

The Role of Intellectual Property Rights in Negotiating and Planning a Research Joint Venture

Kurt M. Saunders

California State University, Northridge

Follow this and additional works at: <http://scholarship.law.marquette.edu/iplr>



Part of the [Intellectual Property Commons](#)

Repository Citation

Kurt M. Saunders, *The Role of Intellectual Property Rights in Negotiating and Planning a Research Joint Venture*, 7 *Intellectual Property L. Rev.* 75 (2003).

Available at: <http://scholarship.law.marquette.edu/iplr/vol7/iss1/3>

This Article is brought to you for free and open access by the Journals at Marquette Law Scholarly Commons. It has been accepted for inclusion in Marquette Intellectual Property Law Review by an authorized administrator of Marquette Law Scholarly Commons. For more information, please contact megan.obrien@marquette.edu.

THE ROLE OF INTELLECTUAL PROPERTY RIGHTS IN NEGOTIATING AND PLANNING A RESEARCH JOINT VENTURE

KURT M. SAUNDERS*

*“Research is formalized curiosity.”*¹

I. INTRODUCTION

Research joint ventures involve agreements among firms to engage in joint basic and applied research and development. This Article explores the importance of intellectual property rights in the formation of a research joint venture. The Article first considers the structural advantages afforded by the joint venture arrangement as to basic and applied research. Next, the Article identifies the intellectual property rights that the joint venture partners may bring into or develop during the term of their collaboration. The Article then considers the relevant antitrust implications of sharing and shared development of intellectual property rights. Finally, this Article assesses the intellectual property rights concerns that may arise at each stage of the research joint venture life cycle and offers strategies for addressing them during the negotiation and planning stages of the collaboration. The Article concludes by noting that if the firms can anticipate and manage many of the legal risks involved, they can maximize the many benefits and efficiencies that result from research collaboration.

Research has been the wellspring for all of the advanced technological innovations that have appeared in the last twenty years. Indeed, many of the most successful and globally competitive industries in the United States, including computers, semiconductors,

* Assistant Professor of Business Law, California State University, Northridge. The initial research for this article was done while serving as a Research Assistant at the Center for International Science & Technology Policy at George Washington University, as part of a project funded by the National Science Foundation. An earlier version of this paper was presented at the 2001 Hawaii International Conference on Business. My thanks go to Professors Nick Vonortas and Henry Hertzfeld for their guidance.

1. ZORA NEALE HURSTON, *DUST TRACKS ON A ROAD* 143 (HarperCollins 1996) (1942).

pharmaceuticals, aeronautics, and biotechnologies, are the products of basic and applied research.² Basic and applied research is usually considered to be the point of departure for dynamic models of technology transfer, leading eventually to product development and diffusion.³ However, a single firm may not have sufficient resources to undertake a project of research and development alone. In such instances, the firm may consider entering into a research and development collaboration with another firm as a means of pursuing innovation.⁴ These types of cooperative efforts have become increasingly prevalent in many industries,⁵ benefiting not only the firms involved, but also enhancing overall U.S. economic competitiveness.⁶

As a business endeavor, a joint venture “represents a collaborative effort between [two] companies—who [sic] may or may not be competitors—to achieve a particular end”⁷ This form of business association⁸ combines certain attributes of one firm with complementary

2. For a comprehensive discussion of the role of research and development in the emergence of these new technologies, see generally *Basic Research White Paper: Defining Our Path to the Future*, R&D MAGAZINE (1997).

3. Whereas basic research may be thought of as pure or exploratory research for the purpose of discovery, applied research represents elaboration and application of what has been discovered. Development involves adaptation of research findings into products for commercialization. The process is not linear; each stage of the process depends on the preceding, and each may be recursive. For a detailed treatment of the technology life cycle, see generally *THE PROCESSES OF TECHNOLOGICAL INNOVATION* (Louis G. Tornatzky & Mitchell Fleischer eds., 1990).

4. Francis Bidault & Thomas Cummings, *Innovating Through Alliances: Expectations and Limitations*, R&D MANAGEMENT, Jan.-Feb. 1995, at 33 (“merging technological knowledge and skills . . . improves the innovation process”); John Carey, *What Price Science?*, BUS. WEEK, May 1996, at 168 (“today’s complex technologies, intense competition, and information overload have required new approaches”).

5. See Neal Templin, *Strange Bedfellows: More and More Firms Enter Joint Ventures with Big Competitors*, WALL ST. J., Nov. 1, 1995, at A8.

6. See COUNCIL ON COMPETITIVENESS, *ENDLESS FRONTIER, LIMITED RESOURCES: U.S. R&D POLICY FOR COMPETITIVENESS 3* (1996); NATIONAL SCIENCE FOUNDATION, DIVISION OF SCIENCE RESOURCES STUDIES, *STRATEGIC RESEARCH PARTNERSHIPS: PROCEEDINGS FROM AN NSF WORKSHOP*, at <http://www.nsf.gov/sbe/srs/nsf01336/start.htm> (last modified Aug. 23, 2001). See also John Hagedoorn et al., *Research Partnerships*, RES. POL’Y 567 (2000) (asserting that there are a variety of important reasons why firms participate in research partnerships and a number of reasons why governments encourage them).

7. *Addamax Corp. v. Open Software Found.*, 152 F.3d 48, 50 n.2 (1st Cir. 1998).

8. A joint venture may be implemented by forming a separate, jointly owned business entity, or by contractual arrangement. See Gregg Kirchoefer & William E. Devitt, *Multiple Factors Govern the Conveyance of IP; Venturers Must Agree on the Specifics of the IP, As Well As on Parties’ Rights and Obligations*, NAT’L L.J., Mar. 2, 1998, at C8. Sometimes these arrangements are referred to as “strategic alliances,” which also represent an agreement to share the commitment to achieve a particular goal by pooling resources and coordinating

features of another firm to engage in a specific project.⁹ The enterprise involves special contributions by each partner, rather than the mere pooling of funds by investors to fund a project that is too costly for either to fund alone.¹⁰ Two or more firms form a joint venture to pursue a program of research activities. The partners jointly engage in these activities for the benefit of the joint venture and each of the partners.¹¹ The partners share risks and investment costs and pool technologies and know-how, to expand the capabilities of each partner.¹² Likewise, the partners may conduct research to develop a product that will be marketed later by the joint venture, or the research joint venture may subsequently license or assign¹³ the intellectual property rights to each of

activities. David J. Teece, *Competition, Cooperation, and Innovation: Organizational Arrangements for Regimes of Rapid Technological Progress*, 18 J. ECON. BEHAVIOR & ORG. 1, 19-20 (1992).

9. James A. Dobkin, *Negotiating an International Technology Joint Venture*, 1 CONN. J. INT'L L. 81, 83 (1986).

10. See ROBERT GOLDSCHIEDER, TECHNOLOGY MANAGEMENT 21-1 (1999).

11. See JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 413 (1992) (noting that research joint ventures are "arrangements in which some firms agree to share the expenditures and the benefits associated with a given research project"); Ronan P. Harty, *International Joint Ventures*, in JOINT VENTURES AND ANTITRUST, 818 PLI/Comm 67, 76 (2001).

12. Dobkin, *supra* note 9, at 84. Aside from research joint ventures, firms may enter into joint ventures for a variety of purposes related to technology development and diffusion. Production joint ventures involve agreements among the firms to collaboratively produce a product sold to others or used by the joint venture participants as an input. Marketing joint ventures involve agreements among firms jointly to sell, distribute, or promote goods or services that are either jointly or individually produced. Purchasing joint ventures involve agreements among firms jointly to purchase products or inputs. Such agreements are essentially the converse of marketing joint ventures. Finally, network joint ventures involve collaborative creation and operation of a network. A network industry is one in which individuals share one or more networks and in which the utility a given individual derives from a network is positively related to the number of other individuals using the network. Examples of networks are credit card networks, news gathering networks, telecommunications networks, and computer networks. See Harty, *supra* note 11, at 76.

13. The United States Supreme Court explained the difference between a license and an assignment of intellectual property rights as follows:

The patentee or his assigns may, by instrument in writing, assign, grant and convey, either, 1st, the whole patent, comprising the exclusive right to make, use and vend the invention throughout the United States; or, 2d, an undivided part or share of that exclusive right; or, 3d, the exclusive right under the patent within and throughout a specified part of the United States. A transfer of either of the these three kinds of interests is an assignment, properly speaking, and vests in the assignee a title in so much of the patent itself, with a right to sue infringers; in the second case, jointly with the assignor; in the first and third cases, in the name of the assignee alone. Any assignment or transfer, short of one of these, is a mere license, giving the licensee no title in the patent, and no right to sue at law in his own name for an infringement.

the partners for further exploitation.¹⁴ Thus, the primary motives for forming a research joint venture are likely to be the desire to establish a vertical relationship in the market, to achieve an expansion of a geographic market for a product, or to achieve an expansion into related product areas.¹⁵

The role of intellectual property rights in forming and conducting the research and development effort may be significant; however, intellectual property rights may also be of central concern to the partners and to antitrust regulators even after the project is completed and the research joint venture is dissolved.¹⁶ This Article explores the importance of intellectual property rights in the formation of a research joint venture between two firms.¹⁷ The Article first considers the

Waterman v. Mackenzie, 138 U.S. 252, 255 (1891) (citations omitted). For a discussion of the considerations involved in intellectual property licensing, see generally JOHN W. SCHLICHER, LICENSING INTELLECTUAL PROPERTY: LEGAL, BUSINESS, AND MARKET DYNAMICS (1996).

14. See ALAN S. GUTTERMAN & JACOB N. ERLICH, TECHNOLOGY DEVELOPMENT AND TRANSFER: THE TRANSACTIONAL AND LEGAL ENVIRONMENT 146 (1997). Of course, the nature and extent of the impact of cooperative research will vary depending on the market structure of the industry, strategic motives of the firms, the level of inter-firm interaction within the venture, and the process of technological accumulation in the industry. See Wendy H. Schacht, *R&D Partnerships and Intellectual Property: Implications for U.S. Policy*, CONG. RES. SERV. REP. 98-862 (2000), available at <http://www.cnie.org/nle/crsreports/science/st-19.cfm>.

15. Steven R. Salbu & Richard A. Brahm, *Strategic Considerations in Designing Joint Venture Contracts*, 1992 COLUM. BUS. L. REV. 253, 261-62. See also Nicholas S. Vonortas, *Research Joint Ventures in the U.S.*, 26 RES. POL'Y 577 (1997) (describing the prevalent characteristics of the research joint ventures, the characteristics of participating business firms, and the type of research activities pursued collectively by joint ventures).

16. Nicholas S. Vonortas, *Commentary: Intellectual Property Rights and Knowledge Dissemination in Research Joint Ventures*, 19 SCI. COMM. 51, 82 (1997) (addressing the sharing of knowledge gained during the venture); John Beath et al., *Organization Design and Information-Sharing in a Research Joint Venture with Spillovers*, 54 BULL. ECON. RES. 47 (2002).

17. Aside from inter-firm research collaborations, there are a variety of other cooperative approaches to research and development, including collaborations between universities and private industry and cooperative efforts, encouraged through federal legislation, between government laboratories and agencies and private industry. The Bayh-Dole Act, for instance, was enacted to facilitate the commercialization of new technologies developed by way of government-sponsored research and development efforts. 35 U.S.C. § 200 (2000). The Stevenson-Wydler Technology Innovation Act was intended to speed the transfer technologies developed in federal laboratories to private sector use. 15 U.S.C. §§ 3701-14 (2000). In addition, the Federal Technology Transfer Act allows government laboratories to enter into cooperative research and development agreements with universities and private industry. 15 U.S.C. § 3710 (2000). See ARYEH S. FRIEDMAN, THE LAW OF HIGH TECHNOLOGY INNOVATION 12-5 – 12-41 (1992); Joshua A. Newberg & Richard L. Dunn, *Keeping Secrets in the Campus Lab: Law, Values and Rules of Engagement for Industry-University R&D Partnerships*, 39 AM. BUS. L.J. 187 (2002).

structural advantages afforded by the joint venture arrangement as to basic and applied research. Next, it identifies the intellectual property rights that the joint venture partners may bring into or develop during the term of their collaboration. This Article then considers the relevant antitrust implications of shared development of intellectual property rights. Finally, it assesses the intellectual property rights concerns that may arise at each stage of the research joint venture life cycle and offers strategies for addressing these concerns during the negotiation and planning stages of the collaboration.

II. STRUCTURAL ATTRIBUTES OF RESEARCH JOINT VENTURES

There are a number of advantages to conducting research in collaboration with another firm using the joint venture form.¹⁸ The most important advantages are “the ability to combine . . . strengths, expertise, technolog[ies], and know-how of separate [firms] along with [the] sharing of investment costs and risks.”¹⁹ Collaborative research also: allows for pooling of resources and sharing of costs in order to pursue the types of research projects that each firm alone could not afford;²⁰ may prevent duplication of research efforts by each firm, as well as foster more efficient application or re-deployment of existing resources within each firm;²¹ reduces investment risk by risk-sharing among the firms;²² accelerates innovation or introduction of a new product to market by reducing the time needed to develop internally;²³ may lead to the invention of a new product, which may itself lead to a

18. Joint ventures pose disadvantages as well, including: incompatible management styles, lack of trust or cooperation, opportunistic behavior, decision-making disputes or conflicts as to managerial control or strategy, “and compromise-based management, which may be less effective than certainty of single firm management.” Salbu & Brahm, *supra* note 15, at 254. All of these suggest that some type of dispute resolution mechanism should be part of the joint venture agreement. See Dobkin, *supra* note 9, at 84-85.

19. Dobkin, *supra* note 9, at 84. Nevertheless, some researchers disagree with the proposition that research joint ventures will lead to greater efficiencies or socially optimal levels of basic and applied research. See, e.g., Morton I. Kamien et al., *Research Joint Ventures and R&D Cartels*, 82 AM. ECON. REV. 1293 (1992) (positing that the sum of consumer and producer surplus is lower when firms participate in joint research ventures than when they conduct research on their own); Kotaro Suzumura, *Cooperative and Noncooperative R&D in an Oligopoly With Spillovers*, 82 AM. ECON. REV. 1307 (1992) (discussing cooperative research at the pre-competitive stage and concluding that socially optimal levels of research are not reached when significant research spillovers exist).

20. See JOSEPH M. MORRIS, *JOINT VENTURES* 3-4 (1987).

21. See KATHRYN R. HARRIGAN, *STRATEGIES FOR JOINT VENTURES* 29-31 (1985).

22. See MORRIS, *supra* note 20, at 3-4.

23. See ALAN S. GUTTERMAN, *THE LAW OF DOMESTIC AND INTERNATIONAL STRATEGIC ALLIANCES* 281-82 (1995).

new industry;²⁴ allows access to new markets or to development of technical standards through shared coordination and investment;²⁵ allows access to complimentary resources or to skills that are not on the market, not affordable, or not internally available;²⁶ and allows flexibility as to form and structure of the venture.²⁷

As such, research joint ventures can produce economies of scale, maximize the utility of complementary assets and specialized competencies, and otherwise facilitate efficiencies through collaboration when individual efforts might be economically duplicative or wasteful. In addition, companies receive particular pecuniary benefits from development of intellectual property rights.²⁸ A common question that arises regarding research joint ventures concerns the ultimate goal of the venture. If the purpose of the research joint venture is research that will lead to the development of a specific technology, why not allow another firm to do the research and license any resulting intellectual property rights? The simple answer is that this approach may “create” a competitor in the market for the technology.²⁹ Moreover, licensing intellectual property rights of new or prototype technologies from a second firm may not be productive unless the second firm also participates in the research process or joint venture and then continues to develop and produce the product.³⁰

Among other advantages that a research joint venture can provide are access to intellectual property rights of the other firm’s technologies that may otherwise be unavailable and shared risk in developing intellectual property rights.³¹ Another potential consequence of a joint

24. See HARRIGAN, *supra* note 21, at 31.

25. See JAMES A. DOBKIN, *INTERNATIONAL TECHNOLOGY JOINT VENTURES IN THE COUNTRIES OF THE PACIFIC RIM* 5 (1988).

26. Carmela E. Schillaci, *Designing Successful Joint Ventures*, J. BUS. STRAT., Fall 1987, at 59, 61.

27. See generally Steven R. Salbu, *Joint Venture Contracts as Strategic Tools*, 25 IND. L. REV. 397 (1991) (examining strategic contracting issues associated with joint ventures and motives behind joint venture formation and the contracting challenges and opportunities associated with these).

28. See GORDON V. SMITH & RUSSELL L. PARR, *INTELLECTUAL PROPERTY: LICENSING AND JOINT VENTURE PROFIT STRATEGIES* 358, 366 (2d. ed. 1998).

29. *Id.* at 359.

30. See *id.*

31. See Judith L. Church, *Structuring Deals Involving Significant Intellectual Property Assets*, in *HANDLING INTELLECTUAL PROPERTY ISSUES IN BUSINESS TRANSACTION*, 690 PLI/Pat 591, 603 (2002) (noting “access to technology, access to distribution channels, development of specialized products, access to international markets and avoidance of regulatory barriers, financing and risk sharing, access to manufacturing capacity or ability to

venture arrangement will be faster market entry, giving a “first-mover” advantage and creating a perception of the partnered firms as innovators.³² In addition, research joint ventures may be useful in overcoming the appropriability or “free rider” problem.³³ For instance, many of the results of expensive research efforts may not be protectable as intellectual property because they do not meet the requirements for protection.³⁴ Even if the research yields results protectable as intellectual property, the results may be easily appropriated through reverse engineering or invent-around development. If so, a competitor can therefore reap the rewards of another firm’s initial investment without incurring the substantial cost of its own basic and applied research. In such cases, firms will be unwilling to invest in research because of the risk of free riding by competitors.³⁵ A research joint venture, however, can overcome this problem by allowing several firms to share the cost and risks, thereby ensuring a socially optimal level of research and development.³⁶

III. INTELLECTUAL PROPERTY RIGHTS THAT MAY BE INVOLVED IN RESEARCH JOINT VENTURES

Firms often enter a research joint venture possessing valuable and multiple types of intellectual property rights, which are then contributed to the research effort. These intellectual property rights may be shared by the partners (and with third parties on occasion) for the term of the research joint venture and, in some instances, beyond the life of the research joint venture. Similarly, the likely product of a successful research joint venture is technology that may qualify for protection by

set or influence industry standards” as reasons behind a joint venture).

32. For a discussion of the advantages of being a first-mover in a market, *see generally* Richard Schmalensee, *Product Differentiation Advantages of Pioneering Brands*, 72 AM. ECON. REV. 349 (1982).

33. For a treatment of free riding, the appropriation and use of goods by those who do not pay for them, *see* WILLIAM G. SHEPHERD, *THE ECONOMICS OF INDUSTRIAL ORGANIZATION* 118-19 (4th ed. 1997).

34. *See infra* notes 37-83 and accompanying text.

35. *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 609, 614-16 (1962).

36. *See generally* Edmund W. Kitch, *The Law and Economics of Rights in Valuable Information*, 9 J. LEGAL STUD. 683 (1980) (discussing the free rider problem as to proprietary research and development). *See also* Sudipto Bhattacharya et al., *Licensing and the Sharing of Knowledge in Research Joint Ventures*, 56 J. ECON. THEORY 43, 43 (1992) (discussing the usefulness of different types of licensing agreements used to facilitate the efficient sharing of knowledge and level of research and development).

one or more intellectual property rights:

If a joint venture engages primarily in research and development, its output will be primarily technology. This technology may include patentable inventions, copyrightable works, or trade secrets. In addition to creating its own technology, the joint venture may improve upon technology transferred to it by one or more of its shareholders. It may also acquire, and improve upon, technology created by others [and acquired by license agreement].³⁷

Furthermore, intellectual property rights “facilitate the very formation of the [joint] venture itself, because they codify discrete quanta of technology that the partners license into the venture, making it easier to keep track of which partner contributed the technology.”³⁸ Intellectual property rights also allow the partners of a research joint venture to “manage the output of the venture”³⁹ and represent important “assets that the partners can allocate if [and when] they wind up the [research joint] venture.”⁴⁰ The intellectual property provides evidence of the work of the research joint venture and “this undoubtedly saves a good deal of time and energy because the parties need not, at the time of dissolution, specify in detail all the research results produced by the venture during its life.”⁴¹ Moreover, intellectual property rights “organize relations between the venture and its ‘parents’ by providing a discrete asset that the venture can license or assign.”⁴² Perhaps most importantly, intellectual property “rights define the limits of the [research joint] venture’s rights with respect to its technolog[ies].”⁴³ In the absence of intellectual property rights, the partners “would have to specify all of this at length by contract.”⁴⁴

The intellectual property rights involved in a research joint venture are likely to take at least one of four forms: patent, copyright, trademark, or trade secret protection.⁴⁵ Each type of intellectual

37. JOHN P. KARALIS, *INTERNATIONAL JOINT VENTURES: A PRACTICAL GUIDE* § 2.25, at 64, 67-68 (1992) (footnotes omitted).

38. Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570, 1582 (1995).

39. *Id.*

40. *Id.* at 1582-83.

41. *Id.* at 1583.

42. *Id.*

43. *Id.*

44. *Id.* at 1582-83.

45. For a detailed description and discussion of these exclusive rights, see generally DONALD S. CHISUM & MICHAEL A. JACOBS, *UNDERSTANDING INTELLECTUAL PROPERTY*

property right has specific requirements that must be met before protection will vest, and each suggests important considerations for firms contemplating the formation of a research joint venture.

A. Patents

A patent excludes all others but the owner from making, using, selling, or importing the technology protected by the patent.⁴⁶ Any person who “invents or discovers any new and useful process, machine, manufacture, or composition of matter” is entitled to a patent.⁴⁷ An invention must meet four essential conditions to qualify for patent protection. The invention must be within the subject matter protected by law,⁴⁸ novel,⁴⁹ useful,⁵⁰ and not obvious from the prior art to a person of ordinary skill in the art at the time the invention was made.⁵¹

With respect to research joint ventures, the requirements of novelty and nonobviousness may be of most importance for research during the venture. An invention will not be novel if even a single source of prior art anticipates all of the elements of the claimed invention.⁵² Any public use (with the exception of experimental uses) by the inventor, any attempt to sell the invention, or any public knowledge of the device at any time before the patent application is filed will bar the invention from patentability for lack of novelty.⁵³ An invention will be considered obvious if differences between the invention and the prior art are such that the invention as a whole would have been obvious—not representing an inventive step or technical advance—at the time the

LAW (1999). For reason of brevity, this Article does not address rights relating to mask works, publicity rights, and boat hull designs.

46. 35 U.S.C. § 101 (2000).

47. *Id.*

48. *Id.* See *Diamond v. Chakrabarty*, 447 U.S. 303, 206 U.S.P.Q. (BNA) 193 (1980).

49. 35 U.S.C. §§ 101-02 (2000) (requiring that the invention must be new and not known in the prior art).

50. 35 U.S.C. § 101. See *Brenner v. Manson*, 383 U.S. 519, 148 U.S.P.Q. (BNA) 689 (1966) (explaining that this requirement is satisfied if the invention is operable and capable of satisfying some function).

51. See 35 U.S.C. § 103 (2000). See *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. (BNA) 459 (1966) (stating that the subject matter claimed must represent an inventive step beyond the prior art in the eyes of those skilled in the existing art).

52. *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576, 18 U.S.P.Q.2d (BNA) 1001, 1010 (Fed. Cir. 1991) (“[A]nticipation requires that all of the elements and limitations of the claim are found within a single prior art reference.”) (citations omitted).

53. 35 U.S.C. §§ 101-02.

invention was made to any person with ordinary skill in the art.⁵⁴

The novelty and nonobviousness requirements suggest that in-house security and nondisclosure may be critical for a research joint venture, while the nonobviousness requirement suggests that sharing of information between partners may be important in determining if references in the prior art, such as journal articles or conference presentations, might later prevent patentability of the results of the new research.⁵⁵ As to the partners' existing patent rights⁵⁶ and to patents that the research joint venture might subsequently yield, it will also be important to enumerate provisions regarding royalties, renewal fees, accounting, and cooperation in use, as well as the respective rights and obligations of partners if one of their patents is infringed.⁵⁷

B. Copyrights

Like patents, a copyright is a form of property protection with constitutional imprimatur.⁵⁸ A copyright will be granted to "original works of authorship fixed in [a] tangible medium of expression . . . from which they can be perceived, reproduced, or otherwise communicated . . ." ⁵⁹ Works of authorship include, among other things,

54. 35 U.S.C. § 103.

55. See *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1440, 43 U.S.P.Q.2d (BNA) 1641, 1643 (Fed. Cir. 1997) (explaining that any non-public information, of which an inventor becomes aware, including confidential information in a joint venture agreement, may be combined with other prior art references to invalidate a patent).

56. The partners' pre-existing technology is an important concern:

Consider a hypothetical situation in which pre-existing technology belonging to one party makes its way into a jointly developed product for which patent protection is sought. Assume that the joint-venture agreement generally requires that patent ownership rights for new developments be assigned to a new corporation and that rights to pre-existing technology remain with the respective original owners. How should inventors assign a patent application which includes new and old subject matter . . . ? One potential approach to solving these . . . problems is to include a provision in the joint-venture agreement that makes it clear that no claims will ever be pursued in joint-venture patents that are limited to pre-existing technology. As a result, the agreement can then simply state that all patents disclosing any newly developed technology will automatically be assigned outright to the new corporation.

Jeffrey R. Kuester, *New Tech Should be Assigned to One Party; Recent Federal Circuit Case on Patent Prior Art has Important Implications for Joint Ventures*, NAT'L L.J., Mar. 2, 1998, at C8.

57. See Dobkin, *supra* note 9, at 98 n.59.

58. U.S. CONST. art. I, § 8, cl. 8 (Congress has the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.").

59. 17 U.S.C. § 102(a) (2000).

literary works, computer programs, sound recordings, graphic works, compilations, and audiovisual works.⁶⁰ Only works that are original—minimally creative and independently created—and fixed—written or recorded in some relatively stable and permanent tangible form—are protectable.⁶¹ Only the expression of an idea, not the idea itself, may be protected.⁶² The owner of a copyright has the exclusive rights to reproduce, distribute, display, perform, import, and adapt the work.⁶³

With respect to research joint ventures, copyright protection will be important to software and databases created by the venture, as well as manuals, screen displays, blueprints and drawings, reports, and similar work products that result from the research or relate to the project. Unlike patents, where concerns of novelty and nonobviousness arise in the creation of the inventions, in the copyright context, the research joint venture partners will likely be more concerned with whether the subject matter itself is protectable⁶⁴ and with the allocation of rights between the partners in the resulting works in order to share or individually use the information generated by the venture.⁶⁵

C. Trademarks

Trademark law establishes exclusive rights to use marks that distinguish the goods or services of one seller or manufacturer from those of others.⁶⁶ Trademarks also protect the goodwill and reputation of a seller or manufacturer, and prevent unfair competition, while

60. 17 U.S.C. § 103 (2000).

61. *See* CHISUM & JACOBS, *supra* note 45, at § 4C[4] & [5].

62. 17 U.S.C. § 102(b) (2000) (“In no case does copyright protection . . . extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodies in such work.”). *See generally* Baker v. Selden, 101 U.S. 99 (1879) (discussing the dichotomy between protected expression and unprotectable ideas).

63. 17 U.S.C. § 106 (2000).

64. *See generally* Feist Publ’ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 18 U.S.P.Q.2d (BNA) 1275 (1991) (discussing whether a database or any other compilation of information is copyrightable). If the partners generate a database or any other compilation of information, they are likely to be concerned with whether the database or compilation is sufficiently original to qualify for copyright protection. *See generally id.*

65. It is likely that the enterprise will lead to the creation of joint works, for example. *See* 17 U.S.C. § 101 (2000) (defining a joint work as “a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole.”).

66. *See* 15 U.S.C. § 1127 (2000). As a source identifier, trademarks lower consumer search costs. *See generally* William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265 (1987).

serving as an indicator of quality or sponsorship for consumers.⁶⁷ Usually, a trademark is a word or group of words, but can also include a symbol, design, color, scent, shape, or packaging.⁶⁸ At a minimum, a trademark must not be merely descriptive of the goods or services, and may not be confusingly similar to marks or names others may have previously adopted.⁶⁹

As to research joint ventures, trademark law suggests several relevant considerations. For instance, the project may end with the partners returning to their roles as competitors in a new or existing market; thus, the partners may agree that use of any trademarks generated by the research joint venture be limited or confined to a certain geographic or product market.⁷⁰ Moreover, the partners may have a well-established reputation and goodwill in the same field or a closely related field as the research joint venture.⁷¹ The joint venture agreement should provide for use of the trademark during the research joint venture and termination of its use after the venture ends.⁷²

D. Trade Secrets

A trade secret protects non-public proprietary information against unauthorized disclosure by one who obtained it through improper means or through a confidential relationship.⁷³ To qualify as a trade secret, the information must be both secret and commercially valuable.⁷⁴ A formula, pattern, device, compilation, method, technique, process, or program may also qualify as a trade secret.⁷⁵ Any of these has

67. See CHISUM & JACOBS, *supra* note 45, § 5B (discussing the interests served by trademark protection).

68. See 15 U.S.C. § 1127.

69. See *id.* §§ 1501-1125.

70. See David J. French, *License or Joint Venture? The Options Explained*, 80 PAT. & TRADEMARK REV. 347, 354 (1982).

71. Even after the dissolution of the joint venture, one partner has a duty not to use the trademarks and trade secrets of the joint venture to the detriment of the other partner. See *Durango Herald, Inc. v. Riddle*, 719 F. Supp. 941, 944-46, 11 U.S.P.Q.2d (BNA) 1052, 1053-55 (D. Colo. 1988).

72. See Dobkin, *supra* note 9, at 109.

73. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 493 181 U.S.P.Q. (BNA) 673, 682 (1974) (discussing the purpose of trade secret law). When such a disclosure or wrongful acquisition of the trade secret occurs, there is liability for misappropriation. See RESTATEMENT OF TORTS § 757 (1939); UNIF. TRADE SECRETS ACT § 1(2), 15 U.L.A. 433 (1985).

74. See Restatement of Torts § 757 cmt. b; UNIF. TRADE SECRETS ACT § 1. Trade secret protection is exclusively a matter of state law.

75. See *id.*

commercial value when it provides a competitive advantage to its owner, and secrecy is a critical requirement.⁷⁶ While the trade secret owner need only take reasonable measures to maintain the secrecy of the subject matter the sufficiency of measures taken to ensure secrecy is judged on a case-by-case basis.⁷⁷ Confidentiality or nondisclosure agreements between employers and employees, sellers and customers, and partners to a joint venture are often essential to maintaining secrecy and safeguarding rights in the event of theft or misappropriation of the secret. Once a secret becomes public, it is never again protectable as a trade secret, though the owner may sue for damages following the improper disclosure or appropriation.⁷⁸

While each partner to a joint venture has a fiduciary duty not to appropriate or disclose the trade secrets of the other partner,⁷⁹ partners in a research joint venture must take steps to make sure that any trade secrets are not misappropriated, either by the partners, their agents, or by third parties. Since unprotected disclosure leads to loss of rights,⁸⁰ dealings with joint venture and other partners or licensees must be done in a manner so as to preclude unauthorized disclosure and use.⁸¹ Thus, implementing certain safeguards, such as confidentiality provisions in employment contracts and licensing agreements, is essential.⁸² Maintaining trade secrets in a research joint venture might involve: restricting access to information by limiting who has access and keeping the information in a secure area; clearly labeling all documents as confidential; requiring employees to sign for possession and acknowledge that they understand that the information is secret; providing for return of all confidential information when the research joint venture terminates; and restricting disclosure and use to the research joint venture and to the partners after the research joint venture ends.⁸³

76. *See id.*

77. *See* CHISUM & JACOBS, *supra* note 45, § 3C[1][c] (discussing what constitutes reasonable measures to maintain secrecy).

78. *See* RESTATEMENT OF TORTS § 757 cmt. e.

79. *See generally* *Univ. Computing Co. v. Lykes-Youngstown Corp.*, 504 F.2d 518, 183 U.S.P.Q. (BNA) 705 (5th Cir. 1974); *Panther Sys. 111 v. Panther Computer Sys.*, 783 F. Supp. 53 (E.D.N.Y. 1991).

80. The trade secret owner must use reasonable efforts to maintain secrecy; otherwise, legal protection is precluded. *See* UNIF. TRADE SECRETS ACT § 1.

81. *See* CHISUM & JACOBS, *supra* note 45, § 3H (discussing preventative measures to take to protect a trade secret).

82. *See* Dobkin, *supra* note 9, at 99.

83. *See id.* at 105.

IV. ANTITRUST CONCERNS ASSOCIATED WITH INTELLECTUAL PROPERTY RIGHTS LICENSING IN RESEARCH JOINT VENTURES

Intellectual property rights licensing arrangements among research joint venture partners, and between the partners and the research joint venture in later stages of the technology life cycle, may raise concerns under the antitrust laws about horizontal collusion by competitors and potential competitors. A principal concern is that a joint venture may foreclose actual or potential competition between the firms involved in the joint venture.⁸⁴ The horizontal combination of firms and the acquisition of one firm by another are controlled by section 7 of the Clayton Act.⁸⁵ Section 7 prohibits a firm from acquiring the assets of another when the effect “may be to substantially lessen competition, or tend to create a monopoly . . . in any line of commerce.”⁸⁶ If two firms become fully or substantially integrated, there is a “merger” for purposes of the Clayton Act, even if the integration is labeled a joint venture.⁸⁷ Thus, section 7 is broadly applied to regulate the formation of joint ventures as well.⁸⁸

The analysis of a merger under section 7 is complex. First, the court will define the relevant product and geographic markets involved in and affected by the merger, and then determine the post-merger level of market concentration using the *Antitrust Merger Guidelines* promulgated by the Department of Justice and the Federal Trade Commission.⁸⁹ The *Antitrust Merger Guidelines* allow the court to weigh

84. See HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* § 5.2a (1999).

85. 15 U.S.C. § 18 (2000).

86. *Id.*

87. See *United States v. Penn-Olin Chem. Co.*, 378 U.S. 158, 168-70 (1964).

88. See *id.* Our focus here is on horizontal relationships. As with mergers, however, a research joint venture may be horizontal (between competitors), vertical (between upstream and downstream firms), or conglomerate (between firms across industries). The latter two categories may raise fewer antitrust concerns in the absence of a substantial threat of market foreclosure.

89. FED. TRADE COMM’N & U.S. DEPT. OF JUSTICE, *ANTITRUST MERGER GUIDELINES 2.0 & 3.0* (1984) [hereinafter *ANTITRUST MERGER GUIDELINES*]. The Hart-Scott-Rodino Antitrust Improvement Act of 1976, 15 U.S.C. § 18, gives the Justice Department and the FTC the power to review major acquisitions before they are consummated. On October 1, 1999, the Justice Department and the FTC issued a draft of the *Antitrust Guidelines for Collaborations Among Competitors*. For additional discussion of the antitrust concerns intended to be addressed in these guidelines, see ABA SECTION OF ANTITRUST LAW ET AL., *COMMUNICATIONS AMONG COMPETITORS: PRICE SIGNALING, INVITATIONS TO COLLUDE, BENCHMARKING, NETWORKS, INFORMATION SHARING, STRATEGIC ALLIANCES, JOINT VENTURES, LEGISLATIVE COALITIONS, PRE-MERGER NEGOTIATIONS AND INFORMATION SHARING: WHEN DOES COLLABORATION BECOME*

various countervailing efficiencies and considerations even if it appears that the merger is presumptively anticompetitive.⁹⁰

Although a consensus began to form in the late 1970's that collaborative research could stimulate innovation as well as competition in the marketplace,⁹¹ many firms were reluctant to enter into research joint ventures because they were uncertain as to how such an alliance would be treated by the courts if challenged on antitrust grounds. As a consequence, the Justice Department issued its *Antitrust Guide Concerning Joint Research Ventures* in 1980.⁹² This *Guide* stated that the "rule of reason"⁹³ would be applied to enforcement regarding research joint ventures and encouraged joint venture activity in markets where "foreign (or any other) competition was eroding market power of the partners, making old technology obsolete, or otherwise necessitating large-scale joint efforts to develop new or improved technology."⁹⁴ According to the *Guide*, these factors would be considered in assessing the competitive effects of the research joint venture.

Although the *Guide* stimulated some activity, it was largely ineffective in encouraging many firms contemplating the formation of a research joint venture.⁹⁵ In 1984, however, Congress enacted the National Cooperative Research Act in order to ensure that the Clayton Act did not deter firms from entering into research and development

CONSPIRACY? (1993).

90. See ANTITRUST MERGER GUIDELINES, *supra* note 89, at 4.0 & 5.0.

91. See generally Thomas M. Jorde & David J. Teece, *Innovation and Cooperation: Implications for Competition and Antitrust*, J. ECON. PERSP. 75 (1990) (suggesting that antitrust law be modified to promote cooperative activity among competitors to motivate the development of new technologies and stimulate competition); Janusz A. Ordover & Robert D. Willig, *Antitrust for High-Technology Industries: Assessing Research Joint Ventures and Mergers*, 28 J.L. & ECON. 311 (1985) (proposing that antitrust analysis be modified to reflect the importance of research and innovation as competitive market forces); Thomas A. Piraino, Jr., *Reconciling Competition and Cooperation: A New Antitrust Standard for Joint Ventures*, 35 WM. & MARY L. REV. 871 (1994) (arguing in favor of a new approach for antitrust analysis of joint ventures based on the economic benefits resulting from such arrangements).

92. U.S. DEPT. OF JUSTICE, ANTITRUST GUIDE CONCERNING JOINT RESEARCH VENTURES (1980).

93. The rule of reason approach to determining whether a given restraint is illegal permits a court to weigh surrounding competitive factors and market circumstances to decide whether the conduct unreasonably or significantly limits competition. Thus, under this standard, only *unreasonable* restraints are illegal. See E. THOMAS SULLIVAN & JEFFREY L. HARRISON, UNDERSTANDING ANTITRUST AND ITS ECONOMIC IMPLICATIONS § 4.05 (3d ed. 1998).

94. *Id.*

95. See FRIEDMAN, *supra* note 17, at 5-28. See also Michael Sennett & Erik Dyhrkopp, *Regulatory Guidance for Venturers is Emerging; Guidelines in Health Care and IP Areas Suggest Ways to Analyze Other Business Collaborations*, NAT'L L.J., Mar. 2, 1998, at C4.

joint ventures.⁹⁶ In 1993, the Act was amended to include production joint ventures as well and is now referred to as the National Cooperative Research and Production Act (NCRPA).⁹⁷ The NCRPA specifies that research joint ventures are not *per se* illegal, but that they should be evaluated by the rule of reason standard, “tak[ing] into account all relevant factors affecting competition, including, but not limited to, effects on competition in properly defined, relevant research, development, product, process, and service markets.”⁹⁸

Use of the rule of reason analysis to test joint ventures is based on the inherent assumption that innovation is more likely to flourish through competition than through collective endeavors.⁹⁹ For instance, a partner in a joint venture may be reluctant to pursue a line of research that could jeopardize its technology investments, or the joint venture might lead to ancillary restraints such as a patent pool.¹⁰⁰ Similarly, a research joint venture may come under antitrust scrutiny if it appeared to be part of an agreement among competitors to impede research efforts rather than promote them.¹⁰¹ Likewise, exchanges of information regarding pricing, costs, sales, profitability, or distribution, and agreements restricting the output or sale of products are not allowed.¹⁰² Additionally, agreements allowing for the sharing of technology and intellectual property outside of the scope of the joint venture, are likely to run afoul of the protection of the NCRPA safe harbor and incur antitrust challenge.¹⁰³

Generally speaking, however, research joint ventures raise fewer anticompetitive concerns than other types of joint ventures because

96. For a critique of legislative efforts to stimulate private sector research and development efforts, *see generally* Richard S. Markovits, *On the Economic Efficiency of Using Law to Increase Research and Development: A Critique of Various Tax, Antitrust, Intellectual Property, and Tort Law Rules and Policy Proposals*, 39 HARV. J. LEGIS. 63 (2001).

97. 15 U.S.C. §§ 4301-05 (2000). For a discussion of the statute and its underlying policies, *see generally* Kelly L. Morron, *The Administration's Legislation: The National Cooperative Research Act of 1984 and the National Productivity and Innovations Act of 1983*, 18 J. MARSHALL L. REV. 607 (1985).

98. 15 U.S.C. § 4305.

99. 1 HAROLD EINHORN, PATENT LICENSING TRANSACTIONS § 7.09(2) (1999).

100. *Id.*

101. *See* Schachar v. Am. Acad. of Ophthalmology, Inc., 870 F.2d 397 (7th Cir. 1989) (alleged conspiracy to restrain development of radial keratotomy not a restraint of trade subject to rule of reason); United States v. Mfrs. Aircraft Ass'n, Inc., 1976-1 Trade Cas. (CCH) ¶ 60,801 (S.D.N.Y. 1975) (consent decree requiring association to make available certain technical information).

102. *See* HOVENKAMP, *supra* note 84, § 5.2b2.

103. *See id.*

research joint ventures are far removed from the product production and marketing stage.¹⁰⁴ Single firms may under-invest in research and development because it is often easy for competitors to use or misappropriate information and technology.¹⁰⁵ Likewise, intellectual property rights can be “leaky” in the sense that firms may free ride by imitating or inventing around patented inventions or processes protected by trade secrets.¹⁰⁶ Thus, rivals that may otherwise be reluctant to invest in research and development may do so if potential free riders join them in the investment.¹⁰⁷ Including potential free riders as research joint venture partners may encourage socially desirable innovation that might not otherwise occur.¹⁰⁸ The NCRPA recognizes this, so that if it appears that no anticompetitive effects are likely, the Justice Department will not challenge the research joint venture and any related intellectual property rights licensing agreements.¹⁰⁹

The antitrust implications of intellectual property rights in research joint ventures were more specifically addressed in the *Antitrust Guidelines for the Licensing of Intellectual Property*,¹¹⁰ issued by the Federal Trade Commission and the Department of Justice in 1995. The *Antitrust Guidelines for Licensing* give some idea of how joint ventures should be analyzed. Specifically, a research joint venture involving intellectual property rights will be scrutinized using the following inquiries:

Which relevant market is affected? Usually, this will be the innovation market—the competition in research and development to create new or improved products or processes, as well as the close substitutes for research and development.¹¹¹

Does the joint venture restrict competition in the innovation market? The degree of market concentration and market shares of the firms will be considered. Does the joint venture unduly restrict competition in other markets by means of collateral restraints?

104. See Walter T. Winslow, *Joint Ventures—Antitrust Problems and Opportunities*, 54 ANTITRUST L.J. 979, 983 (1985).

105. *Id.* at 984.

106. See Joseph Kattan, *Antitrust Analysis of Technology Joint Ventures: Allocative Efficiency and the Rewards of Innovation*, 61 ANTITRUST L.J. 937, 941-42 (1993).

107. See *id.* at 943.

108. See Winslow, *supra* note 104, at 985.

109. See FRIEDMAN, *supra* note 17, at 5-30.

110. FED. TRADE COMM’N & U.S. DEPT. OF JUSTICE, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (Apr. 6, 1995) [hereinafter ANTITRUST GUIDELINES FOR LICENSING].

111. *Id.* at 9.

Intellectual property rights licensing agreements and restrictions may be such restraints.¹¹²

If there are anticompetitive effects, are there any offsetting efficiency benefits? If the potential for combining intellectual property rights and other assets makes successful innovation more likely or faster, or with reductions in cost, these efficiency benefits may allow the research joint venture to form nonetheless.¹¹³

Furthermore, the *Antitrust Guidelines for Licensing* suggest that in some instances, joint ventures need not have a significant sharing of risk to lead to an efficiency-inducing integration of economic activity.¹¹⁴ Evidence of a pro-competitive purpose and a structure providing incentives for efficiency-enhancing conduct by participants can also be important and will be considered relevant.¹¹⁵ The *Antitrust Guidelines for Collaborations Among Competitors* recognize that cooperation and collaboration between competitors often are pro-competitive, allowing the firms to expand into foreign markets, fund expensive innovation efforts, and lower production costs. The *Antitrust Guidelines for Collaborations* also recognize that firms participating in collaborations, such as joint ventures or strategic alliances, remain potential competitors, even if not actual competitors for certain purposes (for example, research and development) during the collaboration. Intellectual property rights are considered important in identifying and assessing the relevant market affected by the collaboration.¹¹⁶

Under these *Guidelines*, therefore, joint venture partners may share information relating to the technology to be developed.¹¹⁷ A patent cross-licensing agreement can be used for the joint venture where

112. *Id.* at 10. The market power of the firms involved is likely to play a critical role in answering these questions. *Cf.* Rabah Amir, *R&D Returns, Market Structure, and Research Joint Ventures*, 156 J. INST'T & THEORETICAL ECON. (2000) (considering the outcome of a research joint venture in monopoly and duopoly situations); CHANGQI WU, *Research Joint Venture Cartels and Welfare*, in COMPETITION, COOPERATION, RESEARCH AND DEVELOPMENT: THE ECONOMICS OF RESEARCH JOINT VENTURES (J. Poyago-Theotoky ed. 1997).

113. *See* ANTITRUST GUIDELINES FOR LICENSING, *supra* note 110, at 11.

114. *See id.*

115. *See id.*

116. "When rights to intellectual property are marketed separately from the products in which they are used, the Agencies may define technology markets in assessing the competitive effects of a competitor collaboration that includes an agreement to license intellectual property." FEDERAL TRADE COMM'N & U.S. DEPT. OF JUSTICE, ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS 17 (Oct. 1, 1999).

117. *See* Salem M. Katsh, *Collateral Restraints in Joint Ventures*, 54 ANTITRUST L.J. 1003, 1008 (1985).

pooling of patents is necessary to avoid blocking patents or where such pooling is reasonably necessary to the research of the joint venture.¹¹⁸ If the joint venture will own the patent rights, market entry can be regulated by licensing agreements for a substantial period of exploitation if reasonable.¹¹⁹ Antitrust concerns arise when joint venture partners reduce output of new information, the rate of use of existing information, or the rate of output in existing product markets.¹²⁰

Antitrust concerns may also arise if the industry is concentrated and the patent pool members account for a substantial share of sales or output in the industry or there are high barriers to entry in the market.¹²¹ Additionally, exclusive grantbacks¹²² may be challenged if they extend unreasonably beyond the original patents.¹²³ Where trade secrets are involved, noncompetition and confidentiality agreements are enforceable if they are for a reasonable period, though if the restrictions on competition in the products or services are unrelated to the joint venture, they will be considered unreasonable.¹²⁴ Where the joint venture develops a new technology based on the contribution of intellectual property rights of the partners and by incorporating new technology generated by the joint venture, the partners may agree on a method for determining the royalty rate and terms of the licensing package, including field of use restrictions, as long as they are reasonable.¹²⁵

V. INTELLECTUAL PROPERTY RIGHTS AND THEIR PART IN PLANNING THE RESEARCH JOINT VENTURE

Intellectual property rights may be the strategic objective of an inter-firm research collaboration. At the same time, they are a source of risk

118. *Id.* at 1009. Patent cross-licensing and patent pooling are tested under the rule of reason. See *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 161 U.S.P.Q. (BNA) 577 (1969); *United States v. Singer Mfg. Co.*, 374 U.S. 174, 137 U.S.P.Q. (BNA) 808 (1963); *Hartford-Empire Co. v. United States*, 323 U.S. 386, 64 U.S.P.Q. (BNA) 18 (1945).

119. Katsh, *supra* note 117, at 1011.

120. See Winslow, *supra* note 104, at 985.

121. See Katsh, *supra* note 117, at 1009.

122. Grantback clauses in a patent license relate to the licensee's future inventions and whether or not these must be assigned or licensed back to the patent licensor. See A.B.A. SECTION OF ANTITRUST LAW, *INTELLECTUAL PROPERTY MISUSE: LICENSING AND LITIGATION* 63 (2000). See also *Transparent-Wrap Mach. Corp. v. Stokes & Smith Co.*, 329 U.S. 637, 72 U.S.P.Q. (BNA) 148 (1947).

123. See Katsh, *supra* note 117, at 1010.

124. See *id.* at 1011.

125. See *id.* at 1013.

and uncertainty that impact the planning and organization of the joint venture. There are a multitude of contingencies and considerations that the parties to a research joint venture should address in negotiating and constructing the endeavor. We have already considered a number of such issues so far in this discussion. The threshold issues in all joint ventures concern the compatibility of each firm's expectations and objectives, as well as ongoing administrative matters.¹²⁶ For instance: what are the reasons of each partner for forming the joint venture? Will one or more partners be limited in its future actions because of the venture? How will disputes as to purposes of venture be settled? Will such disputes be decided jointly, or does one partner have a controlling vote? Who will manage and direct the venture? How will they be chosen and what is their authority? On the other hand, intellectual property rights raise unique concerns at each stage of the joint venture life cycle. Here, we examine these concerns as they may arise in each phase of this process.

A. Conveying Pre-Existing Intellectual Property Rights

Intellectual property rights may be conveyed to the research joint venture in the joint venture agreement, a separate license agreement, a separate assignment, or all three.¹²⁷ Conveyance of intellectual property rights should be discussed in a joint venture agreement or separate agreement, which references back and between both agreements, and which describes the intellectual property rights and subject matter with specificity, specifying the consideration and defining any license or assignment as exclusive or nonexclusive.¹²⁸ As mentioned above, the decision as to whether to assign or license intellectual property rights depends on many factors, including the specifics of the transaction and the nature of the assets.¹²⁹

Other considerations include: the contributing partners' plans as to continued use and exploitation of the intellectual property rights in

126. For a discussion of these issues, *see generally* EDWARD P. WHITE, LICENSING—A STRATEGY FOR PROFITS 119 (1997).

127. The owner of a patent, copyright, mask work, trademark, trade secret or other IP right may license another party to exercise any or all rights falling within the owner's sphere of exclusivity. Such licenses may be transferable or nontransferable; exclusive, sole or nonexclusive; limited in duration, geographical scope or field of use; capable of being sublicensed; and royalty-free or royalty-bearing. Likewise, intellectual property rights licensed to a partner may be sub-licensed to the joint venture, as long as this does not violate the terms of the license agreement.

128. *See* Dobkin, *supra* note 9, at 100.

129. *See* Salbu & Brahm, *supra* note 15, at 274.

geographic and product markets, other than those acquired by the joint venture; tax and accounting issues; allocation of rights and responsibilities with respect to prosecution, enforcement, and defense of intellectual property rights infringement claims; the types of intellectual property rights to be granted; and any other legal constraints, such as antitrust, filing, registration requirements, or limitations. The partners should also determine ownership and licensing rights in improvements to, and derivative works of, pre-existing intellectual property rights; intellectual property rights developed by one of the partners after the joint venture is created that would be used by the research joint venture; and intellectual property rights developed by the joint venture.¹³⁰ Finally, the partners should decide whether the joint-venture entity will have the right to assign or sublicense rights licensed or granted to it by the partners. If sublicensing rights are granted, the joint venture must ensure that the sublicenses adequately protect the intellectual property rights, including all confidential information and trade secrets, and provide adequate contract defenses, including intended third-party beneficiary status for partners.

B. Rights and Duties During the Research Joint Venture

The joint venture agreement must also address the respective rights and obligations of the joint venture and the partners with respect to protecting, prosecuting, and obtaining intellectual property rights; pursuing claims of infringement and misappropriation against third parties; and defending such actions brought by third parties. When the joint venture is permitted to use technologies of one partner that are protected by patent or trademark, the partner will want assurances that the joint venture and other partner's use will not damage partner's reputation or decrease the value of its brand name.¹³¹

Additionally, the joint venture agreement should address responsibility and control issues with respect to litigation against third parties based on the intellectual property. It should also set forth which parties will bear the costs associated with such litigation and how they will share in any recovery. Research partners must agree to maintain records in sufficient detail and in a good scientific manner so as to:

130. The joint venture could also be required to grant a license to such improvements and derivative works back to the contributing partner, though the antitrust laws restrict the use of such "grantbacks," particularly those of exclusive licenses and ownership rights. See *supra* note 95 and accompanying text.

131. See Salbu & Brahm, *supra* note 15, at 274.

permit partners to pursue patent protection for any new invention that results;¹³² maintain confidentiality to prevent disclosure of trade secrets or proprietary information;¹³³ cooperate in perfecting and maintaining intellectual property rights; and implement procedures to protect trade secrets and other confidential information developed during the course of the research joint venture.¹³⁴

C. Termination of the Research Joint Venture

Negotiation of termination provisions, especially those that govern the disposition of intellectual property acquired during the collaboration, are crucial. Termination provisions related to intellectual property rights should provide for an orderly disposition of the intellectual property rights both contributed by the partners and created by the research joint venture. Termination provisions should state: which of any original technologies and pre-existing intellectual property rights should be assigned back to the original owner; which of any original technologies and intellectual property rights should be cross-licensed between the partners or sublicensed to the research joint venture (if it is to continue); which jointly developed technologies and intellectual property rights should be licensed or sublicensed to each partner by the research joint venture; which partner is entitled to improvements made to the technology by the research joint venture; and what types of ancillary agreements, such as noncompetition or nondisclosure covenants, are reasonably necessary to protect the respective legitimate business interests of the partners.¹³⁵

VI. CONCLUSION

Individual firms may lack the resources and incentives to invest at a socially optimal level in uncertain research and innovation. Research collaboration among firms can correct such market failures and increase the rate of technology creation and diffusion in an industry. As Congress has recognized, "technological innovation and its profitable commercialization are critical components of the ability of the United States to raise the living standards of Americans and to compete in world markets... [C]ooperative arrangements among nonaffiliated businesses... are often essential for successful technological

132. See GUTTERMAN & ERLICH, *supra* note 14, at 159.

133. *Id.* at 162.

134. *Id.* at 168.

135. See Dobkin, *supra* note 9, at 102-03.

innovation”¹³⁶

The research joint venture arrangement offers numerous advantages for collaborative basic and applied research and innovation. Intellectual property rights, whether brought into the venture by one or more of the partners or generated during the term of the venture, raise critical concerns about disclosure, ownership, use, and management that should be addressed in the negotiation and planning phase of the collaboration. Antitrust considerations that relate to the cooperative disclosure, ownership, use, and management of intellectual property rights are also relevant. If the partners to a research joint venture are pro-active in addressing these issues, they can anticipate and manage many of the legal risks involved and maximize the many benefits and efficiencies that result from collaboration.

136. National Cooperative Research and Production Act of 1993, Pub. L. No. 103-42, § 2, 107 Stat. 117 (1993).

