Technology and the Future of Dispute Systems Design

Orna Rabinovich-Einy* & Ethan Katsh**

INTRODUCTION

The late 1980s witnessed the birth of both the field of dispute systems design (DSD) and of the World Wide Web. The former is largely traceable to the publication in 1988 of Ury, Brett and Goldberg's (UB&G) book, "Getting Disputes Resolved: Designing Systems to Cut the Costs of Conflict."[1] A year later, in a much less public way at the European Organization for Nuclear Research (CERN) in Switzerland, Tim Berners-Lee invented the World Wide Web.[2] The concurrent development of these systems, one in print and the other in software, was a pure coincidence, with each party unaware of the other's existence. During the last twenty years, this separation has largely continued, with mention of the Web almost non-existent in the literature of DSD.[3]

In this article, we argue that this division, while perhaps understandable in the past, is holding back growth of the field of DSD. Pairing remarkable information processing tools with an information intensive activity such as DSD should lead to new opportunities to craft more effective and efficient dispute resolution and prevention systems. Indeed, as information processing technology continues to advance, it may become increasingly difficult to find a dispute resolution system that does not give significant attention to technology, or a technological development that does not include attention to dispute resolution.

The field of DSD emerged during an era in which distributing information widely required a large financial investment. Unlike the present day, obtaining information often required a trip to the place the information was located. It seemed natural at the time that communication over large distances would cost more than communication over short distances. It is true that compared to previous decades, the late 1980s and early 1990s advanced technologically, with cable television bringing households more channels than over the air broadcasting and personal computers finding a place in many homes. Yet until 1992, the relative few who had Internet connections were prohibited by Federal law from buying and selling online.[4] Indeed, the mere idea of the World Wide Web was so challenging to the mindsets of the time that when Berners-Lee, the inventor of the

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1. WILLIAM B. URY ET AL., GETTING DISPUTES RESOLVED: DESIGNING SYSTEMS TO CUT THE COSTS OF CONFLICT (1988).
2. TIM BERNERS-LEE, WEAVING THE WEB (1999).
3. *See infra* notes 47, 62.
4. Jay P. Kesan & Rajiv C. Shah, *Fool Us Once Shame On You — Fool Us Twice Shame On Us: What We Can Learn from the Privatization of the Internet Backbone*

World Wide Web, submitted a paper describing the Web to the ACM Hypertext Conference in 1991, it was only accepted for a poster session rather than for the main conference program.[5]

When it was first conceived, DSD was intended to be an activity conducted within a single organization. The goal was to identify causes and patterns of disputes, and to institutionalize the means by which conflict between the organization's stakeholders would be addressed. These stakeholders would typically communicate with one another on an ongoing basis, frequently in a physical setting. While interest in and understanding of DSD has expanded during the last two decades, the application of digital technology to the process of designing dispute resolution systems has received only marginal attention and has been viewed as relevant primarily for disputes that have arisen online between distant parties and that must be settled online.[6] Even in this narrow domain, the view of the role of technology has been somewhat limited with online dispute resolution (ODR) systems typically being seen as attempts to mimic traditional ADR processes online (introducing changes where necessary) and as tools that add to (but generally do not transform) a third party's existing tool box. While this description certainly captures some of what has taken place in ODR, we believe that the impact of digital technology on DSD over time will run much deeper, as discussed in our analysis of several case studies below.[7]

Those designing dispute systems are missing many opportunities to more effectively prevent and respond to disputes if they do not understand and use information technologies. DSD (as well as dispute resolution more generally) revolves around the communication, processing and management of information. Information technologies, therefore, should be a natural ally for an information intensive process such as DSD. Such processes are, however, both complex and frequently changing. Consequently, digital communication is likely not only to play a supporting role for DSD, but will also have an impact on the manner in which DSD carries out the design task in the future.

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and the Domain Name System, 79 WASH. U. L.Q. 89, 96-97 (2001), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=260834.

5.   Robert Cailliau, Former Chairman and Founding Member of Int'l World Wide Web Comm. (IW3C2), A Short History of the Web, A More Complete Text of a Speech Delivered at the Launching of the European Branch of the W3 Consortium in Paris (Nov. 2, 1995), http://www.netvalley.com/archives/mirrors/robert_cailliau_speech.htm (last visited Nov. 6, 2011).

6.   *See infra* Part I.

7.   *See infra* Part II.

DSD has been an activity that, at its core, involves boundary-setting[8] and digital information technologies are typically "disruptive,"[9] in the sense that they undermine attempts to establish fixed and stable borders. The manner in which new capabilities for communicating and processing information are pressuring professional, physical and conceptual boundaries is at the heart of both the opportunities and the challenges for the field of DSD. This is something that was largely predictable. The impact of a new technology is initially understood through the lens of existing assumptions and conceptions and over time practices as well as assumptions change.[10] How and why this is likely to occur as technology increasingly becomes a part of the design of dispute systems is explored below.

Another important theme concerns the limitations of many of the existing efforts to employ digital technology in dispute resolution. As observers and participants in some notable ODR efforts for over a decade, we have seen how software has been employed in many kinds of disputes to assist practitioners in how they intervene with parties. Indeed, some ODR providers have enjoyed a high level of success, in terms of both number of users and resolution rates. Yet, while these tools provide support in individual cases, the expanded use of ODR is also moving the field of dispute resolution in a new direction that may not be apparent to those narrowly focused on individual disputes. The value of looking at DSD is that it widens the field of vision and the role and impact of technology becomes more apparent. DSD, in other words, is both a field that is ripe for the use of new tools and one that can serve as a lens to identify future patterns of change for ADR and ODR.

In Part I we focus on historical and current perspectives on DSD and identify areas in which information technologies can facilitate

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8.   In their pioneering book, Costantino and Merchant note:
[B]orders, some tangible and some intangible, separate one system from another. In the case of the conflict management system, its internal management boundaries are often clearly defined as the human resource and legal components of any organization. It is in these components that disputes arising from within or outside the organization's overall boundaries are received, processed, and resolved.
Cathy A. Costantino & Christina Sickles Merchant, Designing Conflict Management Systems: A Guide to Creating Productive and Healthy Organizations 24 (1996).

9.   Joseph L. Bower & Clayton M. Christensen, *Disruptive Technologies: Catching the Wave*, Harv. Bus. Rev., Jan.-Feb. 1995, at 43; Clayton M. Christensen, The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail (1997).

10.   *See* Elizabeth Eisenstein, The Printing Press as an Agent of Change (1979).

and enhance the process. In Part II we present an overview of the experience with ODR, a form of dispute resolution in which technology is key but where attention to the principles of DSD has been uneven. We begin with an example of ODR that did consider the larger system and then discuss several examples of ODR that were concerned only with the effectiveness of a discrete tool. We then explore two ODR contexts and their likely impact on how DSD is thought about in the future. The first is the "*Benoam*" (Hebrew for "in a peaceful manner") ODR system that handles fender-bender subrogation claims for property damages between insurance companies in Israel in lieu of the backlogged court system. The second example relates to the design of a new approach to disputes over Freedom of Information Act (FOIA) requests in the United States by the Office of Government Information Services (OGIS).[11] OGIS is a new federal agency assigned to mediate FOIA disputes substituting for what has been, up until now, a very decentralized and adversarial model for requesting documents and resolving disputes. A primary reason we chose to look at these two ODR systems is that they were designed to address offline disputes. While this is not entirely unique, such an approach does represent a shift from the traditional view (both within the literature on DSD and in the ODR context) according to which ODR is primarily applicable to online disputes. While this is an important point, as we shall see, these examples are also instructive in several other significant respects. Finally, in Part III, we offer preliminary reflections on the future of DSD in the age of digital technology and pervasive Internet communication.

I. The Origin and Evolution of Dispute Systems Design (DSD)

As noted earlier, the origin of the field of DSD can be traced to the publication of the UB&G book, "Getting Disputes Resolved: Designing Systems to Cut the Costs of Conflict," in 1988.[12] The authors described how patterns of disputes can be found in closed settings and that by institutionalizing avenues for addressing disputes ex-ante, conflicts could be handled more effectively and satisfactorily than through ex-post measures.[13] From the very beginning, it was clear that the emerging field marked a shift from an individual perspective on ADR to a structural one. While the UB&G research drew on empirical evidence from one particular setting, the authors sought

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11.   Office of Gov't Info. Servs. (OGIS), Nat'l Archives, http://www.archives.gov/ogis (last visited Nov. 6, 2011).

12.   *See* Ury et al*., supra* note 1.

13.   *See id.* at xii-xiii.

to offer a general framework for analyzing the state of disputing and dispute resolution in organizations and for the development of new, more effective dispute resolution and prevention systems.

By studying the incidence of wildcat strikes in the mining industry, UB&G uncovered the importance of both addressing disputes on an organizational level and the choice of dispute resolution process. UB&G found that not all mines suffered from the same intensity of strikes. The mines that were most successful in addressing conflict were those that encouraged interest-based communication between management and miners. Moreover, such communication would take place not only in the aftermath of a major dispute but also proactively on an ongoing basis.[14] This realization gave rise to UB&G's well-known distinction between interest, rights and power-based dispute resolution processes.[15] The typology not only distinguishes between these approaches to conflict but also posits that interest-based processes are superior to all others because they are the least costly, the most satisfactory, and the most likely to preserve relationships and yield long-lasting outcomes.[16]

Based on their findings, UB&G offered their widely accepted framework for the design of conflict management systems consisting of the following elements: (1) focusing on interests, (2) offering low-cost, rights-based and power-based processes when interest-based processes fail, (3) building loop backs from rights-based processes to

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14. *See id.* at 43.

15. *See id.* at 4-10. Interest-based processes are those that seek to uncover and address people's needs and interests; rights-based processes are ones that determine what parties are entitled to under the law or some other rule-based system; and finally, in power-based processes, the focus is not on what parties need (interests) or are entitled to (rights) but on what they can get, because they have the power to force the other side to accommodate their preferences. Power need not be employed through physical force, but can be exerted through old school negotiation tactics (seating the other side on a low chair, opposite the sun, etc.) or through strikes and boycotts.

The power-rights-interests trichotomy presented a fresh prism for analyzing the dispute resolution spectrum. A more common view of the spectrum was a linear one, with negotiation situated on the one end and litigation on the other, and processes such as mediation, med-arb, and arbitration positioned between the two extremes. The spectrum under this latter view is seen as a sliding scale with the level of party control, flexibility and confidentiality decreasing, and the level of formality and costs associated with the process increasing as we proceed from negotiation to litigation (*See* STEPHEN B. GOLDBERG ET AL., DISPUTE RESOLUTION: NEGOTIATION, MEDIATION AND OTHER PROCESSES 4 (2d ed. 1992)). The power-rights-interests paradigm leads to a different structuring of dispute resolution processes, with processes such as negotiation potentially being power, rights or interest-based, while litigation and arbitration constitute rights-based processes.

16. *See* URY ET AL., *supra* note 1, at 10-15.

interest-based ones, (4) preventing disputes by building in consultation before and feedback after, (5) arranging procedures from low (interest-based) to high (rights or power-based) cost and (6) providing the necessary motivation, skills and resources.[17] Finally, UB&G offered a four-stage communications-intensive design process comprised of diagnosis, design, and implementation, followed by exit, evaluation and diffusion.[18] This framework was embraced and extended several years later by Costantino & Merchant (C&M) whose book became the second major building block in the evolution of the DSD field.[19]

The C&M book devoted considerable attention to the systemic aspect of organizational dispute resolution, mainly the recurrence of patterns of disputes. C&M argued that by recognizing such patterns, the dispute resolution system could move beyond the resolution of individual disputes and enhance learning and prevention on a system-wide basis.[20] C&M went on to emphasize the significance of stakeholder involvement in the design process,[21] as well as in the ADR process itself, by highlighting the need for disputants to maintain control over the choice of their own particular ADR process and remain neutral.[22] These issues later became central to the debate surrounding the rise of conflict management systems and the growing privatization of justice it entailed.[23] Perhaps unsurprisingly, these issues have also proven to be areas likely to be transformed by the new capabilities embodied in digital technology.[24]

In the fourteen year period since the publication of the C&M book, the DSD field has gained salience with additional books and many more articles published on the topic and conflict management systems being established in various organizations and institutions.[25] In many respects, DSD has been an activity of setting professional, physical, and conceptual boundaries, all of which are supported by controlling and shaping processes of communication.

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17. *See id.* at 41-64.

18. *See id.* at 65-83.

19. *See generally* COSTANTINO & MERCHANT, *supra* note 8.

20. *See id.* at 96-100.

21. *See id.* at 49.

22. *See id.* at 121.

23. *See infra* notes 42-46 and accompanying text.

24. *See infra* Part III.

25. Lipsky, Seeber, and Fincher's comprehensive book on conflict management systems is a prominent example (LIPSKY ET AL., EMERGING SYSTEMS FOR MANAGING WORKPLACE CONFLICT: LESSONS FROM AMERICAN CORPORATIONS FOR MANAGERS AND DISPUTE RESOLUTION PROFESSIONALS (2003)). The book emerged from an empirical

With regard to changing professional boundaries, a new class of professional dispute systems designers emerged. These professionals were typically trained in ADR or in organizational development and offered a new type of expertise in conducting organizational dispute analysis, design, and evaluation. While the literature of the time advocated the involvement of stakeholders in the design process, the leadership and active involvement of an expert designer was also generally seen as imperative. Alongside the professional designers, internal dispute handlers, such as ombudsmen, became more and more prevalent, as professional dispute resolvers were needed to run these newly established systems.

A different type of boundary created through DSD was the physical separation between the dispute resolution system and the other parts of the organization. This separation arose from the need to create a secure space for employees to voice their concerns and complaints. Since the dispute system was part of the organization, the system had to be designed to secure confidentiality for those who rely on its services and to ensure the independence and impartiality of the dispute resolvers, who are often both employees of the organization and neutrals addressing disputes that relate to the organization.[26] Consequently, very little information about dispute resolution is documented or preserved, and data on the work of internal dispute resolution systems is rarely shared with outsiders.[27]

Finally, conceptual boundaries relating to dispute resolution typologies and the understanding of process characteristics also form an integral part of DSD. The establishment of such distinctions was

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study of Fortune 1000 companies' corporate conflict strategies conducted by the authors. The study analyzed, among other things, the proliferation of internal dispute resolution systems, the sources of such growth and future developments. *Id.*; *See also* Frank J. Barrett & David L. Cooperrider, *Generative Metaphor Intervention: A New Approach for Working with Systems Divided by Conflict and Caught in Defensive Perception,* 26 J. APPLIED BEHAV. SCI. 219 (1990); Lisa B. Bingham, *Self-Determination in Dispute System Design and Employment Arbitration*, 56 U. MIAMI L. REV. 873 (2002); John P. Conbere, *Theory Building for Conflict Management System Design*, 19 CONFLICT RES. Q. 215 (2001); Cathy A. Costantino, *Using Interest-Based Techniques To Design Conflict Management Systems*, 12 NEGOT. J. 207 (1996); Deborah M. Kolb & Susan S. Silbey, *Enhancing the Capacity of Organizations To Deal with Disputes*, 6 NEGOT. J. 297 (1990); Mary P. Rowe, *The Ombudsman's Role in a Dispute Resolution System*, 7 NEGOT. J. 353 (1991); Karl A. Slaikeu, *Designing Dispute Resolution Systems in the Health Care Industry*, 5 NEGOT. J. 395 (1989).

26.   *See* Howard Gadlin & Elizabeth Walsh Pino, *Neutrality: A Guide for the Organizational Ombudsperson*, 13 NEGOT. J. 17, 17 (1997); Mary P. Rowe, *The Corporate Ombudsman: An Overview and Analysis*, 3 NEGOT. J. 127, 128-29 (1987).

27.   *See* Howard Gadlin, *The Ombudsman: What's in a Name?*, 16 NEGOT. J. 37, 41 (2000).

necessary first and foremost to distinguish internal conflict management systems from the formal law and the litigation process in order to justify their establishment. To that end, UB&G offered a framework demonstrating the advantages of internal systems and the significance of deliberate, ex ante design. While the dispute resolution literature viewed the freedom to tailor one's own dispute resolution process as a principal advantage of ADR over formal avenues, the reality has been one in which dispute systems designers have often opted for one or more tried and true processes, including mediation, arbitration, counseling. Clear lines were drawn between interest and rights-based processes and within each category, and these processes tended to have set, predetermined characteristics.[28]

Over the years, the concept of DSD has expanded its landscape beyond its original workplace setting. One example of this trend is Khalil Shariff's approach towards conflict management and institutional design.[29] Rather than focus on the creation of mechanisms for addressing individual conflict, he studied the ways in which different institutional structures could impact the emergence of conflict and problem solving capabilities in the organizational setting.[30]

Shariff's work is therefore quite innovative in its understanding of the ways in which the physical boundaries between a dispute resolution system and other parts of the organization in which it is located can shift. As we discuss below, this is one of the principal respects in which we see technology impacting DSD. However, Shariff's article, like the earlier UB&G and C&M books, did not discuss digital technology in this context, even though the notion of DSD

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28. *But see generally* Nancy Welsh, *You've Got Your Mother's Laugh: What Bankruptcy Mediation Can Learn from the Her/History of Divorce and Child Custody Mediation,* 17 AM. BANKR. INST. L. REV. 427, 432-41 (2009) (describing the wide range of practices that fall under the definition of mediation, which may blur, to some extent, the distinction between mediation and other processes). At the same time, as is apparent from Welsh's writing, most mediations that take place in court settings (which account for a large portion of face-to-face mediations in the U.S.), tend to conform to a particular mold (*see* Leonard L. Riskin & Nancy A. Welsh, *Is That All There Is? The "Problem" In Court-Oriented Mediation*, 15 GEO. MASON. L. REV. 863, 864 (2008)).

29. Thus, the first principle within his framework for institutional design is striving for inclusiveness of stakeholders, not only in the design of dispute resolution systems as the DSD literature has called for, but more generally in the institutions' work. Other principles relate to the scope of issues the institution covers or deals with and the depth at which they are handled, the manner in which information is gathered and administered, the nature of decision-making and the need for flexibility and learning in the institution. *See* Khalil Z. Shariff, *Designing Institutions to Manage Conflict: Principles for the Problem Solving Organization*, 8 HARV. NEGOT. L. REV. 133, 143-57 (2003).

30. *See id.* at 143-46.

principles being embedded in the structure of the organization would seem to go hand in hand with the recognition of the role that digital technology could play in DSD (and in dispute resolution more generally). It seems difficult to think of an organization in the twenty-first century whose work and structure are not affected by the use of digital technology and the processing of information. Precisely because digital technology has become our preeminent mode of communication, we expect it to play a substantial role in the dispute resolution arena, which revolves around communication through the organization and transfer of information.

Another, perhaps more obvious demonstration of the expansion of DSD lies in its application to additional areas, such as courts,[31] compensation facilities and funds,[32] constitution-drafting,[33] and the international sphere.[34] The principal insight behind this expansion was that these were all contexts in which information needed to be exchanged between parties as part of a decision-making process. It was acknowledged that DSD principles are not inseparably joined to processes revolving around a dispute or taking place between individuals, in informal, local settings. Instead, some ideas about structuring dialogue in the context of individual disputes in organizational settings could, it was thought, shed light on the design of processes for facilitating information exchange and information processing between different types of stakeholders in other arenas.[35] This expansion, then, planted the seeds for another shift in boundaries in the conceptual realm, dimming the distinction between formal and informal dispute resolution,[36] and between dispute resolution and norm

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31.   *See* Carrie Menkel-Meadow, *Are There Systemic Ethics Issues in Dispute System Design? And What We Should [Not] Do About It: Lessons from International and Domestic Fronts*, 14 HARV. NEGOT. L. REV. 195, 201 (2009); Orna Rabinovich-Einy, *Beyond Efficiency: The Transformation of Courts Through Technology,* 12 UCLA J.L. & TECH. 1 (2008).

32.   *See* Robert M. Ackerman, *The September 11th Victim Compensation Fund: An Effective Administrative Response to National Tragedy*, 10 HARV. NEGOT. L. REV. 135 (2005); Ehud Eiran, *Politics and the 2005 Gaza and North West Bank Compensation and Assistance Facility*, 14 HARV. NEGOT. L. REV. 101 (2009).

33.   *See* Menkel-Meadow, *supra* note 31, at 219.

34.   *See* Andrea K. Schneider, *The Intersection of Dispute Systems Design and Transitional Justice*, 14 HARV. NEGOT. L. REV. 289 (2009).

35.   This "leap" has also been critiqued. *See* Amy J. Cohen, *Dispute Systems Design, Neoliberalism, and the Problem of Scale*, 14 HARV. NEGOT. L. REV. 51, 69 (2009) (critiquing the fictitious idea of "equivalence across scale" engendered by a neoliberal ideology which has served as a backdrop to the rise of ADR and DSD).

36.   That is, with the application of DSD principles to courts, the distinction between formal and informal dispute resolution has dimmed. *See* Menkel-Meadow, *supra* note 31.

generation.[37] DSD was still, however, conceived of as an expert activity, involving discrete stages of analysis, design, implementation and evaluation. Moreover, the conceptualization of the various process types and the preference for interest-based dispute resolution also persevered.[38]

As part of the growth of the field, the UB&G and C&M models have been revisited in an attempt to address "second generation" DSD issues.[39] The practice of DSD and the literature advocating the expansion of such systems has exemplified the growing trend towards privatization of justice. In addition, critical research on DSD has also explored design choices and their impact on different parties, dispute outcomes as well as the different settings in which the dispute resolution systems operate.[40] Carrie Menkel-Meadow's analysis of ethical issues relating to DSD[41] and Lisa Bingham's work on the significance of control over DSD[42] are prominent examples of such writing.

Indeed, the significance of power and control over the design process has become a major area of concern both for those critiquing the growth of DSD conflict management systems[43] and those who view such systems as an important avenue for voicing complaints and concerns.[44] While early works in the field emphasized the need for involving stakeholders in the design, more recent works have sought to

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37. With the application of DSD principles in consensus-building processes, the DSD principles were often being used to generate new norms and shared understandings as opposed to addressing a concrete conflict in accordance with preexisting norms. *See* Carrie Menkel-Meadow, *Peace and Justice: Notes on the Evolution and Purposes of Legal Processes: Inaugural Lecture of the A.B. Chettle, Jr. Chair in Dispute Resolution and Civil Procedure*, 94 GEO. L.J. 553, 572-76 (2006).

38. This is evident from the various articles in a recent Harvard Negotiation Law Review volume dedicated to DSD, which still draw on the UB&G and C&M frameworks. *See generally* 14 HARV. NEGOT. L. REV. 1 (2009).

39. *See* Cathy A. Costantino, *Second Generation Organizational Conflict Management Systems Design: A Practitioner's Perspective on Emerging Issues*, 14 HARV. NEGOT. L. REV. 81 (2009); Francis E. McGovern, *Second-Generation Dispute System Design Issues in Managing Settlements*, 24 OHIO ST. J. ON DISP. RESOL. 53 (2008).

40. *See* Cohen, *supra* note 35, at 75-77 (suggesting that the scope of questions that designers ask when designing dispute resolution systems needs to be expanded and that an inductive case analysis of existing dispute systems designs would promote equitable resolution where inequalities exist between the parties).

41. *See* Menkel-Meadow, *supra* note 31.

42. *See* Lisa B. Bingham *et al.*, *Dispute System Design and Justice in Employment Dispute Resolution: Mediation at the Workplace*, 14 HARV. NEGOT. L. REV. 1 (2009); Lisa B. Bingham, *Control Over Dispute-System Design and Mandatory Commercial Arbitration*, 67 LAW & CONTEMP. PROBS. 221 (2004).

43. *See generally* Lauren B. Edelman et al., *Internal Dispute Resolution: The Transformation of Civil Rights in the Workplace*, 27 LAW & SOC'Y REV. 497 (1993).

44. *See* Rowe, *supra* note 26, at 129-30; Gadlin, *supra* note 27, at 43.

deconstruct the nature of control over DSD and the conditions under which such control produces unfair processes. Lisa Bingham in her work in this area differentiates between control over DSD (one party design/mutual design by all parties/third party design) and control over process (for example, mediation that leaves decision-making authority with the parties versus arbitration that leaves parties with very little control over decision making once they agree to take part in the process).[45] Bingham draws further distinctions between different models of process types, such as transformative and evaluative mediation, underscoring the need for further refinement of the interests-rights-power paradigm.

As we demonstrate below, while this is an important development, we believe that the introduction of digital technology will generate a more radical shift under which DSD will be transformed from a boundary-setting activity to one in which boundaries are constantly being challenged and become more diffuse and flexible. This concept is well illustrated by technology's breakdown of traditional distinctions that have long existed within ADR between interest- and rights-based processes, as well as the blurring of boundaries within process types by generating new types of processes and variations within each familiar category of processes.[46]

Despite the impressive growth of DSD, the literature in the field has devoted only sporadic attention to new technologies.[47] What little literature exists has typically been viewed as part of the ODR field and has often overlooked the insights provided in the DSD literature. Against this backdrop, Robert Bordone's 1999 endeavor to draw a connection between ODR and DSD is all the more impressive.[48]

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45. Bingham and her co-authors find that where a single powerful disputant controls the design, they typically choose a design scheme that also leaves very little control to the other party on the process level (mandatory arbitration). *See* Bingham et al., *supra* note 42, at 5.

46. *See, e.g.*, *infra* Part II.A.1 SquareTrade's development of an automated negotiation process, which is a hybrid of negotiation and mediation with technology, fulfills some of the roles traditionally occupied by third party mediators, but also transforms the traditional approach towards confidentiality in mediation.

47. Notable exceptions are the Bordone article discussed below and the LIPSKY ET AL. book, which refers to the emergence of ODR. The authors view ODR as a new frontier for workplace conflict systems (*see* Lipsky et al*., supra* note 25, at 329-31). The following are some additional exceptions where ODR is mentioned: Bingham et al., *supra* note 42, at 14, 17; Menkel-Meadow, *supra* note 31, at 208; Stephanie Smith & Janet Martinez, *An Analytic Framework for Dispute Systems Design*, 14 HARV. NEGOT. L. REV. 123, 145, 150, 154-56 (2009); Eiran, *supra* note 32, at 121. More commonly, however, the DSD literature ignores technology.

48. *See* Robert C. Bordone, *Electronic Online Dispute Resolution: A Systems Approach—Potential, Problems, and a Proposal*, 3 HARV. NEGOT. L. REV. 175 (1998).

Bordone's article presented a call to the ADR community to effectively address online disputes, based on the view that these disputes require a unique arrangement, not the one used offline. Despite the fact that the piece was written before the principal ODR systems we know today had emerged, Bordone was able to recognize some of the issues that have remained significant for the design of ODR systems: insufficient awareness of ODR options,[49] the lack of incentives for participation by disputants,[50] and the challenges to the enforcement of resolutions and decisions reached through ODR.

Therefore, as mentioned above, thus far technology in DSD has not been a major driving force for change in the field. The expansion in applications of DSD (as well as the growth of ODR), together with the growing awareness that DSD involves choice on many different levels and issues, has laid the foundation for a new understanding of the role of technology in DSD. At the same time, the DSD field has remained very clearly within the confines of the traditional DSD paradigm. C&M noted:

> Typically, organizational leaders do not view the management of conflict as systematically as they do information, human resource and financial management systems. Rather, conflict in organizations is viewed and managed in a piecemeal, ad hoc fashion, as isolated events, which are sometimes grouped by category if the risk exposure is great enough but that are rarely examined in the aggregate to reveal patterns and systemic issues.[51]

We argue that DSD is not and cannot be separated from information management practices. The use of data management tools reveals information that in turn impacts various processes within the institution in addition to influencing dispute prevention and resolution processes. In the next section, we describe some of the developments that have taken place in ODR, the field that ties together DSD and technology. The shift that has taken place over the last decade in the understanding of what ODR is – from "offering online equivalents of traditional ADR processes for the resolution of online disputes" to "the use of digital technology in dispute transformation, resolution

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49.   *See id.* at 196-97.

50.   *See id.* at 198.

51.   CONSTANTINO & MERCHANT, *supra* note 8, at xiii. In the years that followed, the literature on organizational dispute resolution has advanced a positive view of conflict as an inevitable, even necessary, consequence of organizational operations, which could have productive consequences. This represented a shift from the traditional negative view of conflict.

and prevention" – has laid the foundation for a new understanding of the impact of digital technology on DSD more generally.

II.   ONLINE DISPUTE RESOLUTION (ODR) AND DISPUTE SYSTEMS DESIGN

The Web's first contacts with the world of dispute resolution occurred in the early 1990s. In hindsight, it was inevitable that the two worlds would intersect. Disputes are likely to occur in any environment in which there are large numbers of interactions and relationships. They are even more likely to occur when the transactions revolve around something valuable or potentially valuable. What has come to be called "online dispute resolution" was a response, at least initially, to problems occurring in the very active and quite novel environment of cyberspace, where a dispute resolution process that took place over a network seemed both necessary and appropriate.[52]

The pioneers of the Internet had focused on creating new capabilities for communicating; they did not focus on possible long-term social consequences. Online dispute resolution (ODR) emerged, not to displace or challenge an existing legal regime, but to fill a vacuum where the law's authority was absent or inadequate. It began, rather simply, as a response to growing numbers of disputes arising out of online activities. In 1994, David Johnson wrote:

> As more people spend more time (and money) communicating over the global electronic networks, they will, inevitably, fight. Some of these disputes will concern subject matters unique to the new electronic terrain . . . The meta–question posed by all these novel types of disputes will be an interesting one: should the networks themselves evolve new and better ways to resolve the disputes that arise in connection with their use?[53]

In 1994, e-commerce was in its beginning phase. No one had heard of eBay, Amazon, or Google yet. The Internet Corporation for Assigned Names and Numbers (ICANN), the entity that manages the domain name system, did not exist and few corporations were aware that domain names might have value. The first case of spam occurred in April, 1994 and the Federal Trade Commission brought its first Internet fraud case in 1994. In general, the range of online activity in 1994 was limited and the range of disputes as well.

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52.   ETHAN KATSH & JANET RIFKIN, ONLINE DISPUTE RESOLUTION: RESOLVING CONFLICTS IN CYBERSPACE 47 (2001).

53.   David R. Johnson, *Dispute Resolution in Cyberspace* (Feb. 10, 1994), http://w2.eff.org/legal/online_dispute_resolution_johnson.article.txt (last visited Nov. 6, 2011).

By 1996, the landscape of disputes on the Internet had changed and many of the problems we are still grappling with today had begun to be of concern. In response, the National Center for Automated Information Research (NCAIR) organized the first conference on online dispute resolution and provided funding for three ODR experiments.[54] The Virtual Magistrate project aimed at resolving disputes between Internet Service Providers and users.[55] The University of Massachusetts Online Ombuds Office hoped to facilitate dispute resolution on the Internet generally.[56] Finally, the University of Maryland proposed to see if ODR could be employed in family disputes where parents were separated by distance.[57] During the last ten years, ODR has gradually become accepted as part of the ADR field.[58] As ODR has grown and matured, it has been employed in disputes arising in both offline and online settings. For a field, such as ADR, that has always emphasized the value of resolving problems face to face, acceptance of the idea of using technological tools to work with parties at a distance has been a challenge.[59] Even the adoption of tools to supplement traditional processes has occurred only little by little. Increasingly, however, practitioners have come to understand that software applications can enhance their skills and provide new opportunities and processes for effective and efficient intervention.[60]

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54.   Henry H. Perritt, Jr., Dir., Chicago-Kent Program in Fin. Servs. Law, Conference Presentation at Nat'l Ctr. for Automated Info. Research (NCAIR) Conference in Washington, DC (May 22, 1996), http://www.mediate.com/articles/perritt.cfm (last visited Nov. 27, 2011).

55.   Robert Gellman, *A Brief History of the Virtual Magistrate Project: The Early Months* (1996), http://www.ombuds.org/ncair/gellman.htm; KATSH & RIFKIN, *supra* note 52, at 54-57; COLIN RULE, ONLINE DISPUTE RESOLUTION FOR BUSINESS 27-28 (2002).

56.   Ethan Katsh, *The Online Ombuds Office: Adapting Dispute Resolution To Cyberspace* (1996), http://www.umass.edu/dispute/ncair/katsh.htm (last visited Nov. 27, 2011).

57.   KATSH & RIFKIN, *supra* note 52, at 55-56.

58.   Some textbooks on ADR now devote a section to the topic. *See, e.g.*, CARRIE MENKEL-MEADOW ET AL., DISPUTE RESOLUTION: BEYOND THE ADVERSARIAL MODE 628-33 (2004).

59.   Indeed, the ODR literature has devoted a fair portion of attention to this question. *See generally, e.g.*, RULE, *supra* note 55, at 83-84; Louise Ellen Teitz, *Providing Legal Services for the Middle Class in Cyberspace: The Promise and Challenge of On-line Dispute Resolution*, 70 FORDHAM L. REV. 985 (2001); Joseph Goodman, *The Pros and Cons of Online Dispute Resolution*, 2003 DUKE L. & TECH. REV. 4; David A. Larson, *Online Dispute Resolution: Do You Know Where Your Children Are?*, 19 NEGOT. J. 199 (2003); Melissa Conley Tyler & Susan Summer Raines, *The Human Face of Online Dispute Resolution*, 23 CONFLICT RESOL. Q. 333 (2005).

60.   *See, e.g.*, Melissa Conley Tyler, *Online Dispute Resolution*, *in* ENCYCLOPEDIA OF DIGITAL GOVERNMENT, 1268-74 (Matti Malkia & Ari-Veikko Anttiroiko eds., 2007), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=934947. This is also

Changing habits and integrating new tools into the traditional processes are both areas of change facing the field of dispute resolution. ODR, however, is not only a change agent that provides new tools that might substitute for or enhance traditional processes; it also generates questions that might not have been asked before. In addition to the question, for example, of whether there is "a better way," the question arises as to whether there is "a different way."

Technology changes not only what we can do, but also, over time, how we decide what to do and what needs to be done. It gives us not only new tools but also new ideas about the use of these tools, some of which are likely to conflict with accepted practices. New technologies change what it is possible to do and, in the process, raise a range of questions about the value and need for doing either what was difficult before or not possible at all. By opening new capabilities, new technologies can lead to a reassessment of goals, priorities, assumptions and expectations. As noted earlier, technology is often characterized as "disruptive," in that while it brings efficiencies, it may require a rethinking and rejecting of accepted practice at the same time that it brings new ways and new ideas about how to achieve goals.[61]

DSD, even in fairly recent writing, has devoted very little attention to the role, value, and impact of technology.[62] Thus, in those instances when practitioners have found some software application to be useful, they have rarely found it embedded in the dispute resolution system designed for their organization. This is unfortunate but not surprising. Attention to the larger system in which some activity occurs is likely to happen only after the activity proves itself to be of some value. "Getting Disputes Resolved" was a response to an ADR movement that had been growing for more than a decade. By the time

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evidenced in the growing attention to ODR as a tool for training students in ADR. *See* 25 OHIO ST. J. ON DISP. RESOL. (2010), which is devoted to the topic.

61.   *See* ETHAN KATSH, THE ELECTRONIC MEDIA AND THE TRANSFORMATION OF LAW 3-5 (1989); RICHARD SUSSKIND, THE END OF LAWYERS 93-100 (2008).

62.   The two leading books on the topic make no mention of technology (*see* URY ET AL., *supra* note 1; COSTANTINO & MERCHANT, *supra* note 8). In addition, the recent symposium at Harvard Law School devoted to second-generation issues in DSD, did not refer to the topic. S*ee* Symposium, *Dispute System Design*, HARV. NEGOT. & MEDIATION CLINICAL PROGRAM BLOG (Mar. 7-8, 2008), http://blogs.law.harvard.edu/hnmcp/ (last visited June 23, 2010). Most surprising perhaps is the recent volume of the Ohio State Journal on Dispute Resolution devoted to the topic of "Teaching and Technology: Teaching ADR and the Future of Dispute System Design," which contains no real discussion of the impact of technology on DSD but focuses on the role of technology in teaching ADR.

the book was published, there had been increasingly widespread experience with ADR and perhaps the most influential book about ADR, "Getting to Yes," had been published seven years earlier. "Getting Disputes Resolved" not only had a title that began with the same word (and was written by one of the same authors), but was a work that extended and built upon the earlier book's emphasis on an interest-based approach to negotiation and mediation.

DSD, in other words, emerged as an attempt to understand how ADR might be used most effectively in an organization and to provide a coherent framework for its use. The focus of DSD on how different ADR models might best be employed in different contexts was an appropriate and even predictable development for a field that had already been accepted, was expanding in use, and was looking toward the future.[63] We are, to some extent, at a similar point in the history of ODR, a time when its value in individual cases has been confirmed and when it is appropriate, therefore, to consider its impact, uses, and the potential applicability it has in the design of other systems.

While those interested in DSD have mostly ignored ODR, it is also true that those involved in ODR have given relatively little thought to the differences between systems and tools or to the value of thinking about the systems in which the tools are being used. In general, and as might be expected at an early stage of technological use, the concern of those interested in or using ODR has been very practical and aimed at identifying and experimenting with any and all software that could be used fruitfully at some stage in a mediation process. ODR today may be used in a narrower range of disputes than ADR was in 1988, but it is likely to be employed in larger numbers of disputes.[64] ODR is providing increasing numbers of useful tools and the more they are employed on- and offline,[65] the greater the need to understand how they might be of value in different contexts.

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63. *See* Amy J. Cohen, *Dispute Systems Design, Neoliberalism, and the Problem of Scale*, 14 HARV. NEGOT. L. REV. 51, 52 (2009) (describing DSD as "a new field of theory and practice to address conflicts that extend beyond bounded individual disputes").

64. *See infra* note 83 and accompanying text.

65. *See* Melissa Conley Tyler, *115 and Counting: The State of ODR in 2004*, http://www.mediate.com/odrresources/docs/ODR%202004.doc (last visited Oct. 17, 2011); Orna Rabinovich-Einy, *Reflecting on ODR: The Israeli Example*, http://ceur-ws.org/Vol-430/Paper3.pdf (last visited Nov. 6, 2011).

The future of ODR is assumed by many to lie in an expanding array of tools that will open up new options for third parties.[66] Perceived in this way, ODR is not in itself a distinct field, but more of a support system for mediators and arbitrators addressing individual disputes. As mediators have become more comfortable generally in the use of technology, they have increasingly been looking for software applications that could perform discrete functions and could be plugged into their practice in some way.[67] From such a perspective, the future of ODR would seem to lie in an ongoing evolution of more and more powerful software that could be employed in more and more complicated contexts. In this view at least, technology is a force that is moving the field in the same direction it has been moving, rather than generating a change in direction or a change in conceptualization.

The Web, in its "disruptive" guise, is an innovative force, not only accelerating change but accelerating changes in direction, moving information in new ways, new patterns, and among groups who might not have communicated before at all. It is in the nature of an emerging communications network to involve new participants and stakeholders and to generate links and connections among users that could not have been made before. Accordingly, the view that we suggest in this article considers technology as more than a new tool; we see technology as a force that will deeply touch the field of dispute resolution, both on- and offline.

The following discussion of several key examples of ODR is meant to illustrate how and why this is likely to occur and how software can be both a tool and a system. These examples are well known in the literature of ODR, but are generally examined only through the lens of tools. Our purpose is to broaden the discussion and examine what they reveal about the use and impact of technology at the system level and what implications these case studies may have for the future of DSD.

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66. *See* KATSH & RIFKIN, *supra* note 52, at 90-116; David Larson, *Technology Mediated Dispute Resolution*, 38 U. TOL. L. REV. 213, 215-17 (2006); Arno R. Lodder & John Zeleznikow*, Developing an Online Dispute Resolution Environment: Dialogue Tools and Negotiation Support Systems in a Three-Step Model*, 10 HARV. NEGOT. L. REV. 287, 298-303 (2005).

67. For example, the use of software for an online brainstorming process, *see generally* Ethan Katsh & Leah Wing, *Ten Years of Online Dispute Resolution (ODR): Looking at the Past and Constructing the Future*, 38 U. TOL. L. REV. 19 (2006); *see also* Debategraph's visualization tools used for exploring various aspects of a problem and potential solutions, http://debategraph.org (last visited Nov. 6, 2011).

A.   *The First Decade of ODR: Some Illustrative Examples*

   1.   *eBay*

eBay is the most cited example of successful and very high-volume ODR. It is also an example of innovative use of technology in addressing disputes from a systems perspective with purposeful design that has challenged the boundaries of both existing ADR concepts and practices and ODR's tool-focused approach. eBay's use of ODR began in March 1999 when the Center for Information Technology and Dispute Resolution (now the National Center for Technology and Dispute Resolution)[68] was asked to conduct a pilot project to see if it were feasible to mediate disputes between eBay buyers and sellers. The approach decided upon was to use the traditional ADR model of a trained human mediator communicating with the parties. In this situation, instead of communicating face to face, email was used. The pilot project handled two hundred disputes in a two week period, by far the largest number of disputes mediated online up to that date, and was successful in that it demonstrated that agreements satisfactory to both sellers and buyers could be achieved online.[69]

eBay decided to continue to offer mediation to its buyers and sellers and turned over dispute resolution to an Internet start-up, SquareTrade. SquareTrade's challenge was two-fold. It needed an ODR process that could handle large numbers of cases, which email and a human mediator alone could not satisfy. In addition, because it was a private company, it needed a sustainable business model. eBay disputes predominantly involved small sums of money that could not be expected to generate sufficient revenue to compensate mediators and still generate a profit.

The solution to the twin goals of scale and revenue was to place dispute resolution within a larger system, which held open the possibility of an appeal to a human mediator but that had a required first step of a software-driven process that could lead to settlement without any human third-party intervention. The solution to the revenue issue was to offer eBay sellers a seal or trustmark to include on the screen when their product was being offered for sale. The seal, sold for a small fee, was meant to build trust in an environment where buyers did not know sellers, where there were no real brand names,

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68. *About*, Nat'l Ctr. for Tech. and Dispute Resol. (NCTDR), http://www.odr.info/about (last visited Nov. 17, 2011).

69. *See* Ethan Katsh, et al., *E-Commerce, E-Disputes and E-Resolution: In the Shadow of 'eBay Law'*, 15 Ohio St. J. on Disp. Resol. 705, 708 (2000) (describing and analyzing the eBay pilot).
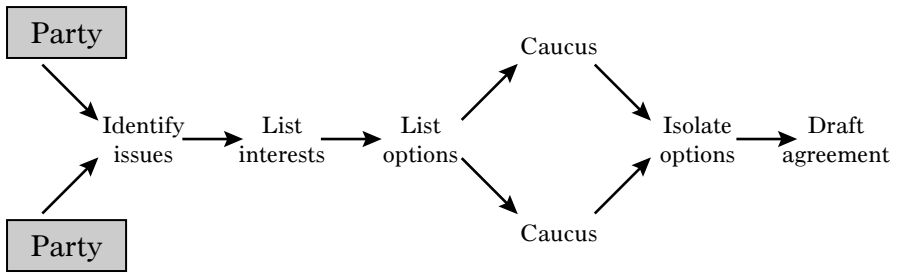
and where fear of fraud was significant. The SquareTrade seal guaranteed that the seller actually existed and, most relevant for this discussion, that the seller promised to engage in dispute resolution should the buyer have a problem with the item.[70] From the beginning, therefore, SquareTrade had a dispute resolution tool but understood that it was intimately connected to a larger process of trust building as well as revenue generation. It also understood that technology had thrust it into a larger environment, one in which the stakeholders were numerous and expectations about speed of resolution were very high.

SquareTrade built its ODR process by identifying components of the traditional mediation process and building them into software, essentially reengineering the entire process. What made this feasible was that mediation, and indeed all dispute resolution processes, rely on the communication, management and processing of information. When mediators "work with the parties" they do so by managing the flow of information. Various stages of a mediation process (for example caucusing, brainstorming, option generating, and drafting) are communications processes that the mediator encourages and structures (see Figure 1 for an information management process between disputing parties). Mediators may, of course, differ in exactly how they manage the use and flow of information. Some may simply want an agreement and an exchange of promises about future actions that are acceptable to both parties. Other mediators may seek an agreement that goes deeper and transforms a relationship.[71] What all traditional mediators have available to them, however, when meeting face to face are the multiplicity of communication channels. Their skill resides in when and how to use those channels.

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70.   *See* Orna Rabinovich-Einy, *Technology's Impact: The Quest for a New Paradigm for Accountability in Mediation*, 11 HARV. NEGOT. L. REV. 253, 259 (2006) (describing the SquareTrade seal program and its ties to the dispute resolution services); KATSH & RIFKIN, *supra* note 52, at 66.

71.   For a description of the various mediation skills and the different goals they advance, *see* MENKEL-MEADOW ET AL., *supra* note 58, at 302-18; *see generally* Leonard L. Riskin, *Decisionmaking in Mediation: The New Old Grid and the New New Grid System*, 79 NOTRE DAME L. REV. 1 (2003).

FIGURE 1: DISPUTANTS' INFORMATION MANAGEMENT PROCESS

SquareTrade understood that mediation revolves around communication and information processing, and also realized that it could not duplicate the richness or flexibility of a face-to-face exchange. It was confronting an environment in which some subtleties of interaction could not be guaranteed and in which the likelihood of very large numbers of disputes was high. At the same time, it also knew that software can be programmed to ask questions in a structured way and then provide other questions based on the answers given. In addition, compared to a negotiation via email (or face to face) where there is little or no structure in exchanges, other forms of web-based communication could be shaped in ways that would move or guide a dialogue in a certain direction.

The UMass project mentioned above tried to mimic the face-to-face process by using email, and had managed to do so with some success.[72] Yet that process was found to be not only very labor intensive, but also one that relied on a specific software application, email, which was not particularly helpful to a mediator who wanted to carefully manage the flow of information. Even if labor intensiveness had not been a problem, SquareTrade realized that it was in an environment which called not only for a better way, but for a different way as well.[73]

SquareTrade's goal was not to make available a machine version of a human mediator, but rather to design something that revolved around an exchange of information about positions and interests, and

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72. *See* Katsh et al., *supra* note 69, at 708-12.

73. The SquareTrade process was structured as a two-stage dispute resolution tool. In the initial phase disputants were referred to an automated negotiation tool that revolved around identifying the precise problem and matching a solution acceptable to both parties. The vast majority of disputes were successfully resolved at this stage, but those that were not could proceed to a mediation session facilitated by an in-person mediator who communicated with the parties online for a nominal fee. *See* Rabinovich-Einy, *supra* note 70, at 258-59.

that resembled mediation in that the outcome would be consensus-based, even if the exact route taken to reach the final agreement was not the same. It knew that there could not be a human mediator present to shape the communication in most cases, but it also wanted the resolution to result from an online negotiation and be one that the parties felt was fair and unbiased.[74] While software could not duplicate the skill of a human mediator interacting with the parties, software could provide some structure to the communication and to the flow of information between the parties. Indeed, the very definition of software is something that manages the flow of information and the work of a programmer is to specify how this will occur and how it will appear on the screen. The software SquareTrade developed that would eventually handle millions of disputes appropriated many elements of traditional mediation. For example, SquareTrade and its software had to be viewed as being fair and not likely to induce settlements favoring either buyer or seller. It had to be trusted not only as being impartial but also as being effective in terms of cost, time to settlement, and enforcement. Lastly, it needed to lead to settlements that were acceptable to both sides.

In the traditional mediation context, the mediator tries to elicit particular interests of the parties and ideas about preferred and acceptable outcomes via exchanges with the parties, together or separately. SquareTrade's software strategy was to discover preferences of parties by presenting the parties with forms and choices they could select from.[75] In the context of buyer-seller disputes on eBay, this was possible because the problems likely to arise with an eBay transaction (e.g., the item broke, was delivered late, etc.) are both predictable and limited in scope and, therefore, can usually be identified ahead of time. More importantly, SquareTrade acquired data from each case as to which choices were being made and how information on the screen was being understood and used, providing the basis for ongoing changes and refinements.[76]

SquareTrade needed effective tools but it also viewed dispute resolution as a contributor to other parts of its business. It understood that in order for every part of the company to improve, every part of the company needed to both use data and to generate data

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74. *See* Cara Cherry Lisco, *Case Study in Online Mediation: Resolution Across Borders*, *available at* http://www.ombuds.org/cyberweek2002/library/lisco_ecommerce_article.doc (last visited Nov. 27, 2011).

75. *See* Rabinovich-Einy, *supra* note 70, at 258.

76. *See id.* at 269-76.

that might be used by other parts. It promised confidentiality to parties but it also used data from every dispute to improve all of its services. Like other online companies, it wanted to find some valuable piece of information in every click of the mouse. In this instance, the data it derived from resolving disputes allowed for enhancements to that process and to the larger and more challenging goal of generating trust online.

The use of information in this manner was radically different from the use of information by offline mediation or ombuds offices. Those offices might accumulate data for statistical purposes and for learning about numbers of cases handled, successes and failures, etc. Typically, data that might possibly reveal something about the parties or about a particular case is discarded.[77] Online systems have capabilities for managing data in a way that can overcome the traditional operational boundaries and practices of mediation. If not done carefully, designing systems that use data from individual cases in ways that would not have occurred before creates a very sensitive challenge for DSD. It is also one that will be faced frequently as more and more links are established between the system and the tools used to further the goals of the system. It is a challenge not rooted in the traditional confidentiality concern, namely that data about a party may escape, but in a more likely concern that data about individuals could be constructed out of multiple seemingly trivial pieces of data.[78]

The availability of rich data, together with the capabilities for mining and analyzing digitally stored information, allowed SquareTrade to continuously improve its dispute resolution system. In five years they came to handle over two million disputes.[79] One way in which SquareTrade used newly available data for improvement and learning was to analyze party input in open text boxes to uncover problems in the dispute and solution typologies.[80] Another area of improvement was mediator performance. First and foremost, the online process allowed SquareTrade to monitor mediator performance

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77. *See* LIPSKY ET AL., *supra* note 25, at 162 (underscoring the need to design systems that maintain confidentiality); *but see* Gadlin, *supra* note 27, at 41; Rabinovich-Einy, *supra* note 70, at 286-91 (demonstrating some of the ways in which offline dispute resolution systems have been challenging some of these engrained assumptions about confidentiality in an attempt to enhance learning and generate change in the organization).

78. *See* KATSH, *supra* note 61, at 196.

79. *See* SQUARE TRADE, http://www.squaretrade.com/cnt/jsp/abt/aboutus.jsp (last visited May 8, 2010).

80. *See* Rabinovich-Einy, *supra* note 70, at 273.

without undermining their authority vis-à-vis parties. But the principle means for monitoring and improving the functioning of mediators was through the collection and analysis of data on success stories (what made for "good" mediators) and failures (analyzing patterns of complaints on mediators).[81]

In 2003, several years after the launch of the SquareTrade system, eBay decided to develop in-house ODR systems and hired Colin Rule as Director of ODR. In the years that followed, eBay launched an internal automated negotiation system for specific types of disputes: item not as described, item not received, unpaid item and feedback related dispute.[82] In all those cases, eBay discovered that disputes primarily arise due to miscommunication and that the transfer of key information can clarify the nature of the problem and assist in assigning responsibility and devising a solution. Under this system, parties are asked to answer questions and supply documents that have been found to shed light on the type of conflict in question. Recently, the volume of such disputes was estimated at 60 million each year.[83] Again, the volume of transactions and the repetitive, simple nature of these disputes have allowed eBay to formulate fixed formats that can be programmed and do not require human intervention for addressing these problems. Most importantly, eBay's move in developing these systems internally represents an understanding that handling disputes that arise out of eBay transactions has become an inherent component of what eBay does.

Since the launch of the internal automated negotiation processes, eBay has continued to develop its ODR services, expanding initially to Paypal[84] and, more recently, broadening the scope of dispute resolution processes offered by developing an online community court.[85] This latest dispute resolution mechanism addresses feedback removal disputes. Instead of an external third party expert deciding whether to remove negative feedback, a "crowd sourcing" mechanism was developed where a disinterested jury of 21 eBay users decides

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81.   *See id.* at 272-73.

82.   *See* eBay Resolution Center, EBAY, http://resolutioncenter.ebay.com (last visited Nov. 10, 2011).

83.   Colin Rule & Chittu Nagarajan, *Leveraging the Wisdom of Crowd: The eBay Community Court and the Future of Online Dispute Resolution*, ACRMAGAZINE, Winter 2010, at 4-5.

84.   *See Dispute Resolution*, PAYPAL, https://www.paypal.com/cgibin/webscr?cmd=xpt/cps/general (last visited Nov. 6, 2011)

85.   *See* Rule & Nagarajan, *supra* note 83, at 5-6.

the issue.[86] In all of these dispute resolution avenues, eBay has been a pioneer in understanding digital technology's impact on DSD. This can be evidenced in eBay's and SquareTrade's defiance of the limits on the conceptual boundaries, separating process types (technology-assisted negotiation as a new mix of mediation and negotiation, and crowd sourcing as a substitute for an expert third party) and questioning the necessity of core features traditionally associated with ADR (broad confidentiality and individualized tailoring of process structure). In many of their decisions, eBay and SquareTrade understood and faced similar questions to those posed in the DSD literature with respect to face-to-face dispute resolution.[87] Their answers, however, were often quite different from the answers that might have been given in considering an offline process.

Over the years, as the eBay system has evolved, other ODR mechanisms have also emerged, most of which have had a more limited understanding of the role technology can play in DSD.

2. *Cybersettle*[88] *and SmartSettle*[89]

The developers of Cybersettle and SmartSettle also reengineered pieces of the dispute resolution process but with a much more limited goal in mind: to find particular points in the offline dispute resolution process where the use of information was ineffective or inefficient. Cybersettle developed a fairly simple application that facilitated "blind bidding" online. Originally aimed at malpractice claims but useable in any negotiation involving money, one party to a dispute instructs a machine as to how much it is willing to pay and the other party instructs the machine the minimum it is willing to accept. The parties agree that if the offer and demand are within some percentage of each other, they will split the difference and settle. If they are not within range, however, there will be no settlement and the offer and demand will not be revealed to the other party.[90]

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86. *See* BETH SIMONE NOVECK, WIKI GOVERNMENT: HOW TECHNOLOGY CAN MAKE GOVERNMENT BETTER, DEMOCRACY STRONGER, AND CITIZENS MORE POWERFUL 14, 18, 181 (2009) (for a more general discussion of the phenomenon of "crowd sourcing").

87. *See, e.g.*, Smith & Martinez, *supra* note 47, at 123, 130 (2009), for the set of questions posed by the authors.

88. *See* CYBERSETTLE, http://www.cybersettle.com/pub (last visited Mar. 10, 2011).

89. *See* SMARTSETTLE, http://www.smartsettle.com (last visited Mar. 10, 2011).

90. *See Web Assisted Claim Settlement*, CYBERSETTLE, http://www.cybersettle.com/pub/home/products/claimresolution.aspx (last visited Nov. 6, 2011). *See also* Paul Kirgis, *Cybersettle and the Value of Online Dispute Resolution*, ADR PROF BLOG (July 7, 2010), http://www.indisputably.org/?p=1456 (last visited Nov. 6, 2011).

Blind bidding was a simple but creative way of doing something online that was possible but relatively inefficient when done offline. It took advantage of a machine's ability to calculate, communicate and follow a programmed rule to decide whether there would be a settlement or not, allowing parties to overcome strategic barriers that prevented them from reaching an agreement despite the existence of a "zone of possible agreement."[91] In recent years, use of Cybersettle's software has expanded beyond malpractice cases to include monetary claims against the City of New York.[92]

SmartSettle was developed by a computer scientist, Ernest Thiessen, who found that the introduction of technology into interest-based negotiation increased the likelihood for parties to reach pareto-optimal resolutions. Building on the insights provided by game theory, the SmartSettle software elicits parties to list their interests and to assign numerical values to them, thereby creating a spectrum along which the parties can negotiate. Based on the parties' input, the software generates various "packages," for the parties' consideration. The software allows for a visual display of the level of satisfaction each package represents for the parties in light of their own initial ranking of the interests. Furthermore, the software offers a unique optimization feature, offering parties an option to improve their negotiated deal where the agreement can be improved for at least one of the parties without making the other worse off.[93]

While Cybersettle uses the computer in a fairly simple way and SmartSettle does so in a much more complex way, both are designed to facilitate resolution in a context in which the parties might or might not meet. The traditional rules of confidentiality apply and any data generated during the dispute resolution process is destroyed. These programs are add-ons for a mediator or, on occasion, possibly even a replacement for a mediator. In SmartSettle's case, the application of an algorithm presents parties with a resource that would not be present in a traditional face-to-face mediation. In this sense, these applications are important for a dispute systems designer since they are a resource that can be employed in many different contexts. On another level, however, these applications are missing an important element that dispute systems designers should be trying to include:

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91. *See* ROBERT H. MNOOKIN ET AL., BEYOND WINNING: NEGOTIATING TO CREATE VALUE IN DEALS AND DISPUTES 18-22 (2000).

92. *See New York City Office of the Comptroller*, CYBERSETTLE, http://www.cyber-settle.com/pub/home/casestudies/nyc.aspx (last visited Nov. 6, 2011).

93. Ernest M. Thiessen & Joseph P. McMahon, *Beyond Win-Win in Cyberspace*, 15 OHIO ST. J. ON DISP. RESOL. 643, 647-48 (2000).

the generation or capturing of data that can be employed to provide insight into the disputing environment of the institution. A dispute systems designer interested in including Cybersettle or SmartSettle in a larger dispute resolution process would have to confront a range of questions posed in the DSD literature relating to system goals, the role of stakeholders and the like, which the owners of the software would not typically address.[94]

3. *The Mediation Room*[95]

The Mediation Room provides software that facilitates online discussions between disputing parties. The discussion takes place on secure websites, thus protecting confidentiality while simultaneously providing some structure and management to conversations that might be disorganized if done via email. This is an effective application in that parties at a distance can easily engage in discussions as a mediator manages communications and the flow of information between the parties. This application also has flexibility in that it can be used in any form of dispute resolution involving give and take on the issues. This application takes good advantage of the communicative capabilities of the network but does not have the intelligence to guide the parties toward resolution or even to help a third party facilitate resolution. It is very useful for allowing parties and a mediator to consult over a distance but it, too, can be viewed as a tool with a discrete purpose, namely enabling an offline process to move online and to be efficient and convenient. It is certainly relevant to DSD, in that it can become a component in any offline dispute resolution process, but, like Cybersettle and SmartSettle, it does not generate data that can be employed to reveal elements in the larger system that might be changed to prevent disputes from occurring or, at least, to reduce the level of disputes.[96]

B.   *The Second Decade: Re-envisioning ODR*

The first decade of ODR provided "proof of concept" in demonstrating how technology could support resolution of large and small

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94.   *See* Smith & Martinez, *supra* note 47, at 129.

95.   *See* THE MEDIATION ROOM, http://www.themediationroom.com (last visited Nov. 6, 2011).

96.   An earlier version of Juripax <http://www.juripax.com> was very similar to the Mediation Room. The latest version of Juripax does go in the direction of collecting data and doing more than supporting discussions, as is evident from the description on the Juripax website. *See* http://www.juripax.com (last visited on Dec. 1, 2011).

numbers of disputes and in how software applications could be designed to overcome constraints of distance. It also provided validation of the idea, suggested almost ten years ago, that technology could play the role of a "fourth party," not replacing the human third party, but aiding the third party and perhaps enhancing third-party skills.[97] As the eBay and Cybersettle experiences reveal, it is possible in some circumstances for technology to even replace third parties, but at present that is likely to occur only in relatively simple disputes where the needs and concerns of the disputants can be anticipated.[98] In general, the "fourth party" metaphor will continue to have value as third party neutrals find uses for an increasing array of intelligent tools and digital "assistants" that can be employed to manage communication and interaction with parties.

The "fourth party" was a concept that was meant to explain how technology might be employed in the dispute resolution process and, most often, in a dispute resolution process managed by a human. It successfully anticipated ever more powerful applications that would, over time, have an impact on a growing number and increasingly

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97.   KATSH & RIFKIN, *supra* note 52, at 94.

98.   Of course it is not an easy task to determine what falls under our understanding of a "simple" dispute. Even small scale monetary disputes can be difficult to address, as both online and offline experiences show us. In the offline arena, this is evident from the rich literature on plaintiff expectations in the small claims courts. In the online setting, eBay, which understood this, has always allowed for an escalation of the resolution process to an in person third party. One could nevertheless ask to what degree online processes, even when led by in-person third parties, can address parties' expectations and needs from a procedural justice perspective (*see generally* Nancy Welsh, *Making Deals In Court-Connected Mediation: What's Justice Got To Do With It?*, 79 WASH. U. L.Q. 787 (2001)). We believe it is too early to provide an answer to this question. We are in the midst of a period of dramatic change in terms of what ODR processes can offer disputants as well as what disputants feel comfortable with when communicating online. What we can say is that the trend is towards increasingly richer technologies (at lower costs) and a higher degree of comfort among young users with the online medium. It is our contention, that over time we can expect increasingly complex disputes to be addressed online with higher degrees of comfort and satisfaction among users. Whatever the future holds, we believe there will always be a need for face-to-face dispute resolution in some cases, for some disputants (see for example disputants' attitudes towards the importance of interacting face-to-face with the other side, as described in an evaluation of a court-connected mediation program in Canada (Julie MacFarlene & Michaela Keet, *Civil Justice Reform and Mandatory Civil Mediation in Saskatchewan: Lessons from a Maturing Program*, 42 ALBERTA L. REV. 677, 691 (2005)). Perhaps, as Nancy Welsh has suggested to us, ODR can be thought of as a default stage under a tiered system that allows disputants to appeal or escalate the process to a face-to-face procedure, much like the Welsh and Riskin proposal made regarding the scope of the problem addressed in court-connected mediation (*see* Welsh & Riskin, *supra* note 28, at 919-21).

complex array of cases.[99] Yet the increasing use of technology is likely to focus attention not only on how individual cases are resolved but also on how they are generated and how they might be prevented.

The current impetus to look at the larger dispute environment and to the challenge of developing dispute systems in a technology-oriented environment is the same as that which inspired the original work in DSD.[100] While cases resolved through alternative means are usually conceived as being independent of each other, in actuality, when observed as a whole for an entire institution, patterns begins to emerge. As UB&G argued, the "challenge is to change the dispute resolution system – the overall set of procedures used and the factors affecting their use – in order to encourage people and organizations to talk instead of fight about their differences."[101]

The motivations for looking at systemic issues may be the same as they were decades ago, but the challenges, opportunities, and likely outcomes have changed. The widespread adoption and use of technology changes the assumptions that prevailed twenty years ago, the questions that need to be asked, and the answers that need to be acted upon. Modern day institutional environments are more complex than they were previously. Increasing numbers of institutions are not simply larger than they were, but are also more geographically diverse than they used to be. They are not only expected to turn out new and improved products and services, but are expected to do so more quickly. They have a greater number of relationships with suppliers and customers and must link with these parties "just in time" and in "real time." Identifying stakeholders and patterns of disputes in such environments will be a challenge entirely removed from what Ury and his co-authors were facing. If the statement "conflict is

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99. See, for example, a National Science Foundation project "The Fourth Party: Improving Computer-Mediated Deliberation through Cognitive, Social and Emotional Support." The project will research and evaluate software to support people engaged in online social deliberation, especially as it relates to dispute resolution and collaborative inquiry. The software will model and monitor deliberative processes skills while people are either in collaboration or involved in settling disputes. http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0968536 (last visited Dec. 1, 2011)

100. It may very well be that when we are referring to a higher level than the personal one in a technological environment, we are referring to a network of entities and not a single organization or institution. We thank Leah Wing for raising this point.

101. URY ET AL., *supra* note 1, at xiii.

a growth industry" was true in 1981,[102] and remained true when repeated in 1996,[103] it is even more true today.

While organizations have been evolving in the direction of increasing complexity, tools to help in the management of large, diverse and complex organizations have also been developing. There are many differences among these tools but what they have in common is that they all involve information, finding it, evaluating it, creating it, and communicating it. Appropriate tools and careful system design can enable institutions to change and grow in complexity while also being efficient and effective. As they are used, refined, and become commonplace, they also create an environment in which software-generated efficiencies and effectiveness are looked to in all aspects of the institution's activities.

In an early piece about ODR, one of us wrote:

> Context can influence the approach of the neutral, the choice of process, and the behavior and attitudes of disputants. In any environment, context can affect the kinds of disputes that are likely to arise and also affect who the parties are who are likely to be involved in the dispute. Context implicitly feeds us information about the extent or nature of the injury as well as how the injury or dispute is perceived by those involved. Context situates a dispute in a particular time and place, and we react and adjust accordingly as the parameters of the environment become clear to us.[104]

While many individual disputes may look familiar and can even be approached in traditional ways by a mediator, the larger economic, political, and social context in which the disputes arise is likely to be quite different from what it was even a few years ago. Designing systems for such environments is the current challenge.

As almost all writers about DSD point out, the appearance of disputes is not necessarily a sign of bad management.[105] Even in the best-run institutions, disputes are likely to arise. Disputes are a consequence of increasing numbers of transactions and relationships, many of them much more complex today than they used to be. eBay is not a poorly run company, but one in which millions of transactions

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102.   ROGER FISHER, WILLIAM URY & BRUCE PATTON, GETTING TO YES: NEGOTIATING AGREEMENT WITHOUT GIVING IN xvii (Penguin Books 1991) (1981).

103.   COSTANTINO & MERCHANT, *supra* note 8, at ix.

104.   M. Ethan Katsh, *Dispute Resolution in Cyberspace,* 28 CONN. L. REV. 953, 974 (1996).

105.   *See, e.g.*, COSTANTINO & MERCHANT, *supra* note 8, at 3-5; LIPSKY ET AL., *supra* note 25, at xii.

occur every week[106] between strangers. This is bound to generate miscommunications and misunderstandings. eBay understands that the solution to this is to both develop sets of tools that can help parties negotiate, and to pay attention to the patterns of disputes and to the factors generating them.

eBay is an example of an entity that has effective tools for handling very large numbers of disputes, but the only way they can do this is to have designed a system and not merely a set of tools. It should be obvious that a virtual company, one where there are no face-to-face encounters, will inevitably construct a system and not merely a set of tools. The goal of such companies is to persuade users to engage in a transaction, something they will not do if the risk is too high. Online businesses need to build trust and customers need to be assured not only that a purchase can be made at a competitive price, but that any problem that arises will be responded to. Amazon.com handles this with a very tolerant returns policy.[107] eBay, in addition to an ODR system, guarantees transactions up to a certain dollar amount and has other dispute prevention tools, notably its feedback rating system.[108] The need to generate trust in order to draw in users applies to not-for-profit sites as well, as is evidenced by the array of tools Wikipedia offers as part of its dispute resolution system.[109]

All-online companies are aware that they need not only to respond to disputes but to understand, anticipate and plan for them. For such companies, every monetary transaction is also an information transaction. Such companies are limited by their privacy policies in sharing or selling data to others, but there are no statutory restrictions on how this information can be employed internally. The result is likely to be a much more dynamic and developed informational ecosystem than occurs offline where professional standards limit what mediators share and the use of paper slows down the further use of any information that might be generated.[110]

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106.   eBay reported that in 2010 the total worth of goods sold on the site was $62 billion. *Who We Are,* eBay, Inc., http://www.ebayinc.com/who (last visited Mar. 10, 2011).

107.   *See Help: Returns and Refunds*, Amazon.com, http://www.amazon.com/gp/help/customer/display.html?nodeId=901888 (last visited Mar. 10, 2011) (thirty-day return policy with the exceptions of products that would not make sense to return like groceries, gift cards, software, electronics, etc. Furthermore, Amazon makes it easy to create and print shipping labels and postage for returning items.).

108.   *See* Adam Cohen, The Perfect Store 27-28 (2002).

109.   *See Dispute Resolution*, Wikipedia, http://en.wikipedia.org/wiki/Wikipedia:Dispute_resolution (last visited Nov. 6, 2011).

110.   *See* Rabinovich-Einy, *supra* note 70, at 264.

Companies that operate exclusively online have enjoyed a head start in understanding how influential communications and information-processing capabilities can be in shaping the nature and quantity of disputes that occur, and the options for dispute resolution that will be needed. They have demonstrated the value of declining to treat disputes as isolated events and of attending to information generated by a functioning dispute system in order to understand how disputes surface and to identify approaches in how they might be resolved.[111]

The lessons learned by the all-online entities that had no choice but to think in terms of a dispute system are not likely to be confined to such entities in the future. As all institutions adopt network communications as a significant part of their operating models, and as online interactions replace many traditional offline interactions, institutions will confront many of the forces, capabilities, and opportunities that the all-online entities have already identified. The following examples are of an existing private venture and of a public entity in an early stage of developing an ODR system: the first involves the *Benoam* online arbitration system in Israel, and the second focuses on the Office of Government Information Services (OGIS) in the United States. Each of these entities has discovered that the presence and use of new information technologies can reveal new possibilities for managing conflict. As these examples reveal, this was possible because technology was not viewed merely as a tool, but as a force that actually challenged, and in some cases transformed, conventional understandings of DSD principles. Each example highlights different ways in which technology has impacted DSD. Benoam is a good demonstration of its effect on the advancement of the systemic goals of consistency and predictability through norm generation and precedent-setting, while the emerging OGIS system demonstrates the potential for an expanded dispute base, improved learning and prevention, and cross-entity standardization. Both examples are also at the frontier of ODR evolution as they relate to disputes that emerged in an offline setting. In this respect, these case studies are very different from the eBay one, where choice of ODR was predictable and necessary.

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111.   *See id.* at 272-76.

1. *The* Benoam *System*

Benoam is an online arbitration system established in 2002 to resolve subrogation claims between insurance companies over property damages incurred in "fender-bender" car accidents.[112] It was set up to handle offline disputes and was meant to function as an effective alternative to litigation. The *Benoam* system is a private, bottom-up initiative conceived of by a leading Israeli attorney, Yehuda Tunik, in collaboration with actors from the insurance industry. After he was exposed to the problems faced by insurance companies in handling subrogation claims, Tunik came up with the idea of instituting a contractual private adjudicatory system that would operate efficiently, fairly and professionally.[113]

To ensure efficiency, the system was designed as an interactive web-based arbitration model, offering a swift process based on written communications without the need for cumbersome paper submissions and service of process.[114] In the majority of cases, in person hearings are not conducted and claims are decided solely on the basis of pleadings and evidence submitted online.[115] The *Benoam* system is accessible from afar, at any hour of the day, without having to coordinate face-to-face proceedings. This has not only made the process itself more efficient, but has also influenced the structure of some of the claims departments within insurance companies, causing them to shift from a geographic-based structure to a centralized one.[116]

In addition, as part of the insurance companies' agreement to submit the subrogation claims to the *Benoam* system, detailed rules of arbitration were agreed upon which contributed to the efficiency of the process both by setting clear and relatively brief time constraints and by making the process more predictable and consistent.[117] Finally, *Benoam* also functions as a clearing house, allowing it not only

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112.   *See* Orna Rabinovich-Einy & Roee Tsur, *The Case for Greater Formality in ADR: Drawing on the Lessons of Benoam's Private Arbitration System*, 34 Vt. L. Rev. 529, 542 (2010) [hereinafter *Greater Formality*]; Orna Rabinovich-Einy & Roee Tsur, *Unclogging the Collision Course: The Evolution of Benoam, an Online Private Court*, ACRᴇꜱᴏʟᴜᴛɪᴏɴ (Winter 2010), *available at* http://www.pmlink360.com/docs/acr.pdf [hereinafter *Collision Course*].

113.   *See Greater Formality*, *supra* note 112, at 543-44; *Collision Course*, *supra* note 112, at 9.

114.   *See Greater Formality*, *supra* note 112, at 545.

115.   *See Collision Course*, *supra* note 112, at 10.

116.   *Id.* at 11.

117.   *See Greater Formality*, *supra* note 112, at 557, 559.

to issue arbitration decisions, but also to execute them under the auspices of the Israel Insurance Association.[118] This feature has enhanced the proceedings' efficiency over courts, as the rulings are executed on a fixed day of the month, regardless of whether an appeal was filed or not.

In terms of fairness and trust-building, the system has adopted an array of measures which together served to enhance consistency and equality in arbitrator rulings. For one, the detailed arbitration rules to which all users agreed when registering for the process, were a means for structuring the process *ex ante* to ensure fairness. Furthermore, the availability of an internal appeals mechanism before another arbitrator or a panel of arbitrators proved an effective *ex post* mechanism for strengthening fairness, albeit at some cost to the efficiency of the process.[119] Nevertheless, by setting time limits on the appeals mechanism and by proceeding with the execution of awards, the cost associated with appeals has been contained.

Another important means for ensuring fairness was the adoption of a form of *res judicata* and the emergence of "precedents" within the system. From the very beginning, *Benoam* adopted a practice of releasing "landmark decisions" to its site without identifying the parties to the claim.[120] Over time, as more and more cases were being decided by *Benoam* while the courts handled fewer of these cases, new questions emerged requiring a clear and consistent rule so as to prevent a feeling of arbitrariness and the incentive to forum shop among arbitrators.[121] Similarly, arbitrators adopted a practice of subjecting themselves to prior decisions by other arbitrators where the rules of *res judicata* applied, even when they disagreed with the outcome itself. Often, their reasoning would explain that they felt compelled to follow the previous ruling in the name of consistency and fairness.[122]

To ensure the success of such developments, all communications and arbitration rulings were documented on the *Benoam* database and each insurance company had a copy of all proceedings to which it was a party. This is very different from the typical ADR process where proceedings are kept private, with very little data being documented. While arbitration proceedings are less sensitive to documentation than mediation, it is still true that in most arbitration contexts

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118. *Id.* at 546, 555.
119. *Id.* at 546.
120. *Id.* at 550-51.
121. *Id.*
122. *Id.* at 552.

there is no extensive database kept. Claims are usually handled on an individual ad-hoc basis and there is rarely an attempt to address claims in a consistent and systematic manner as is done in the court setting.[123] With broad documentation online came a change in the understanding of privacy, allowing for the release of certain rulings into the public domain (albeit in anonymous form) and the voluntary disclosure of previous rulings by some of the parties in their own proceedings in subsequent cases.[124]

Finally, these fairness-enhancing features have been strengthened by the fact that the users of the system are repeat players of similar power. This has contributed to a level playing field both in the initial design stages of the system and in fellow users acting as *de facto* monitors of the system,[125] This state of affairs is complemented by the employment of professional arbitrators (retired judges, attorneys, appraisers, traffic examiners, and CPAs) familiar with the field.[126] The arbitrators' training and qualifications have been further strengthened by the existence of incentives for being singled out as a "leading" arbitrator, whose decisions are not reversed on appeal and whose rulings set important precedents.[127] At the same time, the danger of arbitrators acting to please parties or of parties strategically striking out arbitrators is minimized by the fact that users are repeat players who typically alternate between the plaintiff and defendant positions. Therefore, most users of the system are interested in establishing a clear and predictable rule, and not so much in any particular ruling one way or the other in a given case.[128]

Despite early fears and the risk associated with the introduction of a dramatically different system, *Benoam* has been a success story.

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123. *Id.* at 537, 550. There are of course other exceptions such as the Uniform Domain-Name Dispute-Resolution Policy (UDRP) system established by the Internet Corporation for Assigned Names and Numbers (ICANN) for the resolution of domain name disputes. Under the UDRP system there is a higher degree of transparency than typically expected in private arbitration proceedings. There are also a large number of disputes of similar nature for which the court option is typically de facto unavailable. *See generally Uniform Domain-Name Dispute-Resolution Policy*, INTERNET CORP. FOR ASSIGNED NAMES AND NOS., http://www.icann.org/en/udrp/udrp.htm (last visited Nov. 8, 2011).

124. *Id.* at 555-56.

125. *Id.* at 558.

126. *Id.* at 545.

127. *Id.* at 560.

128. *Id.* at 558. There are of course exceptions where particular insurance companies have a unique insured profile. Nevertheless, it is generally true that insurance companies in this domain are more concerned with consistency in rule application than with the distributive impact of any particular rule.

Since its establishment, the system has earned high levels of satisfaction and has enjoyed broad legitimacy, as evidenced by the fact that *Benoam*'s contract has been renewed annually.[129] However, the meaning of "success" for *Benoam* has also changed over time. While the designers had from the very beginning conceived of a "system," they had not envisaged the role technology would play in enhancing consistency, generating norms, and in ensuring quality control.[130] In short, *Benoam* and its users discovered that rather than set up a closed mechanism for resolving individual claims ex-post, they had created a system that has generated common norms and clarified existing rules, thereby challenging some of the common perceptions about ADR and ODR, and testing the professional, physical, and conceptual boundaries associated with such perceptions.

In terms of professional boundaries, it is quite interesting to note that the *Benoam* team approached the task of setting up the system with no prior experience in DSD and no familiarity with the field of ODR. Since there was no preexisting ODR system in Israel and very few freestanding ADR programs, they were in uncharted waters. Tunik's team was comprised of attorneys and computer scientists, and relied on the input of the stakeholders from the insurance industry as well as their own impressions to assess the interests and needs of potential users.[131] Such collaboration not only led to a speedy outcome, with the system being built in record time,[132] but it also resulted in a more diverse perspective than typically feeds into the design of dispute resolution systems.[133]

Most notably perhaps, the design of *Benoam* reflects the perspective of computer programmers. To design a software program, one must go into substantial detail, laying out the entire process from start to finish, envisioning a wide range of possible scenarios. This is very different from the design of face-to-face dispute resolution systems. While the face-to-face system may tolerate ambiguity, the

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129. *Id.*

130. *Id.*

131. E-mail from Roee Tsur, Founding member and Arbitrator of Benoam, to Orna Rabinovich-Einy, Senior Lecturer of Law, Univ. of Haifa Sch. of Law (May 24, 2010, <12:49 PM IST>) (on file with author) [hereinafter *E-mail from Roee*].

132. The time from the initial meeting between Tunik and the heads of the insurance industry to the development of a fully operating product was less than a year. *See Collision Course*, *supra* note 112, at 8-9; *Greater Formality*, *supra* note 112, at 543-44.

133. Of course, this is attributable to the characteristics of the stakeholders who, as mentioned above (in the accompanying text), were all repeat corporate players who would alternate between the positions of defendant and plaintiff.

software-based system requires designers to think through the de-
tails of the design and their implications more carefully with the
smallest detail being taken into account to ensure a smooth process.
Even though traditional DSD views flexibility as a principle advan-
tage, it is important to realize that the need for detailed design of the
software has not resulted in stagnation in the *Benoam* system, quite
the opposite. The same technology that required thorough planning
of the dispute resolution process has also made data and documenta-
tion an automatic by-product and the analysis of information an inex-
pensive and instructive endeavor. Problems have therefore become
easier to trace and changes relatively easy to institute. While
changes in the *Benoam* arbitration rules had to meet certain procedu-
ral requirements, some of the changes in the software program were
easily performed and had immediate impact on the efficiency and
fairness of the process and on the legitimacy of the system as a whole.
One such example was the limit placed on arbitrator strikes, allowing
one strike per party, per case after *Benoam* detected that users had
used their initially unlimited right to strike arbitrators in a strategic
manner.[134]

Not surprisingly perhaps, the *Benoam* team managed to arouse
the anger of the local Bar Association which tried to prevent the pro-
ject from materializing,[135] demonstrating one way in which technol-
ogy and ADR have been placing pressure on professional groups and
gatekeepers more generally. Over time, *Benoam* has undermined the
position of legal experts more deeply as insurance companies came to
rely less and less on external legal counsel. They could even assign
their in-house claims departments much of the work on the easy to
use and accessible system, thereby cutting costs and increasing ac-
countability.[136] Direct communication between employees of the vari-
ous agencies displaced the interactions among external legal counsel
who formerly controlled access to comprehensive data about claims.
This means that full and unabbreviated information can now be ac-
cessed by each insurance company directly and instantaneously.[137]

In addition, *Benoam* provides a good demonstration of the ways
in which digital technology can undermine physical boundaries.
While *Benoam* is a separate and external entity, the insurance com-
panies have direct links to the *Benoam* system, with data flowing in
both directions. The *Benoam* system is set up so that data can be

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134. *See Greater Formality*, *supra* note 112, at 548-49.
135. *E-mail from Roee*, *supra* note 131.
136. *See Collision Course*, *supra* note 112, at 11.
137. *E-mail from Roee*, *supra* note 131.

transferred automatically from the insurance companies' internal
databases onto the *Benoam* forms to enhance efficiency and accu-
racy.[138] Data also moves in other directions, with information on ar-
bitrator decisions flowing from *Benoam* to the Insurance Association
for the execution of rulings.[139] Furthermore, while the insurance
companies were initially concerned about competitors being exposed
to sensitive information through the *Benoam* process, over time an
increasing number of users have revealed information about previous
claims to their counterparts voluntarily, either as part of an effort to
prevail in current arbitrations (based on precedent) or in an attempt
to settle a claim in the shadow of *Benoam*, before filing.[140] The ease
with which information stored in digital format is traced and shared
across claims, between units and among entities, actually makes use
of information across such boundaries more common than it was in
the past or than it still is in dispute resolution systems that are based
on face-to-face communication.

Most significantly, *Benoam* seems to be a strong demonstration
of the ways in which new technologies are shifting conceptual bound-
aries in DSD. While ADR has traditionally been contrasted with the
formal legal process, *Benoam* presents an example of an informal ar-
bitration process that in many ways has come to resemble a formal
legal system. In place of the emphasis on party control and flexibility
we have come to expect in ADR, *Benoam's* process is formal, pre-de-
termined, and structured.[141] This is evidenced in the detailed arbi-
tration rules adopted by *Benoam* at the outset, and undoubtedly a
result of the use of software that requires that every stage of the pro-
cess be prescribed: time limits, options, and responsibilities of the
parties, and authority of the arbitrator.[142]

In addition, instead of focusing on tailored resolution of individ-
ual disputes, *Benoam* has placed an emphasis on systemic goals,
highlighting the significance of clear and consistent norm elabora-
tion.[143] The development of landmark decisions in the substantive

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138. *See Greater Formality*, *supra* note 112, at 545.

139. *Id.* at 546.

140. *Id.* at 559.

141. *Id.* at 546-50.

142. *Id.*

143. *Id.* at 550-52. Of course, as Leah Wing has commented to us, there are costs
associated with the design of a dispute resolution system that leaves no room for flexi-
bility and individual tailoring. Nevertheless, these costs will vary depending on the
context for which the system is designed. In the case of *Benoam*, where you have
repetitive, monetary, small-scale disputes, the benefits associated with structure
seem to outweigh such costs.

realm and the adoption of the doctrine of *res judicata* on the procedural level indicate that *Benoam's* legitimacy hinges on whether similar cases are treated alike. Indeed, parties have asked, one might even say demanded, that decisions on major issues follow prior precedents.[144] In more than one instance, *Benoam* arbitrators used the avenue for precedent-setting to provide a unified rule to be applied consistently across cases.[145] The feeling that a ruling could be arbitrary and the result of the assignment of a particular arbitrator would have been devastating for *Benoam*. While technology is not the sole explanation for these developments, it is certainly part of the story.[146] Technology has made data about previous resolutions available and easy to share, thereby strengthening efforts to enhance consistency across cases.

Furthermore, unlike many contemporary ADR systems that rely on courts and formal law for their supply of disputes and the substantive norms that govern the resolution of the dispute and its enforcement power, *Benoam* has been a pillar of independence in all of these realms.[147] For our purposes, *Benoam's* ability to execute its arbitrator rulings autonomously is unique and is a central factor in its success and legitimacy. This feature hinges on the availability of digital databases that allow for effortless connections between financial data and resources on the one hand, and resolution outcomes on the other.

Finally, the nuanced approach to confidentiality that is evidenced in the design of *Benoam* (also seen in the SquareTrade system) presents a challenge not only to the formal law/ADR dichotomy, but also to distinctions within ADR. When combined with other unique features of the *Benoam* system – the appeal process and the clearinghouse – a more general lesson seems to emerge. Technology has made certain changes possible, easier, or cheaper to execute, and these changes make us re-think the ways we have structured these processes in other settings as well, even when the arbitration (or some other process for that matter) takes place offline. Instead of seeing dispute resolution processes as a "thing" with fixed features, we become aware that they are social constructs. This realization, in turn, frees up our imagination from traditional conceptual barriers, thus broadening the possibilities for designing dispute resolution processes across traditional, super-imposed categories.

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144. *E-mail from Roee*, *supra* note 131.

145. *See Collision Course*, *supra* note 112, at 553-54.

146. Of course an important part of the explanation lies in the unique characteristics of the stakeholders of *Benoam*. *See supra* note 133 and accompanying text.

147. *See Collision Course*, *supra* note 112, at 552-55.

In the following section, we draw on the emerging OGIS ODR system to explore other ways in which new technologies are challenging the traditional DSD framework.

2. *The U.S. Office of Government Information Services*[148]

The Freedom of Information Act (FOIA) in the United States has been in existence since 1974. It allows citizens to request documents held by federal agencies. The procedure for obtaining a document is to identify the agency that has the document or file and make a request to that agency. The agency is required to turn over the material unless the information is covered by one of the FOIA exemptions, which include nine categories relating to such matters as national security, internal personnel rules and practices, and trade secrets.[149]

If a federal agency turns down a request under FOIA, one can file an appeal with the same agency that decided the request.[150] In the past, if the appeal was denied, the only alternative was litigation. In 2007, however, Congress passed the OPEN Government Act and authorized the establishment of a new agency, the Office of Government Information Services (OGIS).[151] OGIS's main mandate is to mediate disputes involving requests that had been turned down by an agency and then rejected on appeal. It was hoped that this might reduce the amount of FOIA litigation. In addition, OGIS was authorized to review agency compliance, recommend policy changes and issue advisory opinions.[152]

It is difficult to evaluate how effective the FOIA process has been in the past. There were over 600,000 requests filed in 2008,[153] with over 260,000 granted in full and over 117,000 partly granted and partly denied.[154] In addition, there were 8800 appeals in 2008 and approximately 300 court decisions.[155] There have been no large scale surveys of people making requests to determine how satisfied they

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148. Professor Katsh has served as consultant to OGIS. This section represents his views alone, and not the agency's.

149. Freedom of Information Act (FOIA), 5 U.S.C. § 552(b) (2006) (full list of FOIA exemptions).

150. *Id*. § 552(a)(6)(A) (2006).

151. Openness Promotes Effectiveness in our National Government Act of 2007, Pub. L. No. 110-175, § 10, 121 Stat. 2524, 2529-30 (2007) (codified at 5 U.S.C. § 552(h)(2007)) (amending FOIA, 5 U.S.C. § 552 (2006)).

152. *See Greater Formality*, *supra* note 112, at 545.

153. Office of Information Policy, *Summary of Annual FOIA Reports for Fiscal Year 2008*, U.S. DEP'T OF JUSTICE, http://www.justice.gov/oip/foiapost/2009foiapost16. htm (last visited Nov. 6, 2011).

154. *Id.*

155. *Id.*

were with the process and generally little data that might indicate how efficient or effective the process is.

What is clear is that the process is highly decentralized and almost exclusively paper based. There are over ninety departments and agencies and each handles requests according to processes it has established. Recently, each agency has been required to employ one or more Public Liaisons who are supposed to be the main contact person for anyone experiencing problems with the process. There has, however, been minimal communication among the Liaisons and there is no obligation for them to report anything in the agency's FOIA Annual Report about their contacts with the public. Until 2010, there was not even a list containing the names of all Public Liaisons and their contact information. Agencies are required to file a report each year providing statistics about their caseload, both requests and appeals, and about the grounds for the decisions made. These reports are placed online but there is no central database with data from all the agencies that would facilitate comparisons.[156] In 2010, for the first time, agencies were required to post files with data in accessible form, not simply in PDF format.

OGIS's intention from the beginning was to rely on ODR as much as possible. It anticipated a large caseload and viewed ODR as a means for responding efficiently to persons whose requests had been denied. As of September 2011, the caseload had been growing gradually[157] but was still manageable for the agency's staff of seven. Yet requests for assistance were increasing and it was likely at some point that there would be a need for both trained mediators and for an ODR system.

OGIS recruited one of the authors to advise it on ODR and quickly realized that it needed a dispute system rather than an array of ODR tools. OGIS had more professional assistance at the outset than *Benoam*, but it became clear that the increasing use of ODR would require dispute systems designers who had technical as well as dispute resolution expertise, an issue completely neglected in the current DSD literature.

UB&G had advised:

> In order to create an effective dispute resolution system, the designer should first carefully diagnose the current system to determine what kinds of disputes occur, what procedures are

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156. Office of Info. Policy, *Annual FOIA Reports, FY09*, U.S. Dep't of Justice, http://www.justice.gov/oip/fy09.html (last visited Mar. 10, 2010).

157. *See* Previous OGIS Case Logs, Office of Gov't Servs., http://www.archives.gov/ogis/case-log/index.html (last visited Nov. 6, 2011).

being used, and why the parties are using one procedure rather than another. Diagnosis is essential since changes are unlikely to work unless they satisfy the needs that lead the parties to use existing procedures.[158]

While a new agency using technology must confront "the needs that lead the parties to use existing procedures," it also must deal with parties whose needs may not have even surfaced before.

OGIS could be viewed as simply establishing a new level of dispute resolution inserted into an existing system in which there are requests, appeals and filing of lawsuits. Yet, it is also authorized to review agency compliance with FOIA and the use of online tools brings it closer to the users requesting documents from agencies. When OGIS began operations in October 2009, it quickly received inquiries and complaints. Most of these communications, however, were not by persons requesting mediation of a case that had been rejected by an agency or decided on appeal. Rather, the large majority were requests for information about how the process worked, about something related to statutory requirements, or questions about something happening with a request at the agency level. While the agency had been set up to resolve disputes, it found itself receiving information about agency practices and processes that had never before been revealed outside the original agency. The number of these requests, given the overall number of FOIA requests to agencies, was relatively small but it might also be assumed that there were many more requestors in the same situation who did not bring their situation to the attention of OGIS.

Technology, at least until now, has been providing OGIS more with potential disputants than with actual disputants or, viewed another way, with people who have just begun to respond to a perceived problem rather than to parties with a full-blown dispute. In the classic way of looking at the nature of disputes, these are people with grievances (not disputes), persons with bad experiences who are concerned about something and are often angry. Historically, this group has never received much attention and has rarely been included in the dispute resolution literature, perhaps because there were few ways to identify members of this group in the past. The future development of the dispute system may benefit from responding to them. As noted in an early piece on ADR:

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158. *See* URY ET AL., *supra* note 1, at 20.

> [D]isputes are not things: they are social constructs. Their
> shapes reflect whatever definition the observer gives to the con-
> cept. Moreover, a significant portion of any dispute exists only
> in the minds of the disputants. These ideas, though certainly
> not novel, are important because they draw attention to a ne-
> glected topic in the sociology of law – the emergence and trans-
> formation of disputes – the way in which experiences become
> grievances become disputes, and disputes take various shapes,
> follow particular dispute processing paths, and lead to new
> forms of understanding. Studying the emergence and transfor-
> mation of disputes means studying a social process as it occurs.
> It means studying the conditions under which injuries are per-
> ceived or go unnoticed and how people respond to the experience
> of injustice and conflict.[159]

OGIS's response to this class of persons was to invite them to
look at an online application known as a wizard, which provided per-
sons in need of information with an interactive process that might be
of assistance. The wizard was more interactive than a FAQ and was
also a system that collected data in a way that gave a clear image of
who was having a problem with what. The agency is sensitive to the
need for confidentiality, but also believes systems cannot be devel-
oped without understanding the classes of problems that need to be
responded to. In addition, the wizard does not collect personally iden-
tifiable information until the user requests assistance from the
agency.

The current decentralized approach of ninety-two agencies with
independent authority to resolve FOIA requests is one which appears
to be vulnerable to technology that can easily move data across bu-
reaucratic boundaries. There is, for example, a current proposal for
use of a common request form that is not simply a move toward a
more efficient mechanism for making requests for documents than
paper based methods, but a resource that will overcome the tradi-
tional mechanisms that keep data from being shared. Such an online
request form is the beginning of a FOIA process that should have the
ultimate effect of generating data about parties and problems and ul-
timately guiding development of the DSD process.

OGIS's new systems promise to use online resources to change
institutional behaviors that reflect the constraints of paper-based
processes. It is likely to serve as an example of how some of the
boundaries that keep entities apart in the offline world become much

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159. William L.F. Felstiner et al., *The Emergence and Transformation of Disputes:
Naming, Blaming, Claiming . . .*, 15 Law & Soc'y Rev. 631, 631-32 (1980-81).

less effective as data and processes move online. ODR provides a set of tools that can be attached to ADR practices but it also, as often happens with new technologies, changes underlying assumptions, goals and expectations of an institution. It changes not only what can be done but affects decisions about what should be done.

For OGIS, this has been most evident in the attention being given to preventing disputes. New technologies provide a glimpse into, in the words of Jonathan Anderson and Lisa Bingham, what is occurring "upstream."[160] ADR traditionally is more focused on full-blown disputes and what is happening downstream. The capability to obtain information from persons or groups who do not yet perceive themselves as parties is a valuable byproduct of enhanced communications capabilities and, hopefully, a building block for establishing more effective dispute prevention strategies. While OGIS was originally set up to mediate disputes it has quickly understood that providing information effectively at an early stage can make unnecessary the providing of a mediator at a later stage. In highlighting the influence that better communication can have on preventing disputes, OGIS may open up new approaches not only to resolving disputes, but possibly to a new field of online dispute prevention (ODP).

III.   An Alternative Understanding of DSD

In the late 1980s, Ury and his co-authors asked a series of questions that few had asked before. They observed that conflicts were not merely a product of miscommunication, personality clashes, or power struggles between individuals, but were actually shaped and often emerged as a result of systemic factors. Therefore, the authors adopted a broad approach and asked the following questions about conflict in organizational settings where parties had ongoing relations: What types of disputes arise and at what frequency? How are disputes handled and what are the overall benefits and costs of these procedures? Why are certain procedures used for addressing conflict and not others?[161]

While the above questions remain central pillars of any attempt to design a dispute resolution system, the answers and the methods for obtaining answers in the future are likely to be influenced by the

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160.   Jonathan F. Anderson & Lisa Bingham, *Upstream Effects from Mediation of Workplace Disputes: Some Preliminary Evidence from the USPS,* 48 Lab. L.J. 601 (1997).

161.   *See* Ury et al., *supra* note 1, at 20-21.

spread of digital technologies and Internet communication. Although speculation about future developments is always tentative and risky, a good starting point for reflecting on the future direction of DSD in face of the spread of digital technology could be to question some of the assumptions in the field with respect to the following domains: (1) the role of the dispute systems designer, (2) the goals and incentives of the organization in setting up the dispute resolution system, (3) the needs and interests of the stakeholders, and (4) the nature, characteristics and suitability of different dispute resolution processes and tools. In each of these realms, we explore the impact of the blurring of boundaries and discuss some of the ways in which new technologies may challenge the prevailing assumptions and concepts in the field.

One area of change will undoubtedly be the role of the dispute designer. While initially conceived of as an expert professional with ADR background and training, the spread of digital technology has challenged this perception in several respects. For one, as digital technology becomes an inherent part of the way people interact and organizations function, it will have to be incorporated into the way people communicate about their differences. As ODR systems become increasingly widespread (either as standalone systems or as an addition to face-to-face ones), designers will have to better understand the qualities of these technologies and the new opportunities they open up (as well as the barriers and costs they entail). This means that our understanding of dispute systems designer capabilities, qualities and training may undergo significant change.[162]

In addition, dispute systems designers will need to learn to cooperate with technical experts in the development of ODR systems. Working together does not translate into a mere aggregation of perspectives, but may very well result in a product that is altogether different, as a consequence of the commingling of the very different viewpoints, work processes and orientations of each discipline. On the other hand, where a website can easily add an online complaint form or individual users can set up their own dispute resolution mechanisms, what value does a dispute systems designer add? It is important to note that while setting up ODR systems may seem easier than setting up a face-to-face system, relatively few websites, even collaborative web 2.0 sites, have actually chosen to do so. One

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162. *See* Costantino*, supra* note 39, at 96-97 (raising the question concerning what knowledge, skills and competencies dispute designers need to possess).

explanation could be that these enterprises fail to grasp the connection between conflict management systems and their own overall goals. It may also be that certain users have an interest in maintaining the status quo. Whatever its source, this state of affairs seems to indicate that there is room for external professional intervention.

Indeed, as the last point demonstrates, another key factor would seem to be designers' ability to connect the dispute resolution system to the goals and incentives that lie at the heart of an organization. As David A. Hoffman & Salil Mehra demonstrate with respect to Wikipedia, the dispute resolution system plays an important role in "weeding in" productive editors and "weeding out" destructive ones so as to advance Wikipedia's unique collaborative project.[163] Such a connection between an entity's dispute resolution system and other units seems similar to the type of thinking that underlies Shariff's article and that has driven eBay's efforts in this domain. This type of approach also implies a deep understanding of the significance of data collection and requires information sharing across departments and sections of the organization. The impact on dispute system goals can be expected to extend beyond the blurring of physical boundaries, reshaping conceptual boundaries that have taken hold in the ADR field. The *Benoam* case is a good demonstration of the ways in which digital technology can blur clear distinctions between ADR and formal dispute resolution, and, consequently, shift the focus within ADR systems to systemic goals that have typically been associated with the court system. At the same time, the *Benoam* example is of course a product of the setting in which it operates and the unique characteristics of its stakeholders.

In terms of the users of dispute resolution services, or stakeholders, digital technology seems to offer important advantages. Digital technology can make participation by stakeholders much more meaningful than it has traditionally been by allowing a wide array of voices to be heard due to capabilities for synthesizing input from a large number of participants, the ability to offer input at convenient times from afar and, in some cases, the opportunity for anonymous input.[164] Furthermore, users can become actual designers of the dispute resolution systems on which they rely. Wikipedia's informal "mediation cabal" dispute resolution avenue is one example of a bottom up dispute resolution mechanism that exists alongside parallel

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163. *See* David A. Hoffman & Salil K. Mehra, *Wikitruth Through Wikiorder*, 59 EMORY L.J. 151, 190-205 (2010).

164. *See* Katsh & Wing, *supra* note 67, at 40-41.

processes offered by the site.[165] This of course is another clear mani-
festation of the threats technology poses for professional boundaries,
as individual users, with no background in DSD (nor ADR for that
matter) can establish dispute resolution processes and systems. We
can expect a layperson's design to differ from that of a professional
practitioner of DSD, resulting in an end-product that resembles fa-
miliar processes but also departs from some of the basic prevailing
assumptions among ADR professionals. It is perhaps not surprising
therefore that the mediation cabal process does not offer confidential-
ity to disputants and all mediation records are widely available on-
line.[166] By contrast, the formal mediation process conducted on
Wikipedia is a discrete, closed process.

While technology opens the door for greater user involvement
and input, the manner in which large organizations currently operate
may undermine the ability of certain stakeholders to participate in
the design process. Technology can subject stakeholders to power, not
only empower them. The work performed by Lisa Bingham on control
over DSD[167] should be helpful in understanding how technology can
play a role in removing (or allowing) stakeholders to exercise choice
and control over the design of the system, in their selection of dispute
resolution venue, and in the ultimate outcome of the resolution ef-
forts. Indeed, when evaluating these questions, designers need to be
aware of the fact that when introducing digital technology, what is
changing is not merely the arena in which a dispute resolution pro-
cess is offered. In many cases we are transforming the process and
changing its characteristics in ways that are bound to have an impor-
tant impact on stakeholders and the organization alike. As others
have demonstrated, technology is by no means neutral and a particu-
lar software design reflects a preference for certain values over
others.[168] While this is certainly a concern, it should be kept in mind
that the danger for misconduct, negligence or incompetence by a
third party conducting a private and flexible ADR process in a face-

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165. *See Dispute Resolution*, WIKIPEDIA, http://en.wikipedia.org/wiki/Wikipedia:
Resolving_disputes (last visited Nov. 13, 2011).

166. It is important to note that there have been cases of "open" mediation models
in the past, such as the San Francisco Community Boards Program (see Frederic L.
DuBow & Craig McEwen, *Community Boards: An Analytic Profile*, *in* THE POSSIBILITY
OF POPULAR JUSTICE: A CASE STUDY OF COMMUNITY MEDIATION IN THE UNITED STATES
125 (Sally Engle Merry & Neil Milner eds., 1993)), but these have remained the
exception.

167. *See* supra notes 42-45 and accompanying text.

168. *See generally* Helen Nissenbaum, *Values in Technical Design*, *in* ENCYCLOPE-
DIA OF SCIENCE, TECHNOLOGY, AND ETHICS lxvi, lxvi-lxx (Carl Mitcham ed., 2005) (dis-
cussing the challenges of integrating values into the design of technology).

to-face setting can be of similar, if not greater concern.[169] The same software that promotes a particular value choice also makes design choices more visible, minimizes third party discretion due to enhanced structure, and allows for more ex-post study of the impact of design choices and quality control of decision-making where discretion is employed through data documentation and analysis.

Finally, as the examples presented in the previous sections make clear, digital technology is transforming the nature and characteristics of the different dispute resolution processes and blurring the prevailing conceptual boundaries within DSD. Dispute systems designers should acknowledge and embrace this change. The emerging technology-driven structures for dispute resolution processes may actually prove to be a better way to structure the process in a given context. Associated with this emergence of novel approaches to DSD, there are new conceptual distinctions between formal and informal, confidential and public, flexible and structured, and various hybrid combinations. This realization calls for an ongoing reevaluation of the assumptions and conceptions that underlie the current design of dispute resolution systems and processes, opening up new possibilities and options that may be tailored to fit particular circumstances. As the field matures, we may be better able to assess the implications of these new opportunities for DSD.

CONCLUSION

In many ways, the impact of technology on the DSD field is likely to be similar to the transformations and pressures other professions are experiencing. The legal profession, for example, initially viewed technology as a means for enhancing efficiency and extending attorneys' tool boxes. Over time, however, it has become clear that the introduction of digital technology and the spread of internet communication have begun to threaten the legal profession's backbone: its monopoly over legal information and expertise.[170]

While the law and legal interest groups continue to protect lawyers' domain,[171] the widespread availability of legal information, forms and documents as well as the ability to search within large bodies of information without having to resort to complex legal categories and terms of art, have forced the legal profession to start

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169. *See* Rabinovich-Einy, *supra* note 70, at 266-67.
170. *See* KATSH, *supra* note 61, at 218-26; SUSSKIND, *supra* note 61.
171. This is evidenced by the fact that unauthorized practice of law statutes in the U.S. are still prevalent. *See, e.g.*, MODEL RULES OF PROF'L CONDUCT R. 5.5 (1983).

adapting to the new reality.[172] This trend is still unfolding, but we can already see some of its impact. The following phenomena can be attributed, at least in part, to the impact of digital technology: the growing assignment of technical work to non-professionals,[173] the increase in specialization in niche areas among attorneys,[174] the rise in global legal services,[175] and, more generally, the occurrence of a deeper shift in the understanding of the role of the attorney.[176]

Similarly, dispute systems designers will have to demonstrate their relevance in an era in which access, use and control of information is changing, the nature of expertise is shifting and many of the traditional intermediaries are being displaced. They will have to gain a deeper understanding of the impact this shift to digital communication has on their field as well as identify what is changing. New technologies may not replace traditional information workers but they are displacing them in the sense that new specialties emerge and old specialties may be valued less. Dispute systems designers can have a head start in redrawing the dispute resolution landscape if they recognize the opportunities provided by technology, but they will be increasingly vulnerable if they do not.

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172. *See* KATSH, *supra* note 61, at 218-26.

173. *See* Herbert M. Kritzer, *The Professions Are Dead, Long Live the Professions: Legal Practice in a Postprofessional World*, 33 LAW & SOC'Y REV. 713, 721, 727-28 (1999).

174. *See id.*, at 725-727.

175. *See id.*, at 730-731.

176. *See* SUSSKIND, *supra* note 61, at 6, 270-84; RICHARD SUSSKIND, TRANSFORMING THE LAW: ESSAYS ON TECHNOLOGY, JUSTICE AND THE LEGAL MARKETPLACE 102-05 (2003); M. ETHAN KATSH, LAW IN A DIGITAL WORLD 172-94 (1995).