date, duration of calls
  - “SMS routing information and types of calls”
- Internet Protocol (IP) address
- Device event information includes:
  - hardware settings
  - browser type
  - browser language
  - the date and time of your request
  - referrals
- Cookies and cookie information includes:

service providers.<sup>120</sup> The default agreement with Google is that one's private information—including her name, photo, and the actions she takes—can be used in Google's own, or third-party shared, applications, services, and advertisements.<sup>121</sup> Admittedly, these profile information sharing rules are controlled by each user, but this Note does not focus on the privacy issues, or whether this type of sharing of information should be done with or without permission; it simply focuses on the fact that it *can be done* and *is done* in some cases.<sup>122</sup> When these personalized, customized, and tailored interactions occur, targeting specific individuals for specific reasons, then something more than minimum contacts with a forum state is at issue, and such conduct may lead to a finding of personal jurisdiction where, otherwise, none would be recognized without the use of these technologies. There seems to be nothing more personally

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- information “that may uniquely identify [a user's] browser or . . . Google Account”
  - Location information includes:
    - actual location
    - GPS data
    - sensors
    - nearby devices
    - Wi-Fi access points and cell towers
  - Unique application numbers for automatic updates
  - Local storage information includes:
    - personal information may be stored locally on the end user's “device using mechanisms such as browser web storage . . . and application data caches”
  - Cookie and anonymous identifiers:
    - Google may include sending one or more cookies or anonymous identifiers to the users device
    - Google may use cookies and anonymous identifiers “when [the end user] interact[s] with services [it] offer[s] to [its] partners, such as advertising services or Google features that may appear on other sites”

*Id.*

120. *Id.*

121. *Id.*

122. *Frequently Asked Questions About Creating a Google Account*, GOOGLE, [https://support.google.com/accounts/answer/1728595?hl=en&ref\\_topic=2373943](https://support.google.com/accounts/answer/1728595?hl=en&ref_topic=2373943) (last visited Jan. 28, 2016). The point is not whether information sharing should be allowed or who has control over the sharing but rather what is possibly going on behind the scenes when end users interact with modern web services. For example, a user can share information, such as interests, hometown, or preferences. An e-mail address can be made public or a link to receive e-mail can be exposed, not revealing a specific address but allowing receipt of an e-mail through a broker that hides the actual e-mail address but allows an e-mail to be sent. Say you indicate that you like or recommend a certain movie or a certain entertainment site. A friend that later visits that site might not only see your recommendation but your name and your photo as well. One way to target an individual is to use their friend's picture and name as a trusted endorsement. *Id.*

targeting than using one's picture and name to endorse a product or service to the rest of the world.<sup>123</sup>

Third, these services are actually programmable and can be used not just by humans that view the services using static or dynamic web pages but also by programs through the use of an application programming interface ("API").<sup>124</sup> This is true whether the program is a web-hosted application or mobile app.<sup>125</sup> For example, one of the services that Google provides is Google Maps. The API for Google Maps allows a programmer to interact with Google services to provide geographic data for custom applications.<sup>126</sup> The end user that interacts with Google Maps directly, or uses any application that is written to the Google Maps web service interface, is receiving directions, distances, elevations, locations, places, and time zones.<sup>127</sup> In addition, the end user is also sharing back their own locations, traveling patterns, preferences, habits, durations, speeds, friends, purchases, recommendations, interactions, and places of work, school, worship, entertainment, vacation, and recreation.<sup>128</sup> Such online interaction can be used for good or bad, that which is benign or malign, or that which is personal or commercial,<sup>129</sup> but the key point is that it can be

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123. Google can use photos, comments, and names in product placement ads to match the social ads pioneered by Facebook. *Google Reveals Plan to Use Users' Name, Photos in Its Ads*, GADGETS360 (Oct. 14, 2013), <http://gadgets.ndtv.com/internet/news/google-reveals-plan-to-use-users-name-photos-in-its-ads-431946>. The terms of service allow Google to promulgate "shared endorsements" ads on its sites as well as millions of other websites that are part of Google's display advertising network." *Id.* Additionally, Google's Wi-Fi enabled Street View cars collected data from hotspots that had no encryption, including passwords, e-mails, and URLs of websites visited. Zack Whittaker, *Google Offers Street View Opt-Out for Wi-Fi Mapping; Unethical Snooping, yet We Must Opt-Out*, ZDNET (Nov. 15, 2011, 9:22 PM), <http://www.zdnet.com/article/google-offers-street-view-opt-out-for-wi-fi-mapping-unethical-snooping-yet-we-must-opt-out/>. Users could then look up nearby wireless hotspots. *Id.* At one point, "[t]he search giant . . . ceased collecting wireless hotspot data through its Street View cars," but data still remained in its databases. *Id.* Google has since made it possible to opt out of the database, but hotspot owners must take a proactive measure to do so. *Id.*

124. *Google APIs Terms of Service*, GOOGLE, <https://developers.google.com/terms/> (last modified Dec. 5, 2014) ("The APIs are designed to help you enhance your websites and applications . . .").

125. *Id.*

126. *Google Maps APIs Web Services*, GOOGLE, <https://developers.google.com/maps/documentation/webservices/> (last updated Jan. 21, 2016).

127. *Id.*

128. *Welcome to the Google Privacy Policy*, *supra* note 118.

129. A wife found evidence of her philandering husband when his car was captured on Google's street view cameras parked in front of his mistress' house. Chris Matyszczyk, *Cheating Husband Caught on Google Street View?*, CNET (Apr. 1, 2009, 8:52 AM), <http://www.cnet.com/news/cheating-husband-caught-on-google-street-view/>.

used to target certain interactions, possibly leading to a finding of personal jurisdiction.

Fourth, and finally, these sophisticated service interactions are not just unique to Google but run the range of many online service providers.<sup>130</sup> Similar suites of services by large service providers are used to target either specifically identifiable people or various categories of people based on location, interests, or preferences.<sup>131</sup> Small companies also use these customization and targeting technologies by contracting with third party service providers to host the technology and execute the matching algorithms on their behalf with limited cyberspace footprints.<sup>132</sup>

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130. Examples of other large service providers are Yahoo! and Bing.

131. See *Microsoft Services Agreement*, MICROSOFT (June 4, 2015), <http://windows.microsoft.com/en-us/windows/microsoft-services-agreement>; *Yahoo Mail*, YAHOO!, <https://info.yahoo.com/privacy/us/yahoo/mail/ymail/details.html> (last visited Jan. 29, 2016). They have also integrated services that interact in complex ways, sharing and using collected information to enhance the user's experience. The Microsoft privacy statement includes the following:

Microsoft collects data to operate effectively and provide you the best experiences with our services. You provide some of this data directly, such as when you create a Microsoft account, submit a search query to Bing, speak a voice command to Cortana, upload a document to OneDrive, or contact us for support. We get some of it by recording how you interact with our services by, for example, using technologies like cookies, and receiving error reports or usage data from software running on your device. We also obtain data from third parties (including other companies).

Microsoft uses the data we collect to provide you the services we offer, which includes using data to improve and personalize your experiences. We also may use the data to communicate with you, for example, informing you about your account, security updates and product information. And we use data to help make the ads we show you more relevant to you. However, we do not use what you say in email, chat, video calls or voice mail, or your documents, photos or other personal files to target ads to you.

. . . When you use Bing services, we collect your search queries, location and other information about your interaction with our services.

*Microsoft Privacy Statement*, MICROSOFT, <http://www.microsoft.com/en-us/privacystatement/default.aspx#> (last updated Jan. 2016).

132. See, e.g., *Ad Serving. Simplified*, ADBUTLER, <http://www.adbutler.com/> (last visited Jan. 3, 2016) ("All the features of an enterprise service, without the high cost. . . Easy to use targeting lets you control how ads are served. Target users by city, state, country, keyword and more."); *LinkedIn Advertising*, LINKEDIN ADS, <https://www.linkedin.com/ads/> (last visited Jan. 28, 2016) ("Precision . . . targeting [b]y job title and function[, b]y industry and company size[, and b]y seniority."); TARGETEDVICTORY, <http://www.targetedvictory.com/> (last visited Jan. 28, 2016) ("A Targeted Victory campaign is different. It's smart from the start, planned and directed with proprietary intelligence from every campaign we've worked on. It's measured, tracking exactly what's performing. And it's evolutionary, as we continuously steer the campaign towards the messaging and audiences that matter most.").

*B. Claims Arising out of Digital Contact*

Some argue that technology-enabled digital contacts, with their sophisticated computing technology “interactivity[,] give[] the victim’s state a greater nexus with offending acts and provide[] a direct relationship with the offender for purposes of personal jurisdiction.”<sup>133</sup> While technology plays a significant role in the discussion, it is important to remember that at the core, the questions of personal jurisdiction are not founded in technology, but in the Constitution. The law of personal jurisdiction as refined by the Supreme Court represents a question of constitutional law.<sup>134</sup> A guiding principle then is that each state must, within the protections of the Constitution, be able to protect its citizens that have been injured or suffered economic harm by the targeted cyberspace activities from out-of-state individuals or organizations.<sup>135</sup> If its citizens can be significantly affected by cyber activities “that so easily and pervasively invade[] the forum state,” the state must be empowered to protect its citizens.<sup>136</sup> While jurisdictional principles should not be changed in the face of new technology, new applications of those principles in the rapidly evolving cyber world are essential, or a forum state may find that it “is be[ing] denied its sovereign power to provide a forum to its citizens who have been injured” or have suffered harms from such interactions.<sup>137</sup> A state should be able to find specific personal jurisdiction where there is something more, such as a cyberspace activity “that appeals to, and profits from, an audience in the forum” state—especially when there is commercial harm to the plaintiff or benefit to the defendant.<sup>138</sup>

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133. Reidenberg, *supra* note 13, at 1953. Many entities with an Internet presence embrace the wonder of the Internet’s global electronic reach, but often reject the burden and responsibility of a global presence. The defenses for hate, lies, drugs, sex, gambling, and stolen music are in essence that technology justifies the denial of personal jurisdiction, the rejection of an assertion of applicable law by [the home jurisdiction], and the denial of the enforcement of decisions. As Internet technologies enable global activities from remote locations, these claims rely . . . on the assumption that existing technologies are static.

*Id.* at 1953–54 (footnotes omitted). The focus of this Note is to show that such assumptions about the static nature of interactions in cyberspace are no longer supported.

134. The U.S. Supreme Court may only alter or invalidate a state law where “such law conflicts with valid and controlling federal statutory or constitutional directives.” Redish, *supra* note 14, at 576. The “source of the Court’s efforts to control state jurisdictional doctrine . . . [is] the Fourteenth Amendment’s Due Process Clause.” *Id.*

135. *See id.* at 579.

136. *Id.* at 578.

137. *Id.*

138. Facebook, Inc. v. Pedersen, 868 F. Supp. 2d 953, 959 (N.D. Cal. 2012) (emphasis omitted) (citing Mavrix Photo, Inc. v. Brand Techs., Inc., 647 F.3d 1218, 1229–30 (9th Cir.

The remainder of this Section explores various technologies used in cyberspace activities today and reveals how each could be used to support a finding of specific personal jurisdiction where it is not passive but interactively something more.

### 1. Technology in General

“[Even though] the courts have recognized that the standards used to determine the proper exercise of personal jurisdiction . . . evolve as technological progress occurs, it . . . has remained clear that technology cannot eviscerate the constitutional limits on a State’s power to exercise jurisdiction over a defendant.”<sup>139</sup> The concern seems to be that a state’s power to exercise personal jurisdiction over nonresidents should not be allowed to grow unfettered even though business is conducted electronically with increasing ease across state lines. Thus, despite these changes in technology, one test for determining the extent of a state’s judicial power over parties outside of its borders remains the minimum contacts test: “(1) the extent to which the defendant ‘purposefully avail[ed]’ itself of the privilege of conducting activities in the State; (2) whether the plaintiffs’ claims arise out of those activities directed at the State; and (3) whether the exercise of personal jurisdiction would be constitutionally ‘reasonable.’”<sup>140</sup>

Because cyberspace is omnipresent, mere placement of information online enables a person to “communicate with [other] persons in virtually

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2011)); *accord Mavrix Photo, Inc.*, 647 F.3d at 1230 (holding that a website contained advertisements directed specifically at the forum and that the forum’s audience was “an integral component of [the defendant]’s business model and its profitability”).

139. *ALS Scan, Inc. v. Dig. Serv. Consultants, Inc.*, 293 F.3d 707, 711 (4th Cir. 2002). “In *Hanson v. Denckla*, . . . the [Supreme] Court explored the problem of reconciling technological advances with the limits of personal jurisdiction . . .” *Id.* The *Hanson* Court stated:

As technological progress has increased the flow of commerce between States, the need for jurisdiction over nonresidents has undergone a similar increase. At the same time, progress in communications and transportation has made the defense of a suit in a foreign tribunal less burdensome. In response to these changes, the requirements for personal jurisdiction over nonresidents have evolved . . . . But it is a mistake to assume that this trend heralds the eventual demise of all restrictions on the personal jurisdiction of state courts.

*Hanson v. Denckla*, 357 U.S. 235, 250–51 (1958) (citing *Vanderbilt v. Vanderbilt*, 354 U.S. 416, 418 (1957)); *see also* *McGee v. Int’l Life Ins. Co.*, 355 U.S. 220, 222 (1957) (noting that the “trend . . . toward expanding the permissible scope of [personal] jurisdiction” is, in part, “attributable to the fundamental transformation of our national economy over the years”).

140. *ALS Scan*, 293 F.3d at 712 (alteration in original) (citing *Christian Sci. Bd. of Dirs. of First Church of Christ, Scientist v. Nolan*, 259 F.3d 209, 216 (4th Cir. 2001)); *see also Nolan*, 259 F.3d at 216.

every jurisdiction.”<sup>141</sup> Without something more, a person placing information on the Internet could be subject to personal jurisdiction in every state.<sup>142</sup> However, states only have geographically limited judicial power, and, as such, an extreme reach of personal jurisdiction is not justified.<sup>143</sup> Still, some raise the argument that the untargeted electronic transmissions of the defendant into a state become the “surrogates for the person and,” by sending such transmissions, the defendant “conceptually enter[s] a State.”<sup>144</sup>

Until the Supreme Court redefines or rearticulates the contours of personal jurisdiction in light of advances in technology, any argument for personal jurisdiction must be formed under the current law.<sup>145</sup> However, that existing law includes the opening “that the likelihood that personal jurisdiction can be constitutionally exercised is directly proportionate to the nature and quality of commercial activity that an entity conducts over the Internet.”<sup>146</sup> The current standard only stands for the proposition that where there is no electronic activity specifically targeted at the forum state, there can be no finding of specific personal jurisdiction, leaving open the inverse proposition that where there is electronic activity specifically targeted at the forum state, there can be a finding of specific personal jurisdiction. While the use of interactive Web 2.0 and Web 3.0 technology does not automatically rise to a level sufficient for a finding of specific personal jurisdiction, it also does not automatically forbid the finding of specific personal jurisdiction.

## 2. Web Browsers

A web browser is most commonly referred to as a “browser,” and it is an application that human users interact with to access and view websites.<sup>147</sup> Browsers were first developed to fetch and render Hypertext

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141. *ALS Scan*, 293 F.3d at 712.

142. *Id.*

But under current Supreme Court jurisprudence, despite advances in technology, State judicial power over persons appears to remain limited to persons within the State’s boundaries and to those persons outside of the State who have minimum contacts with the State such that the State’s exercise of judicial power over the person would not offend traditional notions of fair play and substantial justice.

*Id.* (citing *Hanson*, 357 U.S. at 250–51).

143. *Id.*

144. *Id.* These arguments have generally been unpersuasive. *See id.*

145. *Id.* at 713.

146. *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

147. *Web Browser Definition*, TECHTERMS, [http://techterms.com/definition/web\\_browser](http://techterms.com/definition/web_browser) (last updated Feb. 28, 2014). Some of the more popular “web browsers include Microsoft Internet Explorer, Google Chrome, Mozilla Firefox, and Apple Safari.” *Id.*

Markup Language (“HTML”) web pages.<sup>148</sup> The browser merges the web page content with local preferences (text size or specific fonts, for example) and then renders the content in a browser window that can be read by the human user.<sup>149</sup> Early browsers supported basic form input, which allowed the end user to supply information that the website could process on behalf of that user and possibly save in a database.<sup>150</sup> As technology evolved, so did browsers.

“The capabilities of modern web browsers allow web developers to create highly interactive websites.”<sup>151</sup> For example, one technology is AJAX.<sup>152</sup> The purpose and design of AJAX is to automatically, without any action required by the end user, “exchange[e] small amounts of data with the [web] server behind the scenes.”<sup>153</sup>

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148. *Id.* HTML is “the code used to design or ‘mark up’ webpages.” *Id.* The simplest web pages include basic HTML. *Id.* When the browser loads a web page, it processes the HTML, which is a combination of text and basic formatting instructions. *Id.* Complex and sophisticated web pages may include links, references to images or other multimedia content, code that can be executed, and complex formatting, presentation, and dynamic content instructions such as cascading style sheets and JavaScript functions. *Id.*

149. *See, e.g., Firefox Options, Preferences and Settings*, MOZILLA SUPPORT, <https://support.mozilla.org/en-US/products/firefox/customize/firefox-options-preferences-and-settings> (last visited Jan. 28, 2016).

150. Most browser users are all too familiar with websites that not only require names and passwords, but addresses, contact information, answers to questions, preferences, requests, and the like. In fact, web-based forms have become so popular that programmers were able to write programs that interacted with web pages, mimicking users in a way to attack a website with too much input or attempt automated extraction of data from websites. An entire technology, CAPTCHA (“an acronym that stands for Completely Automated Public Turing Test to Tell Computers and Humans Apart”) was invented to detect and protect against such automation. Jonathan Strickland, *How CAPTCHA Works*, HOW STUFF WORKS, <http://computer.howstuffworks.com/captcha.htm> (last visited Jan. 28, 2016). CAPTCHA is just one type of what is known as a Human Interaction Proof. *Id.*

151. *Web Browser Definition*, *supra* note 147.

152. *AJAX Tutorial*, W3SCHOOLS.COM, <http://www.w3schools.com/ajax/default.asp> (last visited Jan. 28, 2016).

153. *AJAX Introduction*, W3SCHOOLS.COM, [http://www.w3schools.com/ajax/ajax\\_intro.asp](http://www.w3schools.com/ajax/ajax_intro.asp) (last visited Jan. 28, 2016).

AJAX is about updating parts of a web page, without reloading the whole page.

.....

AJAX = Asynchronous JavaScript and XML.

.....

AJAX is a technique for creating fast and dynamic web pages.

AJAX allows web pages to be updated asynchronously by exchanging small amounts of data with the server behind the scenes. This means that it is possible to update parts of a web page, without reloading the whole page.

Classic web pages, (which do not use AJAX) must reload the entire page if the content should change.

*Id.* High profile examples of AJAX include Google Maps, Gmail, YouTube, and Facebook tabs. *Id.*



Cookies are another way that allow browsers to remember each user's settings and interact with each user in a customized and personalized manner.<sup>154</sup> Cookies are used “to keep track of your movements within [a] site”; to “remember your registered login, theme selection, preferences, and other customization functions”; and to store “any information you may have voluntarily given while visiting the website.”<sup>155</sup> “Cookies are often indispensable for websites that have huge databases . . . [or] have customizable themes . . . .”<sup>156</sup> Targeted marketing is becoming increasingly important, and “cookies in some cases can be aggressively [sic] used to create a profile of [one's] surfing habits.”<sup>157</sup>

### 3. Applets, Flash, and HTML5

Applets consist of technologies that allow website operators “to create dynamic and interactive web contents.”<sup>158</sup> “An applet is a small application designed to run within [a web browser].”<sup>159</sup> The term applet technically applies to any program, but “it usually refers to Java applets, or small applications written in the Java programming language.”<sup>160</sup>

Applets are not run directly by an operating system, but are run within the context of a web browser, and they are “crossplatform,” meaning a single applet can run in any browser and on any operating

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154. *Welcome to All About Cookies.org*, ALL ABOUT COOKIES, <http://www.allaboutcookies.org/> (last visited Jan. 28, 2016). Cookies allow information to be sent back and forth between a particular user and a website. *Id.*

Also known as browser cookies or tracking cookies, cookies are small, often encrypted text files, located in browser directories. They are used by web developers to help users navigate their websites efficiently and perform certain functions. Due to their core role of enhancing/enabling usability or site processes, disabling cookies may prevent users from using certain websites.

Cookies are created when a user's browser loads a particular website. *The website sends information to the browser which then creates a text file. Every time the user goes back to the same website, the browser retrieves and sends this file to the website's server. . . .* [C]ookies are created not just by the website the user is browsing but also by other websites that run ads, widgets, or other elements on the page being loaded. *These cookies regulate how the ads appear or how the widgets and other elements function on the page.*

*Id.* (emphasis added).

155. *All About Cookies*, ALL ABOUT COOKIES, <http://www.allaboutcookies.org/cookies/> (last visited Jan. 28, 2016).

156. *Id.*

157. *Id.*

158. *Java Programming Tutorial*, NANYANG TECHNOLOGICAL U., [https://www3.ntu.edu.sg/home/ehchua/programming/java/J4c\\_AppletWebstart.html](https://www3.ntu.edu.sg/home/ehchua/programming/java/J4c_AppletWebstart.html) (last modified May 2012).

159. *Applet Definition*, TECHTERMS, <http://techterms.com/definition/applet> (last updated Jan. 20, 2012).

160. *Id.*

system, such as Windows, Mac, and Linux systems.<sup>161</sup> “During the early years of the [w]eb, . . . applets provided a way for webmasters to add interactive features that were not possible with basic HTML.”<sup>162</sup> Applets can actually be too powerful in collecting user data and transferring it back to the web server, so significant security restrictions impose limits on applet functionality. Because customization has shifted to server-side programming, applets are not commonly used today.

Adobe Flash and HTML5 are popular today for creating dynamic, visually appealing web content.<sup>163</sup> Through Flash programming, “developer[s] can set and control the actions of . . . Flash objects.”<sup>164</sup> Interactive Flash websites can be used for visually appealing e-commerce applications and sophisticated interactive web experiences.<sup>165</sup> HTML5 is used to “[b]ring ideas to life . . . [and to c]reate engaging, interactive . . . designs and motion graphics that can run on any device.”<sup>166</sup> In other words, web content is no longer static and passive; it is dynamic and interactive. User input controls the direction of the content presentation and that information is stored and remembered by the website provider to customize additional content and personalize presentation.<sup>167</sup> The goal of all of these technologies is to present interactive and customized

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161. *Id.*

162. *Id.*

[I]n recent years, applets have been slowly replaced by newer technologies such as jQuery and HTML 5. Some browsers, like Google Chrome, no longer support the [applets], and others, like Apple Safari, do not even enable [applets] by default. Since web developers cannot fully rely on Java support from web browsers, applets are no longer a common way to provide interactive content on the Web.

*Id.*

163. *Adobe Flash Player*, ADOBE, <http://www.adobe.com/products/flashplayer.html> (last visited Jan. 28, 2016); *HTML5 Introduction*, W3SCHOOLS.COM, [http://www.w3schools.com/html/html5\\_intro.asp](http://www.w3schools.com/html/html5_intro.asp) (last visited Jan. 28, 2016).

164. *ActionScript Tutorial*, SITEGROUND, <https://www.siteground.com/tutorials/actionscript/> (last visited Jan. 28, 2016).

165. *Id.*

166. *Google Web Designer*, GOOGLE, <http://www.google.com/webdesigner/> (last visited Jan. 28, 2016).

167. Netflix is an example of a well-known video streaming service that delivers individualized content on demand. It recently announced that it was moving its platform to HTML5. Anthony Park & Mark Watson, *HTML5 Video at Netflix*, NETFLIX TECH BLOG (Apr. 15, 2013, 2:04 PM), <http://techblog.netflix.com/2013/04/html5-video-at-netflix.html>. Using similar technologies, Netflix remembers what each user was doing, where the person was in a video stream when he or she left the website, and how often the person interacted with the site, and it also suggests other content that might be interesting based on the viewer's preferences and the preferences of others like the viewer. This is personalized and customized content delivery that would likely lead to a finding of personal jurisdiction.

content to specific users for personalized experiences, which often is simply a euphemism for targeted advertising.<sup>168</sup>

#### 4. Mobile Apps

With the explosive growth of smartphone use, mobile applications (“mobile apps”) constitute a new mechanism for service providers to interact with their customers and potential customers.<sup>169</sup> While mobile apps can be designed and implemented using different architectural approaches,<sup>170</sup> the differences are only in underlying technologies and computational patterns, not in the overall effect of increased customized and personalized interaction between service providers and their customers and potential customers. The factors that app designers and developers consider include “the deployment platforms being targeted, the specific devices and user profiles, the contexts in which the application is most likely to be used, and any off-line usability and connectivity profiles that the application must support.”<sup>171</sup>

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168.

Google recently announced its new tool for building HTML5-based interactive graphics and websites. Although it’s targeted towards advertisers (including those who need to make mobile ads), [it] could be used for other projects.

From the looks of it . . . , [it] is a professional-quality tool for easy and fast graphics creation. . . .

. . . .

. . . [It] is intended for creating ads, but . . . you could still create single-page, interactive sites and animations for other . . . uses.

Melanie Pinola, *Build Interactive HTML5 Sites and Graphics with Google’s Free Web Designer Tool*, IT WORLD (Oct. 1, 2013), <http://www.itworld.com/article/2704871/consumerization/build-interactive-html5-sites-and-graphics-with-google-s-free-web-designer-tool.html>.

169. “As of [July 2015], Android users were able to choose between 1.6 million apps . . . [and] Apple[] . . . [had] the second-largest app store with 1.5 million available apps.” *Number of Apps Available in Leading App Stores as of July 2015*, STATISTA, <http://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/> (last visited Jan. 28, 2016).

170. The three major architectural patterns are (1) native application (“offers the best user experience” but requires installation and upgrading and can be device and platform specific); (2) web-based application (can “[r]euse[] existing web applications” and existing technologies like HTML5 and geolocation but “access to native functionality [can be] very limited”); and (3) hybrid application (“built by combining native components and web components”; while these apps have access to all native features, they still need to be installed and upgraded). Sukumar Jena, *Choosing the Right Architecture for Developing Mobile Application*, ENTERPRISE CIO F. (Jan. 29, 2013, 10:11 AM), <http://www.enterprise-cioforum.com/en/blogs/sukumarofs/choosing-right-architecture-developing-m>.

171. *Id.* “The complexity of the workflow and the richness of the user experience that is required is probably one of the most important factors that determine this choice.” *Id.*

There are essentially three types of mobile apps: public service, subscription, and ad-based (including various combinations and hybrids). Both subscription and ad-based apps are commercial in nature and are designed to generate revenue for the app developer or the service provider.<sup>172</sup> Public service apps are not inherently commercial in nature and are usually designed to share information or provide access to otherwise freely available services.<sup>173</sup> Interestingly, the vast majority of smartphone apps developed do not make any money,<sup>174</sup> but that does not mean that they are not intended to be commercially viable.<sup>175</sup> Of the apps that are intended to make money, there are diverse business models that have been and are being used.<sup>176</sup> Some experts expect a blended model where the app use might start out as free, being interrupted by ads, but then offer a subscription model where users pay an upgrade fee to experience an ad-free version of the app.<sup>177</sup>

No matter the technology used or the business model followed, it is essential to remember the facts and circumstances surrounding mobile apps that create a targeted and customized interaction. Essentially all apps, commercial or public service, will involve some sort of personalized interaction, subscription, advertising, account creation, or acceptance of terms of service or terms of use agreements that involve the sending and

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172. Annum Munir, *App Monetization: 6 Bankable Business Models that Help Mobile Apps Make Money*, LOCALYTICS (Sept. 10, 2014, 4:00 AM), <http://info.localytics.com/blog/app-monetization-6-bankable-business-models-that-help-mobile-apps-make-money>.

173. Examples of public service apps include: a community library app, a local city government access app, state government information sharing apps, and federal government services apps. Examples of ad-based apps include: free apps that provide information or entertainment that are supported by embedded or linked advertising. Examples of subscription apps include: banks, travel services, media companies, or news organizations that provide a free app along with a paid subscription.

174. Dave Neal, *Over 99 Percent of Apps Will Not Make Any Money*, INQUIRER (Jan. 14, 2014, 2:24 PM), <http://www.theinquirer.net/inquirer/news/2322853/over-99-percent-of-apps-will-not-make-any-money>.

175. Munir, *supra* note 172.

176. *Id.* One expert asserts that there are six basic revenue generating models: (1) free but with ads (the app vendor “make[s] money by selling data-driven advertising,” independently or by working with a mobile ad partner); (2) freemium (“certain features are gated and cost money to be unlocked”); (3) paid apps (the user pays money upfront to even download the app); (4) in-app purchases (the app actually sells goods or services by using the app as yet “another sales channel . . . or a mobile storefront”); (5) paywalls (subscriptions, “similar to the freemium model except that it focuses on gating content, not features”); and (6) sponsorship (incentivized advertising by “partnering with advertisers, who provide . . . users with rewards for completing certain in-app actions”). *Id.* (emphasis omitted).

177. *Id.* “[Some studies] show[] that advertising is the most popular app monetization strategy, but subscriptions [can be] the most profitable.” *Id.*

receiving of data between the end user's mobile device and the app provider.

In the Google Android world, all of those ads can be geared specifically toward getting more people to download and interact with an app by “provid[ing] targeting information to an ad request.”<sup>178</sup> For example, if an app already knows a user's gender, location, family settings, birthday, child settings, or request agent (third party library that can generate dynamic targeting information), “it can provide that information in the ad request for targeting purposes.”<sup>179</sup> “[Targeting] information is also forwarded to ad network mediation adapters if mediation is enabled.”<sup>180</sup> These facts clearly distinguish this type of targeted and personalized interaction from the passive websites of years past where there were insufficient interactions to support any finding of specific personal jurisdiction.

## 5. The Cloud

“Cloud computing” is a broad term used to describe a wide range of services.<sup>181</sup> Many companies, including the United States federal government, are moving toward cloud computing,<sup>182</sup> which “is a model for enabling . . . on-demand network access to a shared pool of configurable computing resources . . . that can be rapidly provisioned and released with minimal management effort.”<sup>183</sup>

Different organizations use the term differently to include a broad collection of services, but technology experts have divided cloud computing into several categories: Software as a Service (“SaaS”), Platform as a Service (“PaaS”), and Infrastructure as a Service (“IaaS”).<sup>184</sup> “SaaS applications are designed for end-users[ and are] delivered over the web[;] PaaS is the set of tools and services designed to

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178. *AdMob for Android*, GOOGLE DEVELOPERS, <https://developers.google.com/admob/android/targeting?hl=en> (last updated Dec. 8, 2015).

179. *Id.*

180. *Id.*

181. *Understanding the Cloud Computing Stack: SaaS, PaaS, IaaS*, RACKSPACE, [http://www.rackspace.com/knowledge\\_center/whitepaper/understanding-the-cloud-computing-stack-saas-paas-iaas](http://www.rackspace.com/knowledge_center/whitepaper/understanding-the-cloud-computing-stack-saas-paas-iaas) (last updated on Oct. 22, 2013) [hereinafter RACKSPACE].

182. NAT'L INST. OF STANDARDS & TECH., U.S. DEPT OF COMMERCE, SPECIAL PUB. NO. 500-292, NIST CLOUD COMPUTING REFERENCE ARCHITECTURE 1-2 (2011), [http://www.nist.gov/customcf/get\\_pdf.cfm?pub\\_id=909505](http://www.nist.gov/customcf/get_pdf.cfm?pub_id=909505).

183. RACKSPACE, *supra* note 181. Cloud computing gives cloud users “the ability . . . to utilize parts of bulk resources . . . [ which] can be acquired quickly and easily” for either long or short duration (essentially the difference between buying something versus renting it). *Id.*

184. *Id.*

make coding and deploying those applications quick and efficient[.] IaaS is the hardware and system software that powers it all—servers, storage, networks, and operating systems.”<sup>185</sup>

SaaS is a rapidly growing market, as indicated in recent reports that predict ongoing double-digit growth.<sup>186</sup> SaaS provides “web access to commercial software[,] . . . managed from a central location” that would otherwise have to be downloaded and updated.<sup>187</sup> SaaS is “delivered in a ‘one to many’ model,” where one instance of the software is used by many end users.<sup>188</sup> SaaS is effective when applications are needed only for a short term or where there are demand spikes.<sup>189</sup>

“[PaaS] brings the benefits that SaaS b[ring]s for applications . . . to the software development world. PaaS can be defined as a computing platform that allows the creation of web applications quickly and easily and without the complexity of buying and maintaining the software and infrastructure underneath it.”<sup>190</sup> PaaS makes it easy for developers to “develop, test, deploy, host, and maintain applications.”<sup>191</sup> Tools also make it easy for developers to develop web-based services and applications.<sup>192</sup> Often platforms are shared by multiple users providing a multi-tenant environment.<sup>193</sup> PaaS brings significant benefits in scalability, load balancing, and high availability failover.<sup>194</sup>

“[IaaS] is a way of delivering [c]loud [c]omputing infrastructure—servers, storage, network . . . —as an on-demand service” rather than as

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185. *Id.* Several analogies have been offered to help explain the differences between IaaS, PaaS, and SaaS. One is a transportation analogy. “[T]he Interstate transportation system in the U.S. . . . would[ not] be useful without cars and trucks to transport people and goods. In this analogy, the roads are the infrastructure [(IaaS)] and the cars and trucks are the platform that sits on top of the infrastructure [(PaaS)],” with the real value in the transported people and goods (SaaS). *Id.* In the technical realm, the transferred goods and people would be the highest level of cloud computing. *Id.* This Note’s author’s own analogy uses a personal computer, with which most people are familiar. IaaS is like the computer hardware (CPU, hard drive, bus, and memory). PaaS is like the computer operating system (creates a useful computing environment using the hardware). SaaS is like the applications that run on the personal computer. The most important interaction most people have with a computer is running applications, but those applications depend on platform (the operating system) and infrastructure (the hardware).

186. Kushagra Sharma, *Double Digit Growth, How Companies Are Achieving It*, LINKEDIN (Oct. 30, 2015), <https://www.linkedin.com/pulse/double-digit-growth-how-companies-achieving-kushagra-sharma>.

187. RACKSPACE, *supra* note 181.

188. *Id.*

189. *Id.*

190. *Id.*

191. *Id.*

192. *Id.*

193. *Id.*

194. *Id.*

purchased or dedicated datacenter and network equipment.<sup>195</sup> “Public cloud’ is considered infrastructure that consists of shared resources, deployed on a self-service basis over the Internet.”<sup>196</sup> “[P]rivate cloud’ is infrastructure that emulates some of [c]loud [c]omputing features, like virtualization, but does so on a private network.”<sup>197</sup> Some of the key features of IaaS are that it is a computing infrastructure that uses a shared, variable cost, utility-based pricing model that is based on actual use rather than exclusive possession.<sup>198</sup> “Where there is pressure on [an] organization [to grow, yet] to [also] limit capital expenditures,” the IaaS model allows organizations to reassign these costs as more flexible operating expenditures.<sup>199</sup> The distinctions between SaaS, PaaS, and IaaS will blur over time just as tablets and handheld devices have blurred the lines between computer hardware, software, and applications.<sup>200</sup>

Many cloud users, whether it be IaaS, PaaS, or SaaS,<sup>201</sup> use the cloud services based on contracts and terms of use agreements.<sup>202</sup> IBM recently received recognition for radically simplifying the contractual licensing

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195. *Id.*

196. *Id.*

197. *Id.*

198. *Id.*

199. *Id.*

200. *Id.*

201. The following are examples of some of these services:

- SaaS services examples include:
  - email and office productivity, billing, customer relationship management, collaboration, content management, document management, financial (banking, taxes, e-commerce), human resources, sales tools (pricing, commission tracking, etc.), social networks (Facebook, YouTube, Twitter, Instagram), and enterprise resource planning.
- PaaS services examples include:
  - business intelligence (dashboards, reporting systems, and data analysis), databases (both scalable relational database solutions and scalable non-SQL datastores), development and testing, integration, and application deployment (web application runtime environments).
- IaaS services examples include:
  - backup and recovery, compute (server resources), content delivery networks (cache “content and files to improve the performance and cost of delivering content”), services management, and storage (massively scalable storage capacity and big data for applications, backups, archival, and general file storage).

NAT’L INST. OF STANDARDS & TECH., *supra* note 182, at 24–25.

202. LAEF OLSON, ORACLE CORP., TEN QUESTIONS TO ASK YOUR CLOUD VENDOR BEFORE ENTERING THE CLOUD (2012), <http://www.oracle.com/us/products/applications/10-questions-for-cloud-vendors-1639601.pdf>.

process of its cloud services.<sup>203</sup> Their goal was to simplify the process customers use to enter into cloud computing services agreements.<sup>204</sup> The process of setting up cloud computing services agreements involved long and complex “contracts that typically required long negotiations and reviews.”<sup>205</sup> Other cloud providers “require[d] customers to review and commit to . . . complex contracts” with many terms and conditions.<sup>206</sup> Oddly, the legal burden of setting up a cloud computing relationship often overshadowed the technical benefits of the relationship.<sup>207</sup>

Since most cloud computing use is driven by explicit contract and license agreements, inquiries into specific personal jurisdiction in cases involving disputes related to cloud services will almost universally be decided by analyzing the contracts and the contracting factors.<sup>208</sup>

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203. *IBM Radically Simplifies Cloud Computing Contracts*, IBM (Dec. 18, 2014), <https://www-03.ibm.com/press/us/en/pressrelease/45737.wss>.

204. *Id.*

205. *Id.*

206. *Id.*

207. One IBM executive was quoted as saying:

It’s ironic that cloud computing represents a faster and more innovative approach to doing business, yet lengthy and complex cloud business contracts from most vendors remain an obstacle . . . . By dramatically simplifying and accelerating how clients contract for cloud services, IBM is making it easier and faster for companies to reap the benefits of cloud.

*Id.*

208. The existence of a contract is one factor to consider in the minimum contacts analysis:

At the outset, we note a continued division among lower courts respecting whether and to what extent a contract can constitute a “contact” for purposes of due process analysis. If the question is whether an individual’s contract with an out-of-state party *alone* can automatically establish sufficient minimum contacts in the other party’s home forum, we believe the answer clearly is that it cannot. . . . [W]e have emphasized the need for a “highly realistic” approach that recognizes that a “contract” is “ordinarily but an intermediate step serving to tie up prior business negotiations with future consequences which themselves are the real object of the business transaction.” It is these factors—*prior negotiations and contemplated future consequences, along with the terms of the contract and the parties’ actual course of dealing*—that must be evaluated in determining whether the defendant purposefully established minimum contacts within the forum.

*Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 478–79 (1985) (emphasis added) (footnote omitted) (first citing *Lakeside Bridge & Steel Co. v. Mountain State Constr. Co.*, 445 U.S. 907, 909–10 (1980) (White, J., dissenting); then citing *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 319 (1945); and then quoting *Hoopston Canning Co. v. Cullen*, 318 U.S. 313, 316–17 (1943)).



## 6. Spear Phishing

While phishing<sup>209</sup> may be only minimally targeting in nature, spear phishing<sup>210</sup> is even more insidious because of its even more sophisticated, customized, and targeted nature. In fact, one of the means that people use to detect phishing scams is that the fraudulent messages are often not personalized and may share many similar properties revealing the fact that the phisher does not actually know anything about the intended target. “Unlike phishing scams, which cast broad, scatter-shot attacks, spear phishing hones in on a specific group or organization.”<sup>211</sup> “Traditional security often does[ not] stop these attacks because they are so cleverly customized.”<sup>212</sup>

“[S]pear phish[ing] thrives on familiarity.”<sup>213</sup> The spear phisher most likely knows your name, your e-mail address, and some custom, unique detail about you that is the hook that is used to gain your trust and make you reveal personal information.<sup>214</sup> It is clear that spear phishing represents personalized and tailored targeting that would be sufficient for a finding of specific personal jurisdiction.

## 7. Social Media

Targeted social media contacts represent a “shift[ for commercially-oriented organizations] from the traditional[, generic] ‘push’ advertising

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209. “Phishing is essentially an online con game and phishers are nothing more than tech-savvy con artists and identity thieves. They use SPAM, malicious [w]eb sites, email messages and instant messages to trick people into divulging sensitive information, such as bank and credit card accounts.” *Phishing*, NORTON, [http://us.norton.com/security\\_response/phishing.jsp](http://us.norton.com/security_response/phishing.jsp) (last visited Jan. 28, 2016). Phishers “pretend[] to be legitimate companies” and entice recipients to divulge personal information “through malicious web sites.” *Id.* The tools of a phisher are emotional language, scare tactics, illegal use of copyrighted images from legitimate sites, and use of trust-inducing language. *Id.* Phishing works by sending an e-mail, apparently from a trustworthy source, but instead it leads the recipient to a malicious website full of malware. *See id.*

210. Spear phishing is a new twist on generic phishing where an individual is contacted with enough personalized information to persuade the recipient to disclose credit card numbers, bank account information, passwords, financial information, or other sensitive data. *Spear Phishing: Scam, Not Sport*, NORTON, <http://us.norton.com/spear-phishing-scam-not-sport/article> (last visited Jan. 28, 2016).

211. *What Is Spear Phishing?*, KASPERSKY LAB, <http://usa.kaspersky.com/internet-security-center/definitions/spear-phishing#.VOQjHfkc58E> (last visited Jan. 28, 2016).

212. *Id.* “As a result, [spear phishing attacks are] becoming more difficult to detect.” *Id.*

213. *Spear Phishing: Scam, Not Sport*, *supra* note 210. “The salutation [in an] email message is likely to be personalized: ‘Hi Bob’ instead of ‘Dear Sir.’” *Id.* The fake e-mail may also make reference to a specific, recent online purchase a person has made. *Id.*

214. *Id.*

model to a ‘pull’ model that uses inbound marketing and friend recommendations as the core way to” interact with customers and potential customers.<sup>215</sup> “Some 70% . . . of US online adults trust brand or product recommendations from friends and family and 46% trust consumer-written online reviews, while just 10% trust ads on websites and 9% trust text messages from companies or brands.”<sup>216</sup> That is, a person generally trusts a customized, personal recommendation far more than an unsolicited, generic marketing communication.<sup>217</sup> There is some movement to social media technologies that build on trusted and customized online connections, rather than generic, brand-led advertising using one-way push communications.<sup>218</sup>

This customized, personalized, and targeted system of interaction is done by activity and relationship analysis that “return[s] better, more accurate search results” and helps to ensure that you “improve your ad targeting and ensure you’re reaching the right [audience].”<sup>219</sup> For example, searches of the accounts and activities of over one billion Facebook users can help a marketing organization identify (1) friends of its fans, (2) employees of businesses who are fans, (3) interests of both fans and competitors’ fans, (4) locations and interests of people who are fans of a particular industry, and (5) the influencers of a given fan base.<sup>220</sup>

Facebook itself shares insights about how it uses the information it collects from its users to customize the experience for each user.<sup>221</sup>

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215. Leo Widrich, *The 7 Most Interesting Social Media Studies and What to Learn from Them*, BUFFERSOCIAL (Apr. 2, 2013), <https://blog.bufferapp.com/social-media-stats-studies>.

216. *How Branded Content Will Unlock the Key to Consumer Trust*, FORRESTER (Mar. 21, 2013), <https://www.forrester.com/How+Branded+Content+Will+Unlock+The+Key+To+Consumer+Trust/-/E-PRE4784>.

217. *See id.*

218. *See id.*

219. Christian Karasiewicz, *17 Ways Marketers Can Leverage Facebook Graph Search*, SOC. MEDIA EXAMINER (July 22, 2013), <http://www.socialmediaexaminer.com/facebook-graph-search-marketing/>.

220. *Id.*

221. Lars Backstrom, *News Feed FYI: A Window into News Feed*, FACEBOOK (Aug. 6, 2013), <https://www.facebook.com/business/news/News-Feed-FYI-A-Window-Into-News-Feed>. Every time a user visits the News Feed feature within Facebook, there are on average 1500 potential stories from others that they follow. *Id.* The algorithm uses the actions that users take to determine what is most important to them and in what order the information is presented to them. *Id.* For example, what users like or hide helps to determine if they see more or less of similar posts. *Id.*

The . . . algorithm responds to signals from [the user], including, for example: [h]ow often [the user] interact[s] with [others.] . . . [t]he number of likes, shares and comments a post receives from the world at large and from [the user's] friends in particular[,] [h]ow much [the user has] interacted with this type of post in the past[,

The goal of News Feed is to deliver the right content to the right people at the right time so they don't miss the stories that are important to them. Ideally, we want News Feed to show all the posts people want to see in the order they want to read them.<sup>222</sup>

A critical fact is that “[t]he social network also gathers data about users’ [w]eb browsing by placing lines of code on users’ computers, collecting information on the websites they visit, as well as which mobile apps users have downloaded.”<sup>223</sup> In 2014, Facebook added users’ browsing habits to the targeting formula for its advertisers in an attempt “to reap [even more] commercial benefit from the lives of its billion-plus users.”<sup>224</sup> With the changes, ad targeting became even more intelligent for ninety-five percent of Facebook users.<sup>225</sup> “Facebook also allowed advertisers to target users based on third-party [partner] data handlers.”<sup>226</sup> Revealing that Facebook is not alone in these changes to enable the targeting of users, it divulged that it is only “adopting practices widely used by other websites and social-media companies.”<sup>227</sup>

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and] [w]hether or not [the user] and other people across Facebook are hiding or reporting a given post[.]

*Id.* This conduct not only opens the door to targeted advertising but fully walks through that door.

222. *Id.*

223. Reed Albergotti, *Facebook to Target Ads Based on Web Browsing*, WALL ST. J. (June 12, 2014, 5:41 PM), <http://www.wsj.com/articles/facebook-to-give-advertisers-data-about-users-web-browsing-1402561120>.

224. *Id.*

225. *Id.* “Facebook has broadened the ability [of its advertisers] to target specific users. It has long allowed advertisers to target users based on their activity on Facebook, such as ‘likes’ and fan pages,” but now allows advertisers to target ads based on users’ Web-browsing habits. *Id.* “The change highlights Facebook’s effort to continue to expand its advertising business, which generated \$7 billion in revenue last year and rose at a 70% clip in the first quarter [of 2014.]” *Id.* It is unsurprising that “[a]dvertisers applauded the move.” *Id.*

226. *Id.* This integration of third-party partner data enables targeting of users based on interests even outside of Facebook. Facebook notes that “the[se] change[s] will likely increase the number of ‘interests’ associated with each user, allowing advertisers to send more targeted ads to more people.” *Id.* An example that Facebook provides is that “users who regularly visit bowling websites but don’t ‘like’ any bowling-related content on Facebook could soon see ads related to bowling.” *Id.*

227. *Id.*

## IV. PERSONAL JURISDICTION: FUTURE

The future of the online and cyberspace interactions seems to point to systems that allow humans to be even more interconnected.<sup>228</sup> The technology will fuse, evermore, the digital and physical worlds by bringing together different human concepts and technical components.<sup>229</sup> The remainder of this Note discusses an assortment of new technologies and their possible impact on personal jurisdiction issues. These new technologies include virtual digital assistants and digital agents.

A. *Virtual Digital Assistants*

At the start of 2015, the three most popular virtual digital assistants accompanying the major mobile computing platforms were (in no particular order) Apple Siri, Microsoft Cortana, and Google Now.<sup>230</sup> These virtual assistants are, essentially, voice-based interfaces to the mobile device that allow the device users to keep track of their schedules (including reminders), take notes, execute commands, and make natural

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228. Arkady Zaslavsky, *Internet of Things and Ubiquitous Sensing*, COMPUTING NOW (Sept. 2013), <http://www.computer.org/web/computingnow/archive/september2013#sthash.orILQ1zg.dpuf>. “[T]he Internet of Things (IoT) will comprise many billions of Internet-connected objects (ICOs) . . . that can sense, communicate, compute, and potentially actuate, as well as have intelligence, multimodal interfaces, physical/virtual identities, and attributes.” *Id.* This new online world realizes and “incorporates concepts from pervasive, ubiquitous, and ambient computing.” *Id.*

229. *Id.* Smart devices will become “aware of users’ activities, preferences, and context[s].” *Id.* Ambient intelligence systems are seemingly more and more feasible as they “us[e] human-activity recognition methods that can themselves dynamically adapt to captured and discovered sensor data.” *Id.*

230. Geoffrey A. Fowler, *Virtual Assistant Jeopardy! Siri, Cortana, Alexa and Google Now Take Trivia Challenge*, WALL ST. J. (Feb. 4, 2015, 7:00 AM), <http://blogs.wsj.com/personal-technology/2015/02/04/virtual-assistant-jeopardy-siri-cortana-alexa-and-google-now-take-trivia-challenge/>. One technology blogger noted that there are others, singling out Alexa—the latest virtual assistant from Amazon—and tested it against the “three better-known contenders.” *Id.* That test was conducted by asking trivia questions from the official “Jeopardy” practice test—no small task for many non-virtual humans. *Id.* This Note’s author has observed an interesting technology shift where virtual digital assistants are moving from being mobile platforms to being cloud-based platforms, spanning not just mobile devices, but all devices, including computers, tablets, and even wearable computing devices such as Google Glass and the Apple Watch. “Wearable computing is the study or practice of inventing, designing, building, or using miniature body-borne computational and sensory devices. Wearable computers may be worn under, over, or in clothing, or may also be themselves clothes . . . .” Steve Mann, *Wearable Computing*, INTERACTION DESIGN FOUND., [https://www.interaction-design.org/encyclopedia/wearable\\_computing.html](https://www.interaction-design.org/encyclopedia/wearable_computing.html) (last visited Jan. 28, 2016).

language queries.<sup>231</sup> These voice-based virtual assistants are quite intriguing and seem to do more than make it merely convenient for the devices' users to interact with the device and complete various tasks during the day. All three take orders via voice recognition and look up answers to more and more advanced questions.<sup>232</sup>

### 1. Apple Siri

Siri is an “intelligent personal assistant that . . . can send your messages, place calls, make dinner reservations, and more.”<sup>233</sup> Apple claims that Siri is easy to use and does so much that Siri will “help[] you get things done.”<sup>234</sup> A key feature is that a user can use her voice rather than being forced to type with her fingers, and the assistant converts the words into text.<sup>235</sup> Apple has even integrated Siri with automobiles: “If you’re in a vehicle that supports [these technologies], you can hold down the voice-command button on your steering wheel. Then say what you need.”<sup>236</sup>

### 2. Windows Cortana

“Like any good personal assistant, Cortana is ready to help whenever you need it, and she has a wide repertoire of things she can do.”<sup>237</sup> Microsoft suggests that Cortana can do all of the following: “[m]ake calls, send texts, and stay organized”; keep up to date on interests and concerns

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231. Marc Flores, *Cortana vs Siri vs Google Now*, TECHRADAR (Apr. 21, 2014), <http://www.techradar.com/us/news/phone-and-communications/mobile-phones/cortana-vs-siri-vs-google-now-1243987>.

232. Chris Smith, *Check Out the 60 Complex Questions that Confused Cortana More than Siri and Google Now*, BGR (Oct. 31, 2014, 4:00 PM), <http://bgr.com/2014/10/31/cortana-vs-google-now-vs-siri/>. Various tests have been run to determine which virtual personal assistant is better or faster, *id.*, but such (often all too subjective) tests and test results are far beyond the scope of this Note. Having said that, it is almost too tempting to not look at some of the more interesting questions and problems that are being used to test the sophistication of the various digital assistants, including: “What will be the weather in two days?” *Id.* “Find the limit of  $5x/(1+x^3)$  as  $x$  approaches infinity.” *Id.* “What is the median home value in Macedonia?” *Id.* “What is the diet of a cichlid?” *Id.* “What is the midcareer salary of a Fire Fighter?” *Id.* “How do people get [A]lzheimer’s?” *Id.* “Why are people against cloning?” *Id.* “When is the next Chicago Marathon?” *Id.*

233. *Use Siri on Your iPhone, iPad, or iPod Touch*, APPLE SUPPORT, <https://support.apple.com/en-us/HT204389> (last modified Dec. 8, 2015).

234. *Id.*

235. *Id.*

236. *Id.*

237. *What Can Cortana Help Me with?*, WINDOWS PHONE, <http://www.windowsphone.com/en-us/how-to/wp8/cortana/what-can-cortana-help-me-with> (last visited Jan. 28, 2016).

("[d]id your favorite team win or did they get crushed?"); "find related articles, posts, and updates on the web and have them ready for you when you want them"; "[k]eep on top of news, entertainment, weather, health, and more"; make reminders; "[g]et where you want to go"; keep quiet hours; "fill you in on events near you"; and even chat "about whatever's on your mind."<sup>238</sup>

### 3. Google Now

Google Now is Google's digital assistant that "can give you what you want before you even know you want it."<sup>239</sup> It is an ambitious technology that can do much more than just "set reminders to buy milk or have dinner with friends."<sup>240</sup> Google Now's "real attraction lies in its abilities to preempt your desires and needs."<sup>241</sup> Google Now can run in the background while you go about your business gathering "intel."<sup>242</sup> "The more Google Now learns about you, the more useful it potentially becomes."<sup>243</sup> It can tie together your errands with traffic conditions, making suggestions about when to leave and what route to take.<sup>244</sup>

### 4. Assistant or Advertiser

Consider the difference between the following two queries: (1) "What is the temperature in San Jose, CA?" and (2) "Is there a good bakery nearby?" The first is clearly an intent to discover a fact, while the second seems to be soliciting an opinion. Whether a statement is fact or opinion has been the fodder for much debate and impetus for much judicial wrangling.<sup>245</sup> The result of an "opinion seeking" question to virtual digital

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238. *Id.*

239. Simon Hill, *How to Get the Best out of Google Now*, DIGITAL TRENDS (June 11, 2015), <http://www.digitaltrends.com/mobile/how-to-use-google-now/>.

240. *Id.*

241. *Id.*

242. *Id.*

243. *Id.*

244. *Id.*

245. See, e.g., *Milkovich v. Lorain Journal Co.*, 497 U.S. 1, 8–9 (1990) (finding no need to create an additional separate privilege for "opinion," but that absence of any "loose, figurative, or hyperbolic language" leaves the reader with an impression of fact rather than opinion). *Milkovich* has been cited over 6000 times in cases, trial court orders, administrative decisions, secondary sources, and appellate court documents. Citing References of *Milkovich v. Lorain Journal Co.*, 497 U.S. 1 (1990), WESTLAWNEXT, <https://a.next.westlaw.com/RelatedInformation/Ia53e79609aea11d993e6d35cc61aab4a/kcCitingReferences.html?originationContext=documentTab&transitionType=CitingReferences&c>

assistants raises the question of how much the answers to such questions can be manipulated by the assistant, or rather, by those that pay for the assistant, with their targeted content. Automated advice systems are springing up in many industries, and people are just now deciding how much they can be trusted and how biased or reliable the advice is that is being shared.<sup>246</sup>

Google has argued that the result of a query to its search engine, including the use of its PageRank algorithm, “is an opinion and not a factual statement.”<sup>247</sup> “Google suggested at oral argument that an average viewer of a PageRank [result] would understand it to be a matter of opinion, rather than a statement of fact . . . .”<sup>248</sup> It follows then that Google’s, or any other virtual digital assistant provider’s, “subjectivity” can be manipulated, and, in fact, that is the goal of the entire search engine optimization industry.<sup>249</sup> This subjective manipulation applies to even those questions that are presented as purely fact-seeking questions.

In other words, a virtual digital assistant may not be your own, personal, objective, and thoroughly unbiased assistant looking out for you and protecting you. It may more likely be an advertising agent representing commercial entities that want to target you not only directly and personally but in the intimate, friendly, and pseudo-trustworthy environment of a computer-generated voice in your hand that talks to you like your friend. The *Kinderstart* court found that the search engine responses, in that case, were subjective, but there was some validity to the argument that a search engine response reasonably could be interpreted as a factual statement and that a reasonable person thus might understand a search engine’s response to be an objective fact.<sup>250</sup>

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ontextData=(sc.UserEnteredCitation)&docSource=f4be44b1115442d18a0fc138e05f9b2d&rulebookMode=false (last visited Jan. 28, 2016).

246. Telis Demos, *Investors Snap Up Online Financial Advisers*, WALL ST. J. (Feb. 12, 2015, 12:53 PM), <http://www.wsj.com/articles/investors-snap-up-online-financial-advisers-1423763622>. “Investors are pouring hundreds of millions of dollars into these young companies that provide automated online financial guidance.” *Id.* “[R]oboadvisers have room to expand but may still face growing pains as they seek to change consumer behavior.” *Id.*

247. *Kinderstart.com LLC v. Google, Inc.*, No. C 06-2057 JF (RS), 2006 WL 3246596, at \*13 (N.D. Cal. July 13, 2006). “Google also contends that even if [the result] is entirely generated by an algorithm, the weights assigned to variables in programming the algorithm reflect Google’s subjective opinion about the relative importance of websites such that PageRank cannot be anything *but* subjective.” *Id.*

248. *Id.* at \*13 n.11.

249. See Scott Matteson, *SEO 101: How Search Engine Optimization Really Works*, TECHREPUBLIC (Dec. 18, 2013, 3:39 PM), <http://www.techrepublic.com/blog/google-in-the-enterprise/seo-101-how-search-engine-optimization-really-works/>.

250. 2006 WL 3246596, at \*13.

Voice based responses might even be more trusted to be unbiased and untainted.

Virtual digital assistants that provide customized, targeted, and personalized advice can thus be seen not as factually objective researchers, but as targeting engines reaching out with the “something more” required to support a finding of specific personal jurisdiction.

### B. *Digital Agents*

A mere assistant passively helps, obeys orders, or takes directions, but an agent can be proactive and assertive, being authorized to rationally and deductively act on behalf of the master. As technology enables digital agents and those agents reach out and make contact on behalf of their masters, such conduct may be the “something more” required for a finding of specific personal jurisdiction in a forum state for disputes arising from that conduct.

It is well settled that actually transacting business can be sufficient to support a finding of specific personal jurisdiction.<sup>251</sup> Additionally, personal jurisdiction can also be found when an agent represents the defendant in a business transaction.<sup>252</sup> New and emerging technologies and high-tech interactions raise questions about whether agents, based on these new technologies, could actually make binding decisions or perform actions on behalf of their masters and thus subject the master to

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251. See, e.g., *Edwards v. Radventures, Inc.*, 164 F. Supp. 2d 190, 194 (D. Mass. 2001) (applying the Massachusetts long-arm statute). However, two prongs of purposeful availment must be met: voluntariness and foreseeability. *Id.* at 198 (citing *Ticketmaster-N.Y., Inc. v. Alioto*, 26 F.3d 201, 207 (1st Cir. 1994)). “The voluntariness prong ensures that the defendant’s contacts with the forum state are ‘not based on the unilateral actions of another party or a third person.’” *Id.* (citing *Nowak v. Tak How Invs., Ltd.*, 94 F.3d 708, 716 (1st Cir. 1996)). “The foreseeability prong requires that ‘the defendant’s contacts with the forum state be such that he should reasonably anticipate being haled into court there.’” *Id.* (citing *Nowak*, 94 F.3d at 716). In *Edwards*, there was specific personal jurisdiction where an out-of-state company had voluntarily conducted business with a customer in Massachusetts, and it was on notice that it could reasonably anticipate being haled into court in the Commonwealth. *Id.*

252. See *Lane v. Vacation Charters, Ltd.*, 750 F. Supp. 120, 124 (S.D.N.Y. 1990). “[E]ssential to a finding of jurisdiction under the ‘solicitation plus doctrine’ is evidence of some business activity conducted within the state by an agent or representative of the defendant.” *Id.* One factor is whether the agent has the authority to make final, binding decisions on defendant’s behalf. See *Pellegrino v. Stratton Corp.*, 679 F. Supp. 1164, 1171 (N.D.N.Y. 1988). Another is whether the agent is an employee or independent contractor. *Id.* A third is how many acts are performed by the agent on behalf of the master. See *Diskin v. Starck*, 538 F. Supp. 877, 881 (E.D.N.Y. 1982). A fourth is whether the agent represents itself as the master. *Miller v. Surf Props., Inc.*, 151 N.E.2d 874, 876–77 (N.Y. 1958). A fifth factor is whether the agent has an exclusive relationship with only one master. *Id.* at 877.



personal jurisdiction wherever the agent conducts business. Said another way, can an Internet bot<sup>253</sup> or mechanical robot act as a digital agent and perform actions that bind its owner or operator?

One patent application describes how an actionable predictive service system could be built using an identity service, an information gathering service, a semantic service, and a policy engine “to act” on behalf of its users.<sup>254</sup> The patent application’s written description compares the invention of the active predictive service to Reginald Jeeves, a fictional character in many stories by P. G. Wodehouse.<sup>255</sup> A digital agent based on such a system that then transacts business in cyberspace would seem to satisfy the factors used to establish agency: (1) the digital agent could be authorized to make binding and final purchases using pre-supplied but encrypted credit card or other online payment information; (2) the digital agent could be seen as an employee rather than an independent contractor; (3) the digital agent could perform many actions on behalf of its master; (4) the digital agent could present and represent itself not under its own identity, but using the identity of the end user; and (5) the digital agent could be an instance of software that would have an exclusive relationship with only one master (each user would have her own instance of the software running as her own digital agent and each instance would be uniquely configured for that user).<sup>256</sup>

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253. “An Internet bot . . . is software that performs an automated task over the Internet. More specifically, a bot is an automated application used to perform simple and repetitive tasks that would be time-consuming, mundane or impossible for a human to perform.” *Internet Bot*, TECHOPEDIA, <http://www.techopedia.com/definition/24063/internet-bot> (last visited Jan. 28, 2016). A bot can also be used for productive tasks. *Id.* “A gray area also exists where bots are used by websites to promote shopping deals. In such cases, a bot will . . . index information about products” to actively promote them. *Id.* “Some e-commerce sites take steps to ban shopping bots of this type, while their creators feel that they are simply providing a better service to their own users.” *Id.*

254. U.S. Patent Application No. 20,100,122,312 A1, (filed Nov. 7, 2008), <http://www.google.com/patents/US20100122312>.

255. *Id.* at 2.

[Jeeves] is an almost super-human valet who, having unnatural access to knowledge and an ability to correlate observations with such knowledge, is able to predict and fulfill his employer Bertie Wooster’s every need. For example, whenever Wooster needs tickets to the theater, Jeeves would already have them in his pocket. Whenever Wooster needs reservations, Jeeves would have already made sure that the reservations are in place. Even bets on the race track are flawlessly placed thanks to the knowledge and foresight of Jeeves. However, in combining a correlation of events with the massive amount of Internet content, predictive services in accordance with the disclosed technology can actually outdo Jeeves in real life.

*Id.*

256. See *Lane*, 750 F. Supp. at 124–26 (listing factors for agency).

Another example of emerging technology that might have ramifications on agency-based jurisdiction questions is drone technology, both personal<sup>257</sup> and commercial.<sup>258</sup> Personal drones can be fun and entertaining, but they can potentially cause their owners and operators significant liability.<sup>259</sup> An argument can be made that the personal drone is just a high-tech agent of the owner or operator. Likewise, a company that uses a drone to commercially interact with a specific person could find itself liable for the “conduct” of that drone-agent. While it might yet be a while before commercial delivery drones become commercially viable, or even legal,<sup>260</sup> their current and future use would seem to cause their owners and operators to be fully responsible for their drone-agent’s conduct.<sup>261</sup> If Amazon were to fly a drone to a foreign state to make a

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257. Personal drone users have run into legal issues associated with their drone use. *See, e.g.*, Ben Woods, *How to Use Personal Drones Legally: A Beginner’s Guide*, TNW NEWS (July 4, 2014, 6:01 PM), <http://thenextweb.com/gadgets/2014/07/04/use-personal-drones-legally-beginners-guide/>.

The Federal Aviation Administration (FAA) is in charge of overseeing airspace in the US and the guidance for non-commercial [drone] users. With the increasing realization for the potential of drones, it’s already looking closely at how—and when—[drones] should be permitted for use by businesses (or individuals for commercial activity) . . . .

*Id.*

258. For example, drones are being used for commercial use by Amazon Prime Air. *Amazon Prime Air*, AMAZON, <http://www.amazon.com/b?node=8037720011> (last visited Jan. 6, 2016).

We’re excited about Prime Air—a future delivery system from Amazon designed to safely get packages to customers in 30 minutes or less using small unmanned aerial vehicles . . . . Putting Prime Air into service will take some time, but we will deploy when we have the regulatory support needed to realize our vision.

*Id.*

259. *See, e.g.*, Michael D. Shear & Michael S. Schmidt, *White House Drone Crash Described as a U.S. Worker’s Drunken Lark*, N.Y. TIMES (Jan. 27, 2015), [http://www.nytimes.com/2015/01/28/us/white-house-drone.html?\\_r=0](http://www.nytimes.com/2015/01/28/us/white-house-drone.html?_r=0). A personal drone crashed onto the White House property. *Id.* “Although planes are restricted from entering the airspace around the White House and it is illegal to operate a drone in Washington, it is unclear whether the man will be charged with a crime. Some Secret Service officials believe he should be prosecuted in an effort to deter others.” *Id.*

260. *See* Chris Morris, *Where Can Amazon Legally Fly Its Drones?*, FORTUNE (Feb. 18, 2015, 12:02 PM), <http://fortune.com/2015/02/18/amazon-drones-legal-countries/>. “The Federal Aviation Administration’s proposed drone rules clip the wings of Amazon’s Prime Air delivery service in the United States, but the online retailer could be eyeing other countries for testing to keep momentum going.” *Id.*

261. *See* Vikki Stone, *Unmanned Risk: Rise of the Drones*, RISK & INS. (Mar. 3, 2014), <http://www.riskandinsurance.com/rise-drones/>. Current uses of commercial drones include: “an unmanned aircraft fl[y]ing over a raging forest fire, alerting firefighters to where the blaze is most dangerous”; “hover[ing] over a construction site conducting . . . building inspection[s]”; and “sweep[ing] through a neighborhood taking photographs that showcase the exterior and interior of a home listed for sale” (among many others). *Id.* “The use of

commercial package delivery, there is support for the proposition that it would be purposely availing itself of the protections and benefits of that forum state.<sup>262</sup>

## V. CONCLUSION

While the underpinnings of specific personal jurisdiction remain fixed and unchanging in constitutional bedrock, current and emerging technologies raise interesting questions about the application of those principles. Many Web 2.0 and Web 3.0 cyberspace interactions include targeted, customized, and personalized interactive experiences providing the “something more” that is required for a finding of specific personal jurisdiction.

What was once static and passive is becoming more and more dynamic and interactive. The technical facts that lie beneath the surface of even the most simple, modern day digital interactions should allow plaintiffs to successfully argue that defendants purposefully availed themselves of the commercial advantages of the plaintiffs’ forum state. These seemingly simple contacts can be fully interactive and exchange significant amounts of targeted digital content and information. With voluntary, foresight-inducing, and directed conduct, defendants can no longer hide behind the false protection of generic, passive, and impersonal broadcast advertising and solicitation.

Plaintiffs can use the sliding scale test of interactivity, the intentional effects test of customized digital interactions, and the “something more” test of personalized and targeted conduct to hold defendants liable for their damage-causing conduct. If cyberspace technology permits a defendant to target a plaintiff in ways that satisfy the constitutionally required minimum contacts with the plaintiff’s forum state, that same technology can enable the plaintiff to establish specific personal jurisdiction over the defendant in that forum state. Targeted plaintiffs can return the favor, targeting defendants with the responsibility to account for any harmful misconduct.

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flying robotics in the form of small unmanned aircraft systems (UAS), also known as drones, is not only happening now, its commercial growth is predicted to significantly increase over the next 10 years.” *Id.*

262. The legal arguments for such agency liability relating to specific personal jurisdiction would not be unlike insurance liability arguments which include characteristics such as privacy, trespassing, stalking, harassment, other criminal laws, airspace ownership, personal injury, regulations, ancillary business activities, property and workers’ compensation, bodily injuries, and consent. *Id.*