Disputes where issues of science and technology are central are particularly well suited, and I would argue, best suited for ADR. Consider the lawyer drafting a contract involving complex technology. Both counsel and the client often justifiably fear that if a dispute were to arise, explaining the technology to a judge or a jury would be a daunting task. Many disputes today turn on issues of complex chemistry, electronics, fluids, aerodynamics, or computer programming, to name only a few examples. Most judges have neither science degrees, nor even took a science course in college, but rather, understandably, studied history, political science, English, economics or business. Of course, there are jurists with a science background, but they are a small minority, and with random draw systems, there is no assurance of drawing one. While it is possible that one or more jurors in a case may have some advanced science education, that too is rare. ADR enables parties to select a mediator or arbitrator(s) with the specific applicable technical education and/or experience to provide a more effective and reliable means of resolving these disputes.

In common parlance, “technology” has come to refer only to computers and software, and the term “technology litigation” is often assumed to mean only patent litigation. The term “technology” is far broader and refers to all of the applied sciences. And, “technology disputes” encompass far more than just patent and other intellectual property (“IP”) disputes. Rather, the terms also apply to disputes where the application of scientific principles, i.e. physics, chemistry, biology, electronics, mechanics, etc., are required to determine whether there was compliance with a contract, the cause of a device, system, or material failure, or patent or other intellectual property rights. I submit that ADR, whether mediation or arbitration, generally

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can provide a more cost efficient and predictable means of resolving these disputes than court proceedings.

**MEDIATION**

Mediation is becoming more and more accepted in the business community as a more cost effective and generally mutually beneficial means of settling all types of disputes than submitting the dispute to a court or an arbitrator to decide. As mediators like to say, “All cases are settled.” In mediation, the parties agree on the settlement, while in arbitration or court action, the settlement is imposed on the parties by a third party by means of a court judgment or arbitration award. This is particularly significant in disputes between businesses centering on technology. Disputes in these contexts often arise from a technical problem that needs to be solved or a technical question that needs to be answered rather than just a monetary dispute.

While technology cases can involve the emotions and egos of the participants, when it gets down to the science and engineering issues, scientists and engineers will focus on problem solving. Of course, even in technology disputes, there often are emotions and egos involved, which a trained and experienced mediator needs to defuse before the technology issues can be addressed productively. But, scientists and engineers are basically problem solvers. That is how they were educated; and that is what they do professionally. The job of the mediator is to take the parties from a confrontational mode to problem solving. If the mediator has the scientific/engineering knowledge to identify and understand the underlying technology issues the mediator can focus the parties on identifying the specific problems that need to be resolved and assist them in developing a methodology to solve those problems.

Resolving the underlying issues may involve developing an agreed testing protocol to determine causation or finding a fix to a system, component, or product issue. If the mediator is able assist the parties in solving the technical problems, the parties can then focus on whatever financial and/or legal issues remain. Rather than only focusing on negotiating a settlement payment, the parties may be able to negotiate an arrangement to restart a suspended and seeming failed project or business relationship or create a new mutually beneficial relationship. Even where there is no ongoing relationship to be had, reaching an understanding of the real engineering problems can lead to a more focused and productive financial negotiation.
An effective mediator must gain the respect and trust of the participants. In a technology dispute, while the mediator may be trusted as a person, the process is greatly benefited, and the likelihood of success is enhanced, if parties trust that the mediator understands, not only the technical language, but the underlying technology itself. If the dispute involves patents and their potential infringement, then a mediator also familiar with the intricacies of patent law and patent interpretation would be most effective.

The mediator’s job is to facilitate the negotiation of the parties to more efficiently and expeditiously reach a mutually satisfactory resolution. If the mediator does not understand the science or engineering at issue, the mediator may be asking the parties to negotiate in a context where one side or both may be basing their positions on issues that are not relevant to the dispute or, at worst, not based on sound science or engineering. A party may truly not understand or simply be trying to bluff the other party. The mediator needs to be able to perceive when a position asserted has no scientific/engineering merit or where a party is missing the real issue. More importantly, if the mediator understands the industry and can understand the problems faced by both sides on a sophisticated level, the mediator can more effectively assist the parties to “think outside the box” and develop a business and/or engineering solution with a “win-win.”

In addition, if the dispute will or is likely to involve a court action or an arbitration, the mediator who also has litigation and/or arbitration experience can often be more effective by being able to assist the parties and counsel to realistically discuss what is likely to happen in a court or before an arbitration panel, if the matter is not settled in mediation. Often parties, and sometimes counsel, do not have a realistic understanding of likely time required for a trial or arbitration, the types of evidence or witnesses that will be persuasive, the costs of litigation, or the likely range of, rather than the maximum potential, judgment or award.

Good mediators also need to be trained and skilled in dispute resolution and experienced in the process of mediation. A good mediator must understand the human factors at play and be skilled at employing appropriate mediation techniques using his or her own style.

Selecting a mediator can and should be a key focus of counsel when the parties agree to mediation. Mediation involves a significant
commitment of time and money. It is in all parties’ best interest that mediation be success and result in a resolution of the dispute. The right mediator will improve the chances of success. Mediators can be engaged independently or through an ADR organization such as those discussed below regarding arbitrators. These organizations, as well as the ABA, numerous state, local and specialty bar associations, professional organizations, legal continuing education providers, and universities have mediation training programs and, in some cases, issue certifications.

ARBITRATION

Where a technology dispute is not or cannot be resolved by negotiation, mediation or otherwise, arbitration, I submit, is generally preferable to a court trial. The most common complaints from lawyers and clients alike regarding court trials of technology cases are twofold.

First, educating a judge or a jury about the underlying science greatly increases preparation and trial time and costs. Additional teaching time to provide the trier of fact with the applicable basic science/engineering principles, testing methodologies, and data analysis, among other things, quickly increases lawyers’ and expert fees. Often it is necessary to engage additional experts for trial just to provide the basic science background to the trier of fact, in addition to the experts who will render the ultimate opinion evidence. Even if the same experts are used both for background and ultimate analysis and opinion, often a multi-day, or even multi-week, basic science course has to be taught through expert testimony. Creating demonstrative exhibits to assist in teaching the relevant basic science further increases costs.

Second, even with the expenditure of additional time and money, clients and counsel often fear that the judge and/or jury will not fully understand the science or engineering and will reach conclusions based on the personality of the witnesses, the glitz of the presentation, or their gut feeling, rather than accepted scientific principles and good engineering analysis. Whether or not well-founded, these perceptions may undermine the client’s and the public’s confidence in the entire legal process.

One can argue that Daubert and its progeny provide a means of keeping “junk science” out of the court room. However, in complex

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technology cases, it simply is neither fair nor reasonable to expect many, if not most, judges, without scientific training, to be able to determine when “scientific opinions,” presented by articulate and apparently well-credentialed “experts,” are or are not based on good science, supported by appropriate testing, sufficient data, and rigorous analysis. Even if the “science” presented by the expert witness is uncontestably good and well accepted, it still may have no relevance to the real issues that should be determinative of the dispute.

Unlike court proceedings, in arbitration, parties can specify the qualifications of the trier of fact. All dispute resolution provisions, no matter the context, should be carefully drafted, with among other considerations, the qualifications of the arbitrator(s). This is particularly true for contracts where the likely disputes will involve science, engineering or computer software or patent issues. These provisions can specify that the mediator and/or arbitrator(s) be lawyer(s) with background and experience in the relevant field of science or engineering, and/or the particular industry, e.g. electronics, aircraft design, chemistry, polymers, bio-technology, pharmaceuticals, structural design, software, geology, mining, mechanical design, computer software and/or hardware, medical devices, pharmaceuticals, etc. It often is not necessarily important or even practical to specify a very narrow industry or discipline for the lawyer arbitrators, as engineering, chemistry, electronics, mining, etc. could be sufficient. What is important is that the arbitrator has the relevant education and experience to understand the science or technology issues and the types of evidence that likely would be presented in any dispute. When there is a panel, often one or more of the panelists may be a non-lawyer professional with in depth subject matter knowledge. Of course, where patent issues are involved, the arbitrator(s) should be knowledgeable in patent law.

An arbitration turning on sophisticated science or engineering, likely will be a somewhat complex procedure. So, as important as having the relevant engineering and/or science background, the sole arbitrator or panel chair, should also be trained and experienced in adjudicatory proceedings and, in particular, administering complex arbitrations. In my opinion, where there will be legal issues involved, and that is true in almost all such cases, the sole arbitrator or panel chair should always be a lawyer skilled at determining and applying the appropriate governing law.
However, describing the background of the arbitrator is not always enough. Once a dispute arises, there must be a quick and efficient means of obtaining the described arbitrator(s). A third party administering organization such as the American Arbitration Association (AAA), International Institute for Conflict Prevention and Resolution (CPR), JAMS, or specific industry organizations provides these services. For international disputes, there are numerous choices including the International Centre for Dispute Resolution (ICDR), CPR, International Chamber of Commerce (ICC), and many more. These organizations all maintain lists of pre-vetted qualified arbitrators with detailed resumes listing their areas of special training and experience. A new organization, the Silicon Valley Arbitration and Mediation Center (SVAMC) limits its list only to neutrals highly experienced in resolving technology disputes.

An administering organization also serves as a buffer between counsel and the arbitrators, and handles such issues as possible conflicts arising after appointment, scheduling, and collecting and escrowing the arbitrator(s) fees. Each organization has its own set of rules that govern the arbitration unless modified by agreement of the parties. Consequently, before selecting an organization its rules should be reviewed for suitability. Where there is a special need or desire for special procedures or time limits, the arbitration agreement can delineate the procedures and rules that will govern, often stating procedures in detail.

Generally it is the transaction lawyer who drafts the business agreement who also drafts the arbitration clause. Unfortunately, that clause often is lifted either from another transaction document or from a form, with consideration or understanding as to whether the mandated procedure is either appropriate. It is better practice for the transaction lawyer to consult a litigator experienced in arbitrations to assure that the arbitration procedures mandated establish a cost effective and realistically implementable process.

When drafting an arbitration clause and specifying an administering organization or requiring the use of arbitrators from an organization’s list, it is important to investigate whether that organization has arbitrators with the requisite background, rather than learning after a dispute arises, that they do not.

Advanced training for arbitrators is available from the various arbitration administering organizations, bar associations, CLE
organizations, and numerous educational institutions, among others. All arbitration organizations are now focusing their training on methodologies for controlling costs. Most of these organizations, including AAA, ICDR, CPR and ICC, have recently amended their rules to provide arbitrators with the authority to manage arbitrations in a cost effective manner, while providing each party with the opportunity to fairly present its case. Selecting arbitrators trained and experienced in administering cost effective proceedings should be a focus of the selection process, not only for technology cases, but for all complex cases.

A skilled arbitrator, with background in the technology involved, will enable the parties to present their evidence and testimony going directly to the ultimate facts, rather than spending time explaining the basics of science or engineering. The experts can present their methodologies, data, conclusions, and opinions. They will be testifying before arbitrators familiar with their language and the underlying scientific principles upon which they base their testimony. They will not have to simplify their testimony as to scientific or engineering issues, fearing that the judge or jury will be unable to fully understand the science behind their testing, analysis, and/or opinions.

The discussion above applies equally well to other areas involving highly specialized knowledge, such as securities, banking, construction, and professional sports leagues, among others. As a result, many industries established highly specialized ADR organizations with panels of qualified arbitrators or mediators. Various traditional ADR organizations may also maintain lists of arbitrators and mediators with highly specialized industry experience.

In conclusion, while it is certainly possible to have a full and fair trial in a technology case with a judge and/or jury, ADR, with the properly selected mediator or arbitrator(s) is generally better suited to providing an efficient and cost effective means of dispute resolution. Having technology disputes mediated or adjudicated by professionals knowledgeable in the underlying science and/or engineering generally provides the parties with the confidence and security that the facts and evidence will be understood and that the outcome, whether a mediated settlement or an arbitration award, resulted from a fair and thoughtful process.