Applying Information and Communications Technology to Multiparty Conflict Resolution Processes

By Jason Gershowitz and Colin Rule

Information and communications technology (ICT) is transforming the practice of dispute resolution. As networks expand, ADR practitioners and the parties they work with are increasingly bringing ICT into their resolution processes – whether intentionally, through process design, or organically, as parties pull out their smartphones, click on an app, and thereby make the decision themselves to engage with ICT.

Traditionally the conflict resolution field has been slow to adopt new technologies. Probably the individuals drawn to ADR practice are not usually early adopters for both personal and financial reasons. In addition, mediation and similar conflict resolution approaches have placed great emphasis on the power of face-to-face interaction with and between the parties, which may have led to skepticism about the benefits of computer-mediated communication. But as the adoption curve for technology in our society continues to rise, with almost 91% of US adults under the age of 50 connected to the internet and 30% of US adults using Facebook, Twitter, or other social media, it is inevitable that our field will need to think hard about how technology affects our work.

ICT is particularly relevant and potentially useful in multiparty conflicts, including Environment and Public Policy (EPP) disputes (such as those around climate change, energy regulation, watersheds, or public lands). ICT enables interactions between people separated by both time and geography, and no dispute resolution process wrestles with the challenges of time and geography more than multiparty processes. ICT can help to convene widely dispersed groups, share complex scientific and technical information, and focus conversations toward solutions. It is widely recognized that collaborative process facilitators need to consider ethics and process, and (at a minimum) have a basic understanding of the substantive matters under discussion. We believe those facilitators should also have at least a basic level of comfort with and understanding for how the technology might be used in EPP processes. As societal adoption of ICT accelerates, facilitators should proactively engage its risks and benefits, optimizing the chance that it will aid instead of hinder their efforts.

We have collaborated with a group of EPP professionals over the past three years to begin discussions around best practices for integrating ICT into multiparty work. We developed a website to serve as a hub for discussions, facilitated a session at the 2010 ACR EPP conference focused on the topic, and participated in a variety of online webinars and conference calls to share practitioner experiences. We also participated in a working meeting hosted by the Department of the Interior for Environmental Conflict Resolution (ECR) experts to share ideas around best practices.

Now, through our mutual connection with RESOLVE, we have launched the *Collaborative Technology Tool Shed Program*. The program provides access to innovative collaborative technology and support for multiparty conflict resolution processes. The need for facilitators to have, or have access to, specialized knowledge of collaborative ICT is rising as multiparty processes incorporate ICT. We hope to help EPP practitioners increase the value of their interactions and provide more opportunities for engagement with the process.

Assessing the opportunities for using ICT requires an understanding of different approaches for applying technologies *and* an awareness of the advantages and disadvantages in doing so. In this short article, we describe some of the ways we think about these tools and encourage practitioners to learn more.

How It Works

One of the challenges of thinking about how ICT can benefit multiparty processes is figuring out exactly how each new technological tool works and what it can do. There are so many platforms, apps, and services available that getting up to speed can be overwhelming for the uninitiated. Often conversations about ICT in conflict resolution devolve into people trumpeting the advantage of their platform over others, or explaining how they do things specifically with their collection of hardware and apps. However, not everyone has a Samsung phone, an Apple tablet, or a WebEx license, so recommendations from one person may not work in every other context.

We think a better way to illustrate how these tools can provide benefits is to tell a few stories. Here is a sampling of theoretical scenarios, based on real-world experiences we have witnessed, which demonstrate some of what is possible.

The in-person, technology empowered working group

A group of thirty-five stakeholders comes together in person to discuss plans from a local developer to transform a vacant lot into a movie theater with adjacent parking. After a brief introduction, the stakeholders use their mobile devices to submit a list of top concerns about the project, which the facilitator then collects and distributes to all the participants back on their mobile devices. The stakeholders then rate each concern by importance from one to five. The facilitator then ranks all the topics by aggregated importance on an LED projector in the front of the room, and the participants work together to hone the list down to eight key concerns, which serves as the agenda for the meeting. The participants then use the LED projector to view videos and satellite images of the vacant lot. The developer provides computer generated images of what the building will look like if built to the current plan. An environmental scientist shows an animated schematic that demonstrates potential problems from runoff from the parking lot draining into a local creek. The facilitator then brings up a word processor on the projector and the parties collaboratively draft a summary of the concerns that emerged during the meeting. The meeting then adjourns. The next day the developer re-designs the plan to address the concerns,

and the re-design, highlighting changes made from stakeholder input, is shared with all the stakeholders via email for review and comment.

How ICT Made a Difference:

Mobile Polling and Ranking	Saving time
Projector	Achieving a common understanding
Video and Satellite Imagery	Varying learning medias; Common understanding
Collaborative Writing	Reinforced support for solutions

The online/offline regulatory process

A facilitator convenes an expert group to discuss regulations for acceptable recreational motor vehicle use in a state park system. The facilitator introduces himself via email to all the participants prior to the first in-person meeting and asks them to complete a short survey to gather their perspectives and relevant research on the issue. The facilitator follows up with a series of emails, telephone chats, and in-person one-on-one meetings ensuring participants with all levels of technological capacity are engaged. The participants select a workable meeting time with free online scheduling services. The parties meet together for the first time and introduce themselves. They identify key issues (on old-fashioned flip charts) and organize into working groups to tackle each major issue in sequence. The meeting breaks up but the working groups continue to collaborate online in web-based meeting rooms provided by the facilitator, who monitors progress in each working group. The facilitator spends much more time focused on the wildlife impact working group because the science there is much less developed, which generates more disagreement. The other working groups quickly answer the key questions and then draft and agree to a set of recommended rules. Finally, the working groups all finish their assigned tasks and the participants select another in-person meeting time. At the meeting, each working group presents their final recommendations, and the facilitator knits their work together into a two-page consensus report, which is jointly edited by all participants in real time. All participants (except for one) agree to support the final set of recommendations, which are sent back to the state environmental protection regulator for approval.

How ICT Made a Difference:

Online Survey	Efficient information gathering; Broad participation
Online Scheduling Tools	Efficient logistics; Consensus / participant-lead logistics
Web-based Meeting Rooms	Increased progress between meetings
Collaborative Writing	Reinforced support for solutions

A geographically dispersed public feedback initiative

A university-based center for environmental studies receives a grant from a foundation to address conflict around pollution of a section of a major river that crosses three states. It is clear that many thousands of people are fiercely passionate about the issue, as it affects everyone from recreational users of the river, to agricultural interests, to businesses and municipal utilities. The team managing the process for the center launches an outreach campaign in magazines, newspapers, social media, and websites to notify likely interested parties in the project, which they give a catchy name. The team's outreach points interested individuals to a single landing page, which features a compelling and inspirational animated video about the future of the river. Visitors are encouraged to complete an anonymous deliberative survey that collects and prioritizes participants' concerns while presenting up-to-date scientific information (shared in open standard data formats) on the state of the river. Interested participants register for online discussion groups, mixing individuals with diverse perspectives, to address key questions about the optimal path moving forward. The center manages the project for two months, sharing results dynamically as more information is collected. The project culminates in the production of a documentary film about the challenges identified and likely solutions, which is presented online and in local showings across the affected geographies. The participants also elevate the visibility of the documentary by sharing links and announcements through the same social networks the team initially used for outreach.

How ICT Made a Difference:

Social Media Outreach	Broad participation; Empowered participants
Online Survey	Efficient information gathering; Broad participation
Online Discussion Groups	Increased progress between meetings
Video Documentary	Varying learning medias; Empowered participants

The computer-powered science task force

A team of researchers is convened to determine the impact of pesticide use on bees in a particular agricultural area. The project facilitator creates a secure online repository for all participants to upload confidential information and relevant research, which leads to a large volume of scientific data sets and studies, which are indexed so that they can be searched in real time inside the repository. Several researchers volunteer to set up monitoring stations across the geography in question, with webcams and real-time data read outs available to task force participants in open data formats. These results are automatically visualized using open source mapping software, so that increases and decreases appear in time-lapse format, which may generate insights (perhaps correlating changes to known periods of pesticide spraying.) Another researcher designs a mathematical model for bee populations that can project outgrowth and declines for 30 years. This model is made available via a private website to all the task force participants so that they can tweak and improve it, and use it to test different proposed scenarios. The researchers generate several scenarios using the collected data and the model, eventually

crafting a set of recommendations back to the state Department of Agriculture and writing a series of research papers based on the data collected. The project is such a success that the researchers receive funding to keep the monitoring stations active and to distribute bi-annual reports via their project web site, along with making their data sets publicly available to researchers around the world.

How ICT Made a Difference:

Online Document Repository	Secure data collection; Accessible information sharing
Webcam and Real-time Monitoring	Instant shared data collection; Increased data depth
Open Source Mapping Software	Accessible data visualization; Robust data analysis
Secure Project Website	Secure working area

Distilling Best Practices

These stories illustrate some of the ways ICT can help multiparty conflict resolution processes work more effectively. They show that ICT doesn't always mean online interaction. On the contrary, ICT can be used in-person very effectively, as the initial example demonstrates. Projectors and wireless devices can streamline in-person meetings to save time while continuing to focus participants on the key issues, providing instant alternatives to hand written flip charts (electronic flip charting) and organizing information with colored sticky dots (mobile polling). ICT can also help to ensure buy-in from participants through efficiently engaging large groups and synthesizing feedback into documents jointly drafted by everyone in attendance.

The second example shows how online interaction can work hand in glove with face-to-face interaction. Effective use of ICT can turn what might be five face-to-face meetings into two, focusing the conversation in advance of the first meeting, increasing capacity to engage and make progress between meetings, and generating clear recommendations for online distribution and approval at a follow-on meeting. Technologies also enable the facilitator to focus his or her energy on the conversations that require the most attention and time, which minimizes the frustration and delay that might be experienced by other working groups that are able to make quicker progress.

The third example demonstrates how ICT can enable participation across a wide geographic area. Groups that would be impossible to convene face-to-face can be brought together easily via online public participation processes. Groups can learn about the complexity of tradeoffs and decisions through well-designed deliberative polls and interactive exercises. Online tools also allow team members to create and distribute compelling multimedia experiences while empowering participants to share work products to a much larger audience than in-person only processes.

The fourth example shows how confidential scientific and technical information can be gathered, processed, and disseminated via ICT in ways that allow expert working groups to more effectively address complex substantive issues. Computer modeling can enable groups to reality test different scenarios to estimate impacts of different policies and strategies. Data sets can be gathered and widely distributed. The same technological systems are available to monitor solution effectiveness and provide ongoing governance after the consensus-based process ends. The front-end investment in ICT infrastructure can provide long-term returns beyond the scope of the project.

Expanding the tool box

There is no one right way to integrate technology. As with hand tools, there may be four or five tools in the box that can solve a particular problem (*e.g.*, saw a hole in a board, unscrew a pipe, etc.) and each may have its own adherents. The same is true with technologies – one person may think that Apple iPads are the best solution, another may argue for Google Docs, another may argue for a LinkedIn group. It can be a challenge for practitioners to make heads or tails of all the suggestions.

At the 2010 Department of the Interior meeting, the experts in attendance came up with high-level categories for different kinds of ICT tools useful to multiparty processes:

1. Surveys / polling / comment collection and analysis
2. Social networking services
3. Web forums / email lists
4. Trade off analysis / decision aiding / online deliberative tools
5. Modeling / simulation
6. Project management / scheduling
7. Visioning / scenario development
8. Mapping / visualization
9. Governance support

The attendees then devised rough phases that are typical in multiparty processes (which is not easy, because every multiparty process is unique). Not every process goes through all these phases, but every process usually touches one or two of the phases, at least:

1. Explore/inform
2. Consult
3. Advise
4. Decide
5. Implement

We then created a matrix that demonstrated the consensus view of the value of that particular tool in that particular phase of a multiparty process, which is available as Figure A. (The size of each circle corresponds to the tool's perceived value in that phase.)

Figure A: Estimated value of ICT tools as different stages of multiparty processes

Advantages and Disadvantages

ICT can bring many advantages to multiparty processes. Most obviously, when used right, it can make processes operate much more efficiently, which lightens the load on facilitators and participants alike. Documents can be centrally stored, searched, and version-tracked, which makes distributing up to date information to participants very easy.

Some of the other benefits of ICT are less apparent. One capability ICT introduces is the possibility of conflict resolution via asynchronous, or text-based, interaction, like email. Interacting asynchronously can empower parties to be at their best, and to keep them focused on the key issues and avoid unnecessary escalation. Asynchronous communication also enables facilitators to target their communications to particular parties, even enabling caucusing with parties as the joint discussion goes on concurrently. Quite a bit of scholarship on the advantages of asynchronous communication exists in the ODR literature, which mainly focuses on two-party disputes, but those advantages are equally if not more true in multiparty contexts.

However, the introduction of ICT into multiparty processes is not all wine and roses. Some parties feel threatened by technology, and pushing them to use it can lead them to check out, or worse, to resist the process and feel like they are being railroaded. Facilitators can also lose control as parties start to communicate through technological channels inaccessible to the neutral. In addition, as a corollary, facilitators can sometimes overreact and misuse their technological powers, which can frustrate parties and make them rebel against the process. Some parties who are very comfortable with ICT may get an advantage, particularly if they are on fast internet connections that allow them to check email a hundred times a day, versus other participants who may access the system through shared computers or dial-up. Of course, inappropriate exercise of the facilitator's role and unevenly distributed resources can also occur in disputes that do not use ICT, but the technology's power can magnify their effects. Finally, the inclusion of whiz-bang technology sometimes reorients the conversation to focus on the features of the technology as opposed to the issues that really need to be discussed.

Conclusion

We believe the benefits that result from the integration of ICT into multiparty processes outweigh the liabilities. Our society is digitizing, and as a result, parties will expect to be able to use ICT tools in their conflict resolution processes. Users will demand easily accessible platforms that are open, transparent, trustworthy, and well documented. They will also expect processes to adapt and provide different roles and engagement opportunities for parties with different levels of interest. Federal, state, and local government offices and agencies will increasingly use ICT to facilitate their rulemaking, policy dialogues, public participation, and case management obligations. It may take longer for change to occur in government, but eventually ICT will be as commonplace in these public processes as it currently is in private processes.

What will the future look like? It seems clear that multiparty dispute resolution practitioners will come to depend upon ICT, both to ease administrative burdens and to improve the frequency and specificity of their communication with their parties. ICT will become routine in pre-meeting preparation, post-meeting follow up, and in keeping processes and parties engaged and moving towards solutions. Facilitators will find that participants engage each other using technologies with or without the group's consent. Facilitators who are not tracking these dialogues will be disadvantaged in both in-person and asynchronous multiparty processes. The RFPs that service providers respond to will specifically require ICT to be addressed in the proposals, and funders will request ICT that is sophisticated, user friendly, well integrated, and thoroughly tested for stability.

It is incumbent upon all of us in the conflict resolution field to get smarter about information and communications technology, and to anticipate the needs of our parties and customers. Practitioners should think through how they plan to leverage and manage ICT within the process. in advance of implementation. You do not want to experiment on your parties, with fingers

crossed that nothing will go wrong. If you are not confident in your ability to manage the technology effectively for your process, find a collaborative technology specialist who will help you.

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