## **ARBITRATION**—

# An Ideal Way to Resolve High-Tech Industry Disputes

process—arbitration or litigation—provides for expert decision makers and awards that are enforceable globally? Which would best protect your high-tech business?

Which

#### BY RAYMOND G. BENDER, JR.

Mr. Bender serves as an arbitrator in domestic and international commercial arbitration. He teaches alternate dispute resolution law at the Washington College of Law, American University, in Washington, D.C. A retired member of Dow Lohnes PLLC, he practiced law for nearly 35 years, advising companies in many different high-tech industries. Prior to joining Dow Lohnes, Mr. Bender served as a law clerk to the Hon. James R. Durfee of the U.S. Court of Claims (now the U.S. Court of Appeals for the Federal Circuit). Mr. Bender can be reached by telephone at 202-776-2758 or by e-mail at RBender@DowLohnes.com.

igh-tech businesses should look to arbitration when they have commercial disputes because arbitration's core features respond in a compelling way to the needs of the high-tech community for expert decision makers. The term "high technology" (or the shorter version—"high-tech") is routinely used in modern vocabulary, but the meaning is hardly precise. Even dictionary definitions are quite general. One defines "high technology" as "technology that uses highly sophisticated equipment and advanced engineering techniques," such as microelectronics, genetic engineering and telecommunications.<sup>1</sup>

In the early 1980s, the Organization for Economic Co-Operation and Development (OECD) created a list of manufacturing businesses in the "high-technology" sector that produce "high-tech products." This list contained the following businesses: aerospace, pharmaceuticals, computers and office equipment, electronics, communications and precision instruments.<sup>2</sup>

High-technology companies often contract with one other and with companies that provide services to other businesses. For example, they enter into contracts to: acquire, sell or finance a high-tech business or project; manufacture, distribute and/or deliver high-tech products or provide a high-tech service; license patents or other intellectual property rights; and purchase insurance policies covering risks associated with the

Designing and manufacturing these products involve intricate processes that can challenge even the most experienced aerospace engineers.

Telecommunications and IT systems facilitate the transmission and receipt of voice, data and video signals instantaneously across oceans and over wide geographic expanses via terrestrial and satellite-based networks. These businesses have had a transformative impact on the economic, social and cultural fabric of modern life. Revolutionary advances that have changed how people work and play include fiber optics, digital communications, state-of-the-art network equipment, consumer devices enabling a broad array of applications, advanced software, and creative network management. A significant development noted by one IT executive was the design and

## The lack of an expert decision maker in litigation is the principle reason why arbitration is better suited to resolve complex technical or scientific disputes.

production or operation of high-tech assets.

Arbitration has distinct advantages over court litigation when contracting parties have a complex commercial dispute that needs to be resolved promptly, fairly and economically. Disputes that arise in high-tech fields tend to be among the most complex. High-tech businesses have other characteristics in common besides complex that make arbitration a more efficient and effective process for them to use to resolve disputes.

#### Shared Characteristics of High-Tech Businesses

The traits that high-tech businesses have in common are complex processes, the use of proprietary and confidential information, an international focus, a fast-paced, competitive market, and in some fields, government regulation.

Complexity. The complexity of high-tech businesses is mainly due to the fact that high-tech products and services are grounded in the domains of applied science or engineering, or both. Let's look at three high-tech business examples: aerospace, information technology (IT)/telecommunications, and biotechnology.

The aerospace industry designs and manufacturers everything that travels through the air or space, including civil and military aircraft, guided missiles, space vehicles, communications satellites that are placed into geostationary orbit approximately 22,300 miles above the earth's surface, and rockets for launching them into space.

manufacture of "enterprise systems"—i.e., electronic equipment and software that help businesses address particular problems.<sup>3</sup> These products include, for example, large-scale servers, storage systems, and networking equipment. Designing these systems is a complex and intricate business, especially configuring the software elements.<sup>4</sup>

Biotechnology, the third high-tech example, combines the use of science and technology. Let's begin with a definition. The United Nations Convention on Biological Diversity defines "biotechnology" as any technological application "that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use."5 How complex is the business of biotechnology? Well, in medicine, years of research, development and testing result in new pharmaceutical products, medical devices, and surgical and radiological processes. Biotechnology research in medicine has led to: the map of the human genome, an important step in understanding certain diseases and developing treatments for them; stem cell research, which is being used to regenerate damaged tissues and even clone certain body parts; and genetic testing for hereditary diseases.6

Biotechnology is not limited to medicine and health. Agricultural biotech, for instance, has enjoyed notable, if sometimes controversial, advances, including the development of genetically engineered, herbicide-tolerant, insect-resistant crops.<sup>7</sup> Industrial and environmental biotechnology has developed enzymes to produce bioplastics and biofuels. It has also employed the process of bacterial bioleaching to extract metals from ores.<sup>8</sup> On the environmental front, science has developed bio-remediation processes to eliminate pollutants in water and soils.<sup>9</sup>

Biotechnology may provide solutions to many challenges facing our world; but, as many authors have noted, finding these solutions is a demanding and highly complex endeavor.<sup>10</sup>

To resolve a dispute in a high-tech business may require an understanding of the complex science or technology behind the business. Thus, the ability to comprehend this kind of information can be very important in the context of a business conflict.

Proprietary, Confidential Information. One typically finds that high-tech companies possess proprietary and/or confidential business information, including trade secrets, from which they derive significant economic value. Much of this information can be technical or scientific in nature. Examples include engineering methods, computer programs (particularly source code), chemical formulas and algorithms. Companies do not wish for this information to be made public, let alone to be revealed to a business competitor in litigation.<sup>11</sup>

International Business. For some time, parties to international agreements have chosen international arbitration with an established arbitration institution to resolve cross-border disputes because, among other things, arbitration avoids being forced to litigate in a national court, especially in the home country of the other party. Many high-tech companies have international contracts with foreign partners, licensees or licensors, distributors, suppliers and customers. Since these agreements can give rise to many different types of disputes, high-tech companies should follow their commercial brethren in choosing international arbitration.

Fast-Paced Markets. High-tech companies operate in fast-paced, commercial markets, which are driven by intense competition. These companies need to be agile and innovative in order to remain technologically competitive. They must be able to promptly correct problems identified by their customers and readily improve their own systems. (That is why every year or two we hear advertisements for a new operating system for our computers.) One high-tech company has noted on its Web site that "[s]hort product life cycles, fast changing consumer preferences and rapidly changing technologies make speed-tomarket essential." There is a possibly apoc-

ryphal anecdote illustrating the "severity of product iterations" and the need for companies to be in "a continuous state of major new product development, making it difficult to meet objectives for revenue and margins." Its subject is a network equipment company that issued a press release announcing a new product that also "discussed the product that would obsolete the product being announced." 14

Because of the intense focus on innovation and product development, high-tech companies cannot afford to become bogged down in a lengthy dispute resolution process like litigation, as another commentator noted.<sup>15</sup> Being involved in a court case can divert more than financial resources, it can also divert the attention of management and employees away from the core business.

Government Regulation. Some high-tech businesses—particularly, aerospace, telecommunications and biotechnology—are subject to government oversight. This can add legal and regulatory complexity to the enterprise.

In the aerospace sector, for example, the Federal Aviation Administration regulates airline safety in the United States, while this agency's Office of Commercial Space Transportation must approve rocket launches and space vehicles. The U.S. Departments of State and Defense regulate the deployment of communications satellites because these products could be used improperly to transfer defense-related technologies and services to foreign recipients. For this reason, communications satellites and launch vehicles are listed on the U.S. Munitions List. They are also subject to the U.S. International Traffic in Arms Regulations. <sup>16</sup>

In the telecommunications field, the U.S. Federal Communications Commission and similar agencies abroad regulate terrestrial and satellite-based telecommunications networks. These networks are also subject to the rules of the International Telecommunications Union, an agency of the United Nations headquartered in Geneva.

In the biotech arena, advances in environmental science may generate regulation by the Environmental Protection Agency, while new agricultural technology tends to trigger oversight by the Food and Drug Administration and the U.S. Department of Agriculture.

Because high-tech companies often operate in a highly regulated environment, they not only require skilled scientists and engineers for research and development, they also need knowledgeable lawyers and other professionals to help them address challenging regulatory and compliance issues.

## Why Arbitration Is Ideal for High-Tech Disputes

The lack of an expert decision maker in litigation is the principal reason why arbitration is better suited to resolve complex technical or scientific disputes. In court litigation, trial judges are randomly assigned to cases. Though highly intelligent, a judge may have little or no experience in the hightech field involved in the case assigned to him or her, and little or no exposure to a high-tech contract or the laws and regulations that apply to it.

Also, judges are often burdened by a heavy caseload. This means that they have limited time in which to delve into the factual and legal complexities of a high-tech dispute. Jurors are generally no better able to comprehend scientific or technical testimony, since most are lay people with no particular technological, scientific, or legal expertise (although there are exceptions).<sup>17</sup> Thus, presenting complex technical, scientific and even legal issues to a jury is considered to be fraught with peril.<sup>18</sup>

The risk of an inexpert decision maker is a key disadvantage of using litigation to resolve hightech disputes. Arbitration solves this problem and it offers other key advantages for parties to hightech disputes.

Qualified Expert Arbitrators. The principal advantage is that in arbitration, the parties can agree in their contract to appoint an experienced arbitrator who has knowledge of the industry involved in the dispute, knows the "customs" or "usages" in the trade, has expertise in the science and/or technology involved, and is familiar with the applicable legal and regulatory framework, if relevant to the dispute.

The parties may agree to the number of arbitrators as well. They can have one or three arbitrators decide their dispute and agree to the manner of arbitrator selection.<sup>19</sup> In a very large dispute involving multiple areas of expertise, it could be helpful to have a panel with one arbitrator who is expert in one area (e.g., an engineer or chemist) and another who has expertise in another area (e.g., an accountant), with a lawyer as the chair. If cost is a concern, the parties could decide that a single arbitrator should decide the dispute. In that situation, the parties usually agree to select an arbitrator agreeable to both parties, who is most often a lawyer. (Some lawyers will not appoint a non-attorney as a sole arbitrator, given that legal knowledge is often needed to resolve issues of jurisdiction and arbitrability, discovery disputes or evidentiary problems.)

Alternatively, the parties could designate an arbitral institution to select the arbitrator or

panel. More often, however, the administrating institution provides the parties with a list of qualified arbitrators for the parties to consider, with the institution appointing an arbitrator or chair only if the parties are unable to agree.

The parties can determine the qualifications they want the arbitrator or panel to have and specify them in their arbitration agreement. (Parties should avoid language that is too specific or limiting to retain flexibility at the time the arbitrator or panel is appointed.) In addition to technical and scientific expertise, important qualifications include experience in deciding hightech disputes, solid arbitration management skills, and a reputation for fairness and evenhandedness. For a dispute involving legal issues, attorneys with experience advising high-tech companies on applicable laws and regulations usually are better candidates to serve as arbitrator than engineers or scientists. Familiarity with patent laws is likely to be desirable in a patent validity or infringement dispute. Practical knowledge of the regulatory environment also could be useful and help ensure a thoughtful outcome if a dispute involves the aerospace, telecommunications or biotechnology industry.

An arbitrator's schedule is important. Sometimes the most well-known experts are too busy to devote sufficient time to the case or to schedule consecutive hearing days. A less well-known expert may be a better choice. In any event, an experienced arbitrator of high-tech disputes will be better equipped than most judges to give a case the attention it deserves in order to reach a sound and reliable decision. Based on this factor alone, arbitration is decidedly superior to litigation for resolving high-tech disputes.

A Faster Process. Who expected texting to replace e-mail? That is how fast the pace of the technology sector is moving. That sector, with its vast array of new products, services and applications, needs a quick and efficient dispute resolution process so that valuable resources (both human and financial) are not diverted away from new product development. As one author noted: "Players in fast-paced technology markets cannot afford to have progress stalled for lengthy and expensive litigation." In the patent area, for example, while a U.S. patent has statutory protection for roughly 20 years, its effectiveness may diminish more quickly given the rapid advancement of technology. 1

The distractions and uncertainties surrounding lengthy legal battles can disrupt any business, but they affect high-tech firms even more intensely, given the pressure to outperform the competition and get products to market first.

Another consideration favoring the use of arbitration over litigation is that it is less adversarial and can cause less damage to established long-term relations with suppliers, business partners and customers. Ongoing business relationships are often a casualty of protracted litigation.

It must be acknowledged that arbitration has been criticized recently for not living up to its potential as an efficient and economical dispute resolution process.<sup>22</sup> Various factors contribute to the perception that arbitration can be timeconsuming and costly, perhaps as costly as litigation. One is that advocates seeking to achieve the best outcomes for their clients have interjected litigation-like techniques into arbitration—contentious advocacy, uncontrolled discovery, aggressive motion practice, and other adversarial techniques aimed at achieving a "leg-up" in the contest. These tactics invariably increase the duration and cost of the process and thereby compromise arbitration's hallmark features. However, the arbitrator and the parties' counsel can take steps to curb the use of such tactics and agree to procedures to speed the process without compromising fairness. A large commercial dispute often requires greater discovery than a routine arbitration. However, delay and cost are not an inherent part of arbitration. Quite the opposite, they are contrary to arbitration's core objec-

A Final Process with Limited Appeal Rights. There is no appeal on the merits in arbitration.<sup>23</sup> The arbitrator's ruling is given great deference and generally may not be overturned for errors of law. This is a key difference between arbitration and litigation in court. This difference means that companies that choose arbitration over litigation save money by avoiding time-consuming court appeals.

However, if the parties desire broader appeal rights, they can agree to appeal an arbitral award to a panel of appellate arbitrators.<sup>24</sup> At least two provider organizations offer appeal procedures in arbitration. The appeal process is streamlined to provide time limits, briefing restrictions, and/or deadlines for issuance of a decision by an arbitrator appeal panel.

*Discovery*. Discovery is often blamed for the high cost of litigation. When arbitration becomes expensive, the reason is often that the parties engaged in unlimited discovery.

Parties should never seek more discovery than needed to present evidence to the arbitrator to make a fair decision. There is no advantage to discovering repetitive information. Arbitrators are trained to disallow its use in the interest of conducting an efficient process.

The critical task for arbitrators is to maintain arbitral efficiency while affording each party a full opportunity to present its case. Because arbitration is a consensual process based on party agreement, arbitrators do not have unlimited power to curtail discovery where counsel agree to an unbridled discovery plan. But arbitrators can use the power of persuasion to urge parties and advocates to limit the scope of discovery to what is essential given the nature and complexity of the case.

Escalating cost and duration of arbitration due to the use of litigation procedures have captured the attention of many in the arbitration community. The American College of Commercial Arbitrators (CCA) held a well-attended national summit in the fall of 2009 on how to address this problem. The participants came from arbitration's principal constituencies—in-house counsel, outside counsel, provider organizations and arbitrators. The participants considered proposals to reduce delay and cost in commercial arbitration. The CCA recently issued a white paper containing its conclusions together with protocols (i.e., best practices) for each of the stakeholders in arbitration: business users and in-house counsel, provider organizations, outside counsel, and arbitrators.<sup>25</sup>

Key suggestions in the white paper include limiting document discovery to that for which there is a demonstrable need; limiting the number of discovery depositions and pre-hearing motions; and setting time limits on each stage of an arbitration, including the hearing on the merits. The CCA suggests that provider organizations develop rules to promote improvements to the arbitral process. As a result of CCA's exemplary work, all stakeholders in arbitration, but particularly arbitrators, are on notice of their responsibility to advise against introducing into arbitration adversarial litigation practices that erode arbitral efficiency.

Even while litigation practices continue to challenge arbitral efficiency, improvements can be made in the process if the parties' in-house counsel attend the preliminary conference and arbitration hearings and make outside counsel aware of the client's goals for an efficient but fair arbitration. Incorporating these and other "best practices" in arbitration means that, in contrast to court litigation, high-tech companies can obtain a faster and less costly resolution of their disputes in arbitration.

Protecting Confidential Information. Preserving the confidentiality of trade secrets and other confidential or proprietary business information is critical for technology-based companies. Nondisclosure or confidentiality agreements are used routinely in a variety of commercial settings to protect trade secrets and confidential business information. Pursuant to such agreements, parties agree not to disclose trade secrets or other confidential information furnished to them during the course of a business relationship or commercial transaction. As noted by one commentator, confidentiality is "a giant issue" when a technology-related dispute arises. 27

The issue is much more problematic in litigation than in arbitration. Judicial proceedings in the United States and many other countries are open to the public. As a result, anyone may be able to access documents filed with or issued by the court. At least in this country, motions are argued and trials are held in a public courtroom and anyone can enter the courtroom and watch the proceedings. A litigant may request that confidential documents and other forms of information be filed under seal, or that the courtroom be closed to the public. However, such requests are

keep their business private and their reputations intact. Keeping disputes out of the press is vital to that goal.

The commercial arbitration rules of respected U.S. arbitration organizations require arbitrators and the administering organization not to disclose any arbitration matters relating to a case. For example, the AAA commercial rules provide: "The arbitrator and the AAA shall maintain the privacy of the hearings unless the law provides to the contrary."29 Most international arbitration rules have similar confidentiality provisions.<sup>30</sup> The International Arbitration Rules of the AAA's International Center for Dispute Resolution (ICDR) state that: "Confidential information disclosed during the proceedings by the parties or by witnesses shall not be divulged by an arbitrator or by the administrator. Except as provided in Article 27, unless otherwise agreed by the parties, or required by applicable law, the members of the tribunal and the administrator shall keep confi-

### Recognizing the privacy benefits of arbitration, another commentator has said that "the most compelling reason for arbitrators in [the high-tech] arena is a concern for trade secrets."

not readily granted in view of the strong public policy in favor of open judicial proceedings. Moreover, court decisions in this area can be inconsistent and unpredictable.

Jury trials pose their own disclosure risks, particularly after the trial is over, for jurors often speak openly to the press once they are released from jury service.

Arbitration, by contrast, is a private process that permits the parties to resolve their dispute out of the public eye. Although there is no law making arbitration a confidential process or conferring a confidentiality privilege on documents or materials used during the process, it is nevertheless a more private proceeding than litigation. Recognizing the privacy benefits of arbitration, another commentator has said that "the most compelling reason for arbitrators in [the hightech] arena is a concern for trade secrets."<sup>28</sup>

Arbitration permits the parties to enter into a confidentiality agreement shielding from public view and potential disclosure, not only the documents and other information exchanged, but also the very existence of the arbitration and the award. Some companies do not mind having a reputation for being litigious but others want to

dential all matters relating to the arbitration or the award."<sup>31</sup>

The Code of Ethics for Arbitrators in Commercial Disputes also requires arbitrators to keep confidential all matters relating to an arbitration proceeding and the decision.<sup>32</sup>

Given the importance of confidentiality, hightech businesses should provide in any arbitration clause, at a minimum, that all arbitration proceedings shall be conducted on a confidential basis.

When arbitration commences and the arbitrator is appointed, the issue of confidentiality is usually brought up for discussion at the first prehearing conference. The parties usually agree on the terms of confidentiality applicable to documents and information disclosed during the proceedings, and those terms are frequently embodied in a protective order issued by the arbitrator.<sup>33</sup> Such agreements address, among other issues:

- Procedures for designating documents or information as confidential.
- Persons who may have access to confidential documents and information (e.g., attorneys of

record, technical or other consultants, experts, arbitrators, and employees of administering organization)

- Whether any highly-competitive or sensitive information should be subject to special restrictions.
- How the agreed-upon terms shall apply to documents and information disclosed by non-parties participating in the arbitration.

Disputes that arises over the terms of a confidentiality agreement are normally resolved by the arbitrator.

There are some circumstances where information concerning an arbitration might lose its protected status under a confidentiality agreement. For example, upon conclusion of an arbitration, the prevailing party may file a motion in a court of law for the purpose of enforcing the award, or the losing party may seek to vacate (i.e., set aside) the award. In addition, public companies involved have certain disclosure obligations under the federal securities laws and therefore may be required to report material financial risks or outcomes if they are involved in any arbitration or court proceeding related to arbitration. However, such reports would normally disclose the existence of the proceeding and the claims and defenses of the parties, but they would not disclose the content of trade secrets or specific sensitive business information.

It is possible that a third party involved in an unrelated dispute with a high-tech company may seek to discover evidence from an earlier arbitration involving that company. Whether such discovery will be allowed is usually determined by a court, which will balance the privacy expectations of the high-tech party against the third party's need for the evidence and its lack of availability by other means.<sup>34</sup>

Nevertheless, by choosing arbitration over litigation, high-tech businesses can negotiate confidentiality protections, though at a later time some information related to the arbitration may end up being disclosed. If parties choose litigation, they may be able to persuade the judge to issue a confidentiality order pertaining to trade secrets and certain other confidential business information. But there can be disputes over the nature and extent of those orders. Also, the existence of a court case and the documents filed in court, including pleadings, motions and briefs, usually will be subject to viewing by anyone who takes the time to go to the courthouse and view the court's file.

International Operations. The spread of technology has been a catalyst to international com-

merce. International supply chains and distribution networks have enabled many high-tech businesses to provide products and services on a global scale.<sup>35</sup> Information technology is perhaps the best example of an international enterprise, for practically all meaningful businesses around the world now rely on advanced IT systems and applications to achieve efficiency in product design, manufacturing, marketing, sales and other business functions.

Biotechnology is also a global enterprise made possible by demand for innovative biotech products and processes—medical, pharmaceutical, agricultural, industrial and environmental—which are manufactured, licensed and distributed around the world.

Disputes can arise in the international commercial environment as easily as in the domestic context, perhaps more so given that the parties are often from different countries with different cultural mores and expectations. International arbitration better meets the dispute resolution needs of technology companies operating internationally for the following reasons.

International Arbitration's Benefits. International litigation poses a variety of uncertainties and risks. Jurisdictional issues frequently arise as to which courts can properly hear a claim, and parties sometimes bring legal actions in multiple jurisdictions simultaneously, which increases the cost of litigating and can lead to inconsistent results.

Litigating in a foreign country can be problematic if the local court is in the other party's home country. Local courts may afford a "home-party advantage" to the local company due to bias on the part of a local judge or jury. Litigating abroad can also be problematic if the local court has little or no experience in international transactions or the subject matter of the dispute. Moreover, no general counsel wants to subject the company to unfamiliar foreign laws, rules, or customs, or be required to litigate in a language that company officers and employees do not understand. These are not the only risks involved in litigating abroad, but for purposes of this article, these will suffice.

International arbitration is not beset by these risks. The advantages of arbitration discussed above are all available in international arbitration, including appointing neutral arbitrators who are experienced in the field and who will resolve a dispute objectively and impartially. An arbitration agreement can provide that the arbitrator or arbitrators, or the chair of a panel, shall not be a national of (or reside in) the same country as any party. International arbitration also permits the

parties to select the substantive law governing the contract, the procedural law that will govern the arbitration, and the procedural rules of a neutral administrating organization to apply to the proceeding. Parties can also specify the language in which arbitration proceedings will be conducted and whether transcripts will be translated into other languages.

A major advantage of international arbitration

is that foreign arbitral awards can be enforced around the world under the 1958 United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the New York Convention).<sup>36</sup> Generally speaking, Article III provides that "Contracting States shall recognize and enforce" foreign arbitral awards, with a limited number of exceptions that permit the court to refuse enforcement.<sup>37</sup> To date, the New York Convention has been ratified by 145 nations,

including all of the major trading countries. This success affords a high degree of confidence to parties to international arbitration agreements that the courts of most countries will enforce the convention's provisions.

Foreign court judgments are not as easily enforced in the courts of another country.<sup>38</sup> Thus, in litigation there is a risk that a favorable foreign court judgment will not be enforced internationally. Whether a foreign judgment will be enforced

by the courts of another country generally depends on the highly discretionary and unpredictable principle known as "comity." Courts consider whether the foreign tribunal would recognize a judgment of the court where enforcement is sought, whether the judgment violates public policy, and other issues.

For these reasons international arbitration has become the accepted means of dispute resolution

for disputes that have an international aspect. Given the enormous risks of litigating in foreign courts, it makes no sense for technology companies to choose litigation to resolve international business disputes.

Litigating in a foreign country can be problematic if the local court is in the other party's home country.

#### **Conclusions**

High-tech companies develop solutions for some of the world's greatest problems and enhance our well being as a result. The development and marketing of new and innovative technology-

based products and services will produce more commercial contracts. High-tech companies and their partners, suppliers, customers and others need to anticipate the possibility that disputes may arise during the course of their contractual relationship and prepare to address those disputes with a dispute resolution mechanism that serves their special needs. For reasons explained in this article, arbitration meets those needs most directly and efficiently.

#### **ENDNOTES**

- <sup>1</sup> Random House Webster's Collegiate Dictionary (1999).
- <sup>2</sup> See OECD Handbook on Economic Globalisation Indicators 172-73 (2005), The OECD also classified electrical machinery, motor vehicles, chemicals (except pharmaceuticals), other transport equipment, and machinery and equipment as "medium-high-technology" sectors.
- <sup>3</sup> Oracle V.P. Jay Goyal, Challenges to Enterprise Systems Manufacturers: Delivering Flexibility, Managing Complexity, and Providing Optimal Service 2-3 (2006), download from www.oracle.com/us/industries/hightech/022563.pdf.
  - 4 *Id*
- <sup>5</sup> U.N. Convention on Biological Diversity, art. 2, www.cbd.int/convention/articles.shtml?a=cbd-02.
- <sup>6</sup> See generally, Judy Arbique, Biotechnology—Science and Engineering Work Together 1 (2006) (noting other biomedical and pharmaceutical ad-

- vances:), available at http://microbiology.suite101.com/article.cfm/biotechnology.
- <sup>7</sup> See U.S. Dep't of Agric., Adoption of Genetically Engineered Crops in the United States 1 (2009), available at www.ers.usda.gov/data/biotechcrops.
- <sup>8</sup> See Albert Sasson, *Industrial and Environmental Biotechnology: Achievements, Prospects and Perceptions* (U.N. Univ. Instit. of Advanced Studies 2005).
  - <sup>9</sup> *Id*.
- <sup>10</sup> See e.g., Yali Friedman, "A Global Biotechnology Survey—Worldview Scorecard 3-4 (*Scientific American* WorldVIEW 2010), published online at www.saworldview.com/article/a-global-biotechnology-survey-worldview-scorecard; Economic Issues in Agricultural Biotechnology iv (Robbin Shoemaker, ed. 2001, U.S. Dep't of Agric. Econ. Res. Serv., Agric. Info. Bull. No. 33735 (2001), available at http://ideas.repec.org/p/ags/uersab/33735.html. See also

- Arbique, supra n. 6, at 1.
- <sup>11</sup> See John F. Hornick, "Trade Secrets: What Your Company Needs to Know," *IP Litigator* 1 (July/August 2004), available at www.finnegan.com/resources/articles.
- <sup>12</sup> Siemens PLM Software, How do we transform the process of innovation for high tech and electronics? 5 (2010), available at www.plm.automation.siemens.com/en\_us/Images/7045\_tcm1023 -20893.pdf.
- <sup>13</sup> Simon Ellis, "Optimizing Channel Coordination in High-Tech and Electronics Manufacturing: Flawless Sales Execution From Initial Lead Generation Through Aftersales Service," *IDC Manufacturing Insights* 6 (2009), available at www.microsoft.com/industry/manufacturing/hightech/solutions/crm.mspx.
  - 14 Id.
- <sup>15</sup> Sandra J. Franklin, "Arbitrating Technology Cases—Why Arbitration May Be More Effective than Litigation

When Dealing with Technology Issues," Mich. Bar 7. 31, 32 (July 2001).

<sup>16</sup> See generally Raymond G. Bender, Jr., "Conducting Satellite Industry Arbitrations Under the Watchful Eye of the International Traffic in Arms Regulations," ch. 10, in *Handbook on International Commercial Arbitration and ADR* (2nd ed. 2010).

<sup>17</sup> See L. Tyrone Holt, "Whither Arbitration? What Can Be Done to Improve Arbitration and Keep Out Litigation's Ill Effects," 7(3) *DePaul Bus. & Com. L.J.* 455, 463 (2009) ("Disputes involving technical matters demand specialized knowledge which historically has led commercial parties to seek arbitration.").

<sup>18</sup> See David Woodcock & Zeke De-Rose, "Is Arbitration Actually Desirable?" 3 *Bloomberg L. Rpt.* 1, 2-3 (May 26, 2009).

19 The rules of provider organizations consider certain factors affecting the number of arbitrators to be appointed, including the monetary amount in dispute, the complexity of the case, and other relevant circumstances. See e.g., International Chamber of Commerce (ICC) Rules of Arbitration, art. 8: London Court of International Arbitration (LCIA), art. 5; AAA Large, Complex Commercial Disputes Procedures, Rule L-2; International Center for Dispute Resolution (ICDR) International Dispute Resolution Procedures, art. 5: Arbitration Rules of the Singapore International Arbitration Center (SIAC), Rule 6.1; and World Intellectual Property Organization (WIPO) Arbitration and Mediation Center, art. 14.

<sup>20</sup> Franklin, *supra* n. 15, at 32.

<sup>21</sup> William H. Pratt, "Arbitrating Patent Disputes," 1994-95 *Managing Intellectual Property* 28 (1994-95). See also M. Scott Donahey, "Unique Considerations for the International Arbitration of Intellectual Property Disputes," 65(1) *Disp. Resol. J.* 4 (Feb.-Apr. 2010) ("Intellectual property is a wasting asset. The life span of a technology grows shorter as the speed of development grows faster. Delay in resolving an IP dispute not only adds to the cost of the proceeding, it reduces the value of the patented technology.").

<sup>22</sup> Various experienced arbitrators have noted this recent criticism and carefully analyzed its underlying causes. See e.g., Thomas J. Stipanowich, "Arbitration and Choice: Taking Charge of the 'New Litigation'," 7(3) DePaul Bus. & Com. L.7. 383-436 (2009); Holt, supra n. 17, at 455-80; John Wilkinson, "Arbitration Contract Clauses: A Potential Key to a Cost-Effective Process," 16(1) Disp. Resol. Mag. 9-12 (2009); Hon. Curtis E. von Kann, "A Report Card on the Quality of Commercial Arbitration: Assessing and Improving Delivery of the Benefits Customers Seek," 7(3) DePaul Bus. & Com. L.J. 499, 516 (2009).

<sup>23</sup> The grounds to vacate an award are limited by statute. For example, see 9 U.S.C. § 10; Del. Uniform Arb. Act, 10 Del. Ch. 1953. § 5714.

<sup>24</sup> See e.g., Stipanowich, *supra* n. 22, at 386

<sup>25</sup> The College of Commercial Arbitrators Protocols for Expeditious, Cost-Effective Commercial Arbitration: Key Action Steps for Business Users, Counsel, Arbitrators & Arbitration Provider Institutions (Thomas J. Stipanowich et al., eds. 2010), available at www.the cca.net.

<sup>26</sup> Richard Stim, *Protect Your Trade Secrets with a Nondisclosure Agreement* (Nolo.com 2005).

<sup>27</sup> Franklin, supra n. 15, at 32.

<sup>28</sup> See Charles R. Dyer, "Who Ya Gonna Call?" 3(1) Newsl. of the St., 27 Court, and County Law Libraries Special Interest Section of the American Association of Law Libraries No. (Fall 2001) ("T)he most compelling reason for arbitrators in this [the high-tech] arena is a concern for trade secrets. When two high tech companies go after each other, they don't want the actual conflict publicly examined because of the competitive intelligence it gives away to third parties, i.e., the company down the road.").

<sup>29</sup> Rule R-23(a) of the AAA Commercial Arbitration Rules (effective June 1, 2009), available at www.adr.org. See also JAMS Arbitration Rule 26(a) (2009); CPR Rules for Non-Administered Arbitration, Rule 18 (2007).

<sup>30</sup> International provider organizations that address confidentiality in their

arbitration rules include ICC (app. I, art. 6, and app. II, art. 1, 1998); LCIA (art. 30, 1998); SIAC (Rule 35, 2010); Arbitration Institute of the Stockholm Chamber of Commerce (SCC) Arbitration Rules, art. 46 (2010); and WIPO (arts. 73-76, 2009).

<sup>31</sup> ICDR International Arbitration Rules, art. 34 (2009), available at www. adr.org.

<sup>32</sup> Canon VI. The code is available at www.adr.org/sp.asp?id=32124.

<sup>33</sup> See AAA Commercial Arbitration Rule R-34(a) (permits interim measures for the protection or conservation of property); JAMS Arbitration Rule 26(b) (permits orders to protect the confidentiality of proprietary information, trade secrets); CPR Rule R. 11 (same).

<sup>34</sup> Richard Reuben, "Confidentiality in Arbitration: Beyond the Myth," 54 *Kan. L. Rev.* 1255, 1288 (2006). (arguing convincingly that this balance should struck by raising the burden of proof to require "a showing of unavailability and necessity" when evidence is sought from an arbitration for use in another proceeding).

<sup>35</sup> For a discussion of the global nature of high-tech businesses, see Arun Saksena, CISCO Business Solutions Group White Paper, High Tech Industry: The Road to Profitability Through Global Integration and Collaboration (July 2009), available at www.cisco.com/web/about/ac79/docs/wp/High\_Tech\_Indus\_0716FINAL2.pdf.

<sup>36</sup> 330 U.N.T.S. 28. See www.unci-tral.org.

<sup>37</sup> The exceptions are in Article V.

38 Certain European nations have agreed to enforce court judgments obtained in other European states, but this intra-European framework represents a limited reciprocity that has not gained acceptance in other regions of the world. See Brussels Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters, 1990, 29 I.L.M. 1413; Lugano Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters, 1989, 28 I.L.M. 620; and Council Regulation (EC) No. 44/2001 on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters.