

## A NEW AGE OF PRO-EMPLOYER RIGHTS: ARE AUTOMATIC ASSIGNMENTS THE STANDARD?

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### I. INTRODUCTION

Knowledge and innovation have increasingly become the drivers behind the (private) economic sector, particularly through intangible assets created from “intellectual capital.”<sup>1</sup> A company’s market value is now greatly dependent upon the company’s *intangible* assets rather than its tangible assets.<sup>2</sup> The rising significance of “intellectual capital,” particularly patents, requires companies to carefully consider how to categorize the ownership of employees’ innovations developed while under employment. The Federal Circuit’s 2008 decision in *DDB Technologies, LLC v. MLB Advanced Media, LP*, holding that federal law, not state law, governs the interpretation of patent assignments in employment agreements,<sup>3</sup> creates several concerns for many current and potential companies, employers, and employees. The effects on innovation, research and development, hiring patterns, and other corporate decisions in several industries may be more substantial than the Federal Circuit anticipated.

Consequently, an analysis of the effects of the *DDB Technologies*

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1. James E. Malackowski et al., *Innovation Measurement: The Economic Impact of Patent Value* 1 (2007) <http://www.innovationmetrics.gov/comments/051107OceanTomo.pdf>. “Intellectual capital” is categorized as “a company’s intangible assets, including those assets traditionally referred to as intellectual property—patents, trademarks and copyrights.” *Id.*

2. *Id.* “[I]ntangible value as a percentage of market value has grown from 16.8% in 1975, to 32.4% in 1985, to 68.4% in 1995, and to 79.7% in 2005.” *Id.* Over 30 years, therefore, the percentage of market value increased almost five times its value since 1975.

3. *DDB Technologies, LLC v. MLB Advanced Media, LP*, 517 F.3d 1284, 1290 (Fed. Cir. 2008).

decision is necessary, especially as it was a case of “first impression.”<sup>4</sup> This examination begins with an overview of the history behind the relationship between employee innovations and employers. In particular, Part II of this Comment explores the evolution from a “pro-employee” and “individual genius” approach to one favoring employers with respect to innovation ownership and rights. Part III of this Comment then examines the facts and reasoning underlying the Federal Circuit’s groundbreaking decision in *DDB Technologies*. Part IV subsequently investigates the significance of employee innovations for both firms and inventors from an economic, financial, equitable, and contractual perspective. Finally, this Comment concludes with a projection and analysis into how the *DDB Technologies* decision may affect the employer-employee relationship and how it may drastically change the method through which each party arrives at its decisions in launching a new employment relationship.

## II. HISTORY OF THE RELATIONSHIP BETWEEN EMPLOYEE INNOVATION AND EMPLOYERS

The United States Constitution grants Congress the power “to 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.”<sup>5</sup> Patent law has recognized this idea of protected invention as a product of “individual genius.”<sup>6</sup> The history of employers’ rights to an employee’s “individual genius” can be divided into three stages. First, from 1840 to the mid-1880s, an inventor’s employment status was irrelevant in determining patent ownership.<sup>7</sup> After the 1880s, however, courts began to recognize the “shop right rule,”<sup>8</sup> although they infrequently awarded it despite employers’ emphasis on hiring particular individuals solely to invent.<sup>9</sup> Finally, the third stage of the development of the current

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4. Mike Baniak & Todd Dawson, *Discussion of Employer Assignment Agreements after DDB Technologies v. MLB Advanced Media*, 7 NW. J. TECH. & INTELL. PROP. 298, 307 (2009).

5. U.S. CONST. art. I, § 8, cl. 8.

6. Catherine L. Fisk, *Removing the ‘Fuel of Interest’ from the ‘Fire of Genius’: Law and the Employee-Inventor, 1830-1930*, 65 U. CHI. L. REV. 1127, 1139 (1998).

7. *Id.* at 1132-33.

8. The “shop right rule” grants an employer the right to practice a given employee’s invention when the idea was conceived and perfected during the hours of employment and with the employer’s resources. *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 196 (1933) (citing *Solomons v. United States*, 137 U.S. 342 (1890); *McClurg v. Kingsland*, 42 U.S. (1 How.) 202 (1843)). For a discussion on the difference between an “implied license” and “shop rights,” see ROBERT PATRICK MERGERS & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 1198 (4th ed. 2007) and Annotation, *Right to Inventions as Between Employer and Employee*, 153 A.L.R. 983 (1944).

9. Fisk, *supra* note 6, at 1132-33.

legal doctrine, covering employers' rights to employees' innovations, was greatly influenced by the emergence and prevalence of contracts in the 1900s.<sup>10</sup> This period represented a trend toward an invention ownership approach that has been adopted by courts and companies today, demonstrating the evolution from the focus on the "individual genius" to one on corporate decision-making.<sup>11</sup>

A. *Individual Genius as a Determinant of Patent Ownership*

Traditionally, *individual* efforts, not those related to an "employer-sponsored research agenda," produced the most inventions.<sup>12</sup> Courts initially demonstrated a strong opposition to employment contracts granting rights to employers for employees' innovations.<sup>13</sup> This approach was consistent with the labor theory developed by John Locke.<sup>14</sup> Locke's principle maintains that inventors have a natural right to their inventions ("property") because such innovations are results of their labor and efforts.<sup>15</sup> Nonetheless, courts implemented and widely applied different strategies during earlier periods, when holding that a contract did *not* assign patent rights to employers.

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10. *Id.* In the early 1900s, the Supreme Court of the United States recognized "[t]he general right [of an employer] to make a contract in relation to his business [a]s part of the liberty of the individual protected by the Fourteenth Amendment of the Federal Constitution." *Lochner v. New York*, 198 U.S. 45, 53 (1905) (citing *Allgeyer v. Louisiana*, 165 U.S. 578 (1897)).

11. Fisk, *supra* note 6, at 1132-33.

12. *Id.* at 1139.

13. *Id.* at 1185-97. "The hostility toward contracts assigning employees' future patents was articulated most pointedly in *Aspinwell Mfg. Co. v. Gill*, an early influence federal circuit case involving an inventor who assigned his patent to a manufacturing firm and then went to work for the firm making the product." *Id.* at 1186 (discussing *Aspinwell Mfg. Co. v. Gill*, 32 F. 697 (Cir. Ct. Dist. Ct. N.J. 1887)). However, in cases where it was clear that the employee agreed to assign his future rights to his employer, courts would then hold such contracts enforceable. See *Littlefield v. Perry*, 88 U.S. (21 Wall.) 205 (1874) (holding that contracts and their provisions assigning future rights to inventions were enforceable).

14. Seana Valentine Shiffrin, *Lockean Arguments for Private Intellectual Property*, in *NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY* 138 (Stephen R. Munzer ed., 2001); Justin Hughes, *The Philosophy of Intellectual Property*, 77 *GEO. L.J.* 287, 299-302 (1988). Locke's theory is applicable to intellectual property as it awards an individual for her labor by automatically granting her the rights to the "fruits" of her efforts and work, which in intellectual property would be the rights conferred upon the issuance of a patent (or in certain cases a copyright, trademark, or trade secret).

15. "Intellectual Property law has been framed around the ancient notion that individual labor (creativity) deserves a prize, and that the recognition of exclusive property rights constitutes such a prize." Ugo Mattei & Andrea Pradi, *Property Rights: A Comparative Law and Economics Perspective in the Global Era*, in *PROPERTY RIGHTS DYNAMICS: A LAW AND ECONOMICS PERSPECTIVE* 40, 50 (Donatella Porrini & Giovanni Battista Ramello eds., 2007).

First, unless there was a clear contractual provision establishing ownership of inventions, courts would not interpret any assignment of rights (to employers) into agreements. Furthermore, even if terms granting rights were included in a contract, courts narrowly construed the coverage of the agreement *against* the employer.<sup>16</sup> However, as will be discussed below, this trend has recently changed—especially after the *DDB Technologies* decision and the collaborative efforts inherent in many radical technological developments.<sup>17</sup>

Nonetheless, although the theory of the “individual genius” recognizes the individual work behind an invention, firms are still considered the “logical repositories” of legal rights over intellectual property developments.<sup>18</sup> Firms have been defined as “institutional vehicles in which complementary material, intellectual and financial resources are collected and organised [sic] to manage the risks inherent in innovative activity.”<sup>19</sup> Internationally the treatment of intellectual property rights differs and therefore causes inconsistencies,<sup>20</sup> especially for firms with a global presence. As the foundation of many patents has transformed from work of the “individual genius” to one of “team work,” particularly while subject to an employment agreement, courts have begun to interpret assignments with greater deference to the parties to the contract. Consequently, although it has been maintained that the lack of an *express* agreement represents that an employer has no interest in patents issued to or created by one of its employees,<sup>21</sup> this view has shifted and evolved since the emergence of employment contracts, assignment provisions, and state courts’ interpretation thereof.

### B. *The Rise of the Corporate Form and Employment Contracts*

Although patents were historically deemed representative of “individual genius,” such innovations are today considered products of a “collective enterprise” of creations and ideas.<sup>22</sup> This transformation

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16. Fisk, *supra* note 6, at 1187–88. See also *Pressed Steel Car Co. v. Hansen*, 137 F. 403, 410 (3d Cir. 1905) (establishing that an assignment contract must be express and supported by clear evidence); *Hopedale Mach. Co. v. Entwistle*, 133 Mass. 443, 444 (1882) (holding that a contract granting the employer rights to the employee’s invention developed while under employment did not apply after the contract expired even though parts of the innovation had been developed prior to the agreement’s termination).

17. See *infra* Part II.B (describing the collective nature of innovative development prevalent in many companies today).

18. WILLIAM VAN CAENEGEM, *INTELLECTUAL PROPERTY LAW AND INNOVATION*, 94-95 (2007).

19. *Id.*

20. See *id.* at 95 (discussing how each nation grants such rights differently).

21. *Talbot v. Harrison*, 270 N.Y.S. 171 (N.Y. Sup. Ct. 1933).

22. Fisk, *supra* note 6, at 1133.

resulted in changes in corporate structure and led to the predominance of contracts in determining ownership of patents and inventions.

The rising significance of contracts reflected not only a change in legal discourse, but also a change in actual practice in the workplace. As firms grew in size, they began to invest in research and development and as personnel management became increasingly organized and bureaucratized, employers began to also be more systematic in their handling of employee-inventors. Employers more frequently required that all employees who were likely to invent sign agreements assigning their potential inventions to their employer.<sup>23</sup> Furthermore, because patents are “reward[s] to those who . . . exert their abilities, employ their time, and spend their money in the production of something new and useful to the community,”<sup>24</sup> tension arises when an employer has control over or owns the time, money, and resources utilized in the creation of such patents.

Employers seek to maximize the benefit of employees’ “individual genius” while minimizing the costs associated with such benefits. Costs include the employee allocating her time, while working, to developing a patent that may not constitute a direct part of her position’s responsibilities.<sup>25</sup> Nonetheless, employers often have an advantageous position in negotiating for ownership and use of their employees’ inventions because of the greater resources employers make available to their employees, consultants, and contractors.<sup>26</sup> Innovators often lack the access to such resources when developing patentable ideas while unemployed.<sup>27</sup>

As a result, employment contracts are not only significant in protecting both the employer and employee, but also in encouraging and

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23. *Id.* at 1185.

24. RICHARD GODSON, A PRACTICAL TREATISE ON THE LAW OF PATENTS FOR INVENTIONS AND OF COPYRIGHT 19 (William Benning ed., 2d ed. 1844).

25. This opportunity cost is often a disadvantage to employers. The employee developing an independent innovation could be utilizing that same time to develop or work on projects under her exclusive employment responsibilities. Opportunity costs are significant when conducting a cost-benefit analysis for such situations because they “represent the value of a forgone opportunity when some other choice is made.” Elchanan Cohn & Samuel T. Cooper, *Multi-Product Cost Functions for Universities: Economies of Scale and Scope*, in INTERNATIONAL HANDBOOK ON THE ECONOMICS OF EDUCATION 579, 588 (Geraint Johnes & Jill Johnes eds., 2004).

26. This presumes that the employee would not have access to such advantages if she were unemployed or working for a different enterprise. Nonetheless, these stronger resources frequently consist of, but are not limited to, greater financial resources, networks and contacts in a particular industry, and equipment to produce and perfect a particular product or service. In addition, the talent, expertise, and input of co-workers and other employment-related colleagues are particularly pertinent especially for patents, which are increasingly becoming products of collaborative efforts. Fisk, *supra* note 6, at 1192.

27. *Id.* See also *infra* Parts III.B and IV (discussing the benefits inventors garner while employed).

supporting the ongoing growth of technological innovation.<sup>28</sup> The National Venture Capital Association (“NVCA”) conducts an annual study, entitled *Venture Impact: The Economic Importance of Venture Capital-Backed Companies in the U.S. Economy*, which, in 2008, found that venture-backed companies corresponded to 21% of the United States Gross Domestic Product (“U.S. GDP”).<sup>29</sup> This percentage increased by nearly 25% since 2006 when it was determined that only 17.6% of U.S. GDP was contributable to such companies.<sup>30</sup> Most importantly, the many innovations developed by venture-backed companies have been and continue to be “disruptive technologies” which lead to groundbreaking patents and advancements.<sup>31</sup> These technologies may build upon prior inventions or more importantly establish and launch novel and radical ideas that are new to their respective markets. This is the type of technological growth that is

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28. The greater resources provided by a firm are the foundation for the support of continuing innovation. *See contra* Michele Boldrin & David Levine, *Intellectual Property and the Efficient Allocation of Social Surplus from Innovations*, in PROPERTY RIGHTS DYNAMICS: A LAW AND ECONOMICS PERSPECTIVE, *supra* note 15, at 93, 107 (explaining that excluding a few exceptions, “[intellectual property] is not necessary for efficient innovation”). “The efficient allocation of surplus from innovation can and would be achieved by properly regulated competitive markets, and such distribution . . . could provide the correct incentives for the efficient amount of creation to take place in society.” *Id.*

29. NATIONAL VENTURE CAPITAL ASSOCIATION, VENTURE IMPACT: THE ECONOMIC IMPORTANCE OF VENTURE CAPITAL-BACKED COMPANIES IN THE U.S. ECONOMY, 2 (2009), [http://www.nvca.org/index.php?option=com\\_content&view=article&id=255&Itemid=103](http://www.nvca.org/index.php?option=com_content&view=article&id=255&Itemid=103) [hereinafter NVCA REPORT].

30. In 2008, the Head of Research at the National Venture Capital Association explained the process behind the study relating revenues of venture-backed companies to U.S. GDP. Calculating the percentage involved finding all companies funded by venture capital between the 1970s and 1990s. Although many of those firms were no longer in existence, those that survived were evaluated through Dun and Bradstreet databases. The total revenue of the venture-backed firms analyzed was then summed and compared to U.S. GDP. Telephone Interview with John Taylor, Head of Research, National Venture Capital Association (Apr. 8, 2008). Although there is some criticism as to the equitability of a revenue-to-GDP comparison, such concerns are mitigated by the Solow Growth Model. *See* Shannon H. Hedvat, *Entrepreneurial Engineers and Scientists: The Drivers Behind the Most Significant Innovations and Patents* (May 9, 2008) (unpublished M.S.E. thesis, University of Pennsylvania) (on file with author) (describing the Solow Growth Model’s theory that capital, labor, and total product growth rates will be the same in the long run only if technological progress is non-existent) (citing ROBERT M. SOLOW, *GROWTH THEORY: AN EXPOSITION ix-190* (2d ed. 2000); Press Release, Nobel Prize, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1987: Robert M. Solow (Oct. 21, 1987)).

31. NVCA REPORT, *supra* note 29. Disruptive technologies frequently result in what many scholars consider “significant patents.” The significance of a patent is determined by various factors including the number of subsequent citations of the given invention in other patents and applications. ZOLTAN J. ACS AND DAVID AUDRETSCH, *INNOVATION AND SMALL FIRMS*, 51-52 (1991); DAVID AUDRETSCH, *INNOVATION AND INDUSTRY EVOLUTION*, 31-37 (1995); Manuel Trajtenberg, *A Penny for Your Quotes: Patent Citations and the Value of Innovations*, RAND J. ECON., 1990, at 172-87. This measurement is often scaled by the elapsed time since the publication and issuance of the patent being evaluated.

sought by venture capitalists and innovation experts.

Therefore, many significant inventions are being developed at and supported by both start-up and long established firms. The ownership and protection of patents granted as a result of these innovations are important for employees, employers, and (potential) investors. Although in the late 1890s courts' reasoning for enforcing assignment provisions was based on the theory that "employment provided opportunities for invention,"<sup>32</sup> decisions today focus more on the "collective nature of research and development."<sup>33</sup>

Research and development hiring has resulted in the categorization of patents into three areas: firm-owned, firm-related, and independent.<sup>34</sup> These groups may be incorporated into employment contract provisions by utilizing them in defining specific patent rights, assignments, and distinctions.<sup>35</sup> As a result, the invention development process and the benefits garnered by both employers and employees with respect to innovations are vital when considering the effects of language used when forming employment contracts.<sup>36</sup>

32. See Fisk, *supra* note 6, at 1192 (discussing the 1890s courts' enforcement of an assignment agreement in *Hulse v. Bonsack Machine Co.*, 65 F. 864 (4th Cir. 1895)).

33. *Id.*

34. Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J. LAW & TEC. 1, 7 (1999). Merges defines each category as shown in the adapted table below:

Type	Invention Status	Ownership
Firm-Owned	Inventor "employed to invent"	Firm owns outright
Firm-Related	Non-R&D inventor; invention related to employee duties or created with employer resources	Split entitlement: employee owns patent, but firm has "shop right," a limited, nontransferable license
Independent	Invention unrelated to employee duties or created without employer resources	Employee owns outright

35. The categories are also important when evaluating the "significance" of a patent. ACS & AUDRETSCH, *supra* note 31; AUDRETSCH, *supra* note 31; Hedvat, *supra* note 30.

36. The language used in employment contracts may improve the difficulties in assignment provisions if the *type(s)* of patents covered by the agreement are defined. See *supra* note 34 for a list and table of these patent categorizations.

### III. *DDB TECHNOLOGIES LLC v. MLB ADVANCED MEDIA, LP*: A NEW AGE OF EMPLOYER RIGHTS

Employment contracts and the interpretation thereof have traditionally been subject to state law. However, “the question of whether a patent assignment clause creates an automatic assignment or merely an obligation to assign is intimately bound up with the question of standing in patent cases . . . [and is therefore] treated . . . as a matter of federal law.”<sup>37</sup> This recent holding in *DDB Technologies* “seemingly enhances the rights of employers,”<sup>38</sup> demonstrating a change in the trend of courts’ protection of employers and employees.<sup>39</sup>

#### A. *Background of DDB Technologies*

David Barstow, a former employee of Schlumberger Technology Corporation (“Schlumberger”), founded DDB Technologies, LLC (“DDB”) with his brother (not an employee of Schlumberger).<sup>40</sup> While working for Schlumberger, Barstow and his brother developed a computer simulation program that ultimately resulted in the issuance of four patents.<sup>41</sup> Although several employees confirmed that Schlumberger, or at least some of its employees, was aware of the program’s development,<sup>42</sup> the company never claimed ownership or rights to the product, especially since the firm was in an unrelated industry of oil wells.<sup>43</sup> Nonetheless, Barstow left the firm in 1994 to launch his new venture, DDB.

In 2004, DDB filed a patent infringement suit against MLB Advanced Media (“MLB”).<sup>44</sup> At this point, from 1994 until 2005, Schlumberger did not assert any ownership interests in or rights to the patents granted for

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37. *DDB Technologies, LLC v. MLB Advanced Media, LP*, 517 F.3d 1284, 1290 (Fed. Cir. 2008).

38. Baniak & Dawson, *supra* note 4, at 298.

39. *See supra* Part II.A for the history of courts’ treatment of employers and employees in contract disputes.

40. *DDB Technologies*, 517 F.3d at 1286.

41. The developed program resulted in three “Computer Simulation Patents” (U.S. Patent Nos. 5,526,479, 5,671,347, and 6,204,862) and one “Pattern-Matching Patent” (U.S. Patent No. 5,189,630). *Id.* The former patents encompass “a method for generating a computer simulation of a live event for display on a viewer’s computer” while the latter relates to “a method allowing a viewer to search for certain information about a live event.” *Id.* All four patents were ultimately assigned to Barstow and his brother in 1998, six years before the infringement suit was filed.

42. *Id.* at 1287.

43. *Id.*

44. *Id.* at 1288. The suit alleged that MLB “provide[d] several Internet services related to baseball that infringe[d] the Computer Simulation Patents and the Pattern-Matching Patent.” *Id.* *See also supra* note 41 for a list of the patents at issue.



Barstow's computer simulation program.<sup>45</sup> Despite this inactivity, Schlumberger decided, a year after the suit was initiated, to enter into an agreement with MLB transferring "all of Schlumberger's rights and interest in the patents in suit and granted MLB[] a retroactive license to practice under those patents."<sup>46</sup> This agreement allowed MLB to seek dismissal of DDB's action against MLB for lack of subject matter jurisdiction.<sup>47</sup> Although the district court granted MLB's motion to dismiss,<sup>48</sup> the appeal by DDB provided the Federal Circuit with the opportunity to review the case.<sup>49</sup>

The language of Barstow's employment contract<sup>50</sup> granted Schlumberger the rights and ownership of patents that were developed under the agreement and were "suggested by" or "relate[d] . . . to" Barstow's work for the company.<sup>51</sup> While the Federal Circuit admitted that the agreement language was *ambiguous*, it nonetheless held that the effect of the language was to automatically assign ownership of inventions to Schlumberger.<sup>52</sup> This decision not only raises concerns because

45. *DDB Technologies*, 517 F.3d at 1293.

46. *Id.* at 1288.

47. MLB's motion was "based on DDB's failure to join all owners of the patents in suit (including MLB[]) and on DDB's inability to pursue an infringement claim against MLB[] by virtue of its newly acquired ownership interest in those patents." *Id.*

48. *Id.*

49. The ultimate question before the court was "whether the interest of Dr. David Barstow . . . in these patents was previously assigned to his former employer, Schlumberger . . ." *Id.* at 1286.

50. The provisions in the employment agreement between Barstow and Schlumberger regarding ownership of employee inventions included:

3. Employee shall promptly furnish to Company a complete record of any and all technological ideas, inventions and improvements, whether patentable or not, which he, solely or jointly, may conceive, make or first disclose during the period of his employment with [Schlumberger].

4. Employee agrees to and does hereby grant and assign to Company or its nominee his entire right, title and interest in and to ideas, inventions and improvements coming within the scope of Paragraph 3:

a) which relate in any way to the business or activities of [Schlumberger],  
or  
b) which are suggested by or result from any task or work of Employee  
for [Schlumberger], or  
c) which relate in any way to the business or activities of Affiliates of  
[Schlumberger],

together with any and all domestic and foreign patent rights in such ideas, inventions and improvements. Employee agrees to execute specific assignments and do anything else properly requested by [Schlumberger], at any time during or after employment with [Schlumberger], to secure such rights.

*Id.* at 1287.

51. *Id.* at 1290.

52. *Id.* The court further clarified that as a result of this holding, DDB's defenses based

Schlumberger failed to object to Barstow's full ownership and use of the patents for over a decade,<sup>53</sup> but also because it demonstrates the *federal* courts' move toward a pro-employer approach for patent assignments.

*B. Effects of DDB Technologies on Employment Relationships*

The difficulties that arise from the *DDB Technologies* holding are magnified by the language chosen by employers when drafting employment agreements. Although federal law governs the interpretation of patent assignment provisions (according to the Federal Circuit in *DDB Technologies*), and therefore creates uniformity, general contract interpretation is still under state law jurisdiction. Judge Pauline Newman, in her dissenting opinion in *DDB Technologies*, emphasized that contracts are “creatures of state law . . . [and] they should be governed by whatever contractual law was binding on the parties at the time.”<sup>54</sup> The separation created by the majority in *DDB Technologies* undermines the benefits often sought by companies when selecting a particular state for incorporation or an applicable law provision in contracts. Nonetheless, employers and employees must now carefully consider the terms comprising a patent assignment clause, if any.

Corporations and firms maintain that the *DDB Technologies* decision only highlights the advantages of “put[ting] [the inventions and patents] in [employers'] hands” because the employee, on her own, “can’t handle it.”<sup>55</sup> However, this conclusion assumes that the employees creating such inventions would not have been able to launch their own ventures or have access to the resources needed to succeed in the development of a new (patentable) innovation if they were unemployed. Nonetheless, it is possible for an employee to unexpectedly develop a new idea while employed,<sup>56</sup> even if the project is unrelated to her official responsibilities.

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on estoppel, waiver, and statute of limitations were without merit. *Id.*

53. Baniak & Dawson, *supra* note 4, at 306.

54. *Id.* at 308. See also *DDB Technologies*, 517 F.3d at 1294 (Newman, J., dissenting) (“Interpretation of employment contracts, including clauses establishing employer-employee obligations with respect to inventions and patents, is a traditional state matter. This is a quite different issue from ‘standing in patent cases . . .’”).

55. Baniak & Dawson, *supra* note 4, at 309.

56. See John C. Coffee, Jr., *Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer’s Role in Corporate Governance*, 84 COLUM. L. REV. 1145, 1225 n.244 (1984) (“[C]onglomerate firms obtain economies of scale when conducting basic research, because technological innovation resulting from such research is often unpredictable, and hence the diversified firm with more product lines stands a greater chance of benefiting from an unexpected innovation.” (citing Nelson, *The Simple Economics of Basic Scientific Research*, 67 J. POL. ECON. 297, 302 (1959))). See also Harry McCracken, *The Patents of Steve Jobs: Ten Unexpected Inventions that add up to a Portrait of Apple’s CEO*, TECHNOLOGIZER, May 28, 2009, <http://technologizer.com/2009/05/28/the->

This does not suggest, however, that the individual would have been unable to successfully create the invention if she were not employed, even if the concept precipitated from her work.<sup>57</sup>

Consequently, it is imperative for employees, more than employers in many situations, to carefully analyze the language used in labor agreements. The *DDB Technologies* decision stands for the proposition that an employer is entitled to the work an employee has accomplished on the employer's time and through the use of the employer's laboratories and equipment. This right is realized even if the employee was not hired to invent and the ultimate innovation does not relate to the firm's business.<sup>58</sup> The holding grants employers even more leverage in negotiating contracts than they previous had.

Before *DDB Technologies*, employers were viewed as having a significant bargaining advantage when hiring employees and drafting related agreements.<sup>59</sup> Now, however, not only are employers granted authority over patents when *express* language is provided in an employment contract,<sup>60</sup> but they are also entitled to bring suit to obtain ownership rights of former employees' patents that they did not demonstrate interest in or control over for several years (as in *DDB Technologies*).<sup>61</sup> This effect also impacts the effective termination of such contracts, as demonstrated by Barstow's situation.

Furthermore, drafters of employment contracts must also be cautious in structuring the terms of automatic assignments so there is no ambiguity. For example, defining ownership only for those inventions "related to" the industry in which the firm operates or the responsibilities for which the employee was hired leaves great room for dispute, as shown in *DDB*

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patents-of-steve-jobs/ (describing "unexpected" patents developed by Steve Jobs that have been vital to the recent successes of Apple).

57. This is particularly pertinent as capital and investment opportunities for inventions are more accessible and varied than before. Steve Lohr, *Turning Patents into 'Invention Capital'*, N.Y. TIMES, Feb. 18, 2010, at B1. Therefore, investments can be sought by individual entrepreneurs and innovators, which may ultimately diminish the reliance of these individuals on employer firms for such advantages.

58. Baniak & Dawson, *supra* note 4, at 301.

59. PATRICK J. CIRON & JAMES OTTAVIO CASTAGNERA, EMPLOYMENT AND LABOR LAW (6th ed. 2008); RICHARD EDWARDS, RIGHTS AT WORK: EMPLOYMENT RELATIONS IN THE POST-UNION ERA 51 (1993) (discussing how the "asymmetry in the bargaining powers of an employer and the individual worker" was one of the key factors in the legalization of labor unions).

60. An example of express language is: "Agrees to and does hereby grant and assign." "Hereby assign[ing]" such invention and patent rights creates an *automatic* legal assumption of ownership. Baniak & Dawson, *supra* note 4, at 308.

61. The time delay Schlumberger was permitted before demonstrating its ownership in *DDB Technologies* was, however, influenced in part by the state law under which Barstow's employment contract was formed. *DDB Technologies*, 517 F.3d at 1290.

*Technologies*.<sup>62</sup> Companies are advised by legal counsel to “ensure that patent assignment provisions effect a current and express assignment of present and future inventions in their employment agreements in light of the decision in *DDB Technologies*.”<sup>63</sup> More significantly, subsequent courts have adopted the reasoning and holding of the Federal Circuit in *DDB Technologies*,<sup>64</sup> indicating that potential innovators will now be faced with more difficult decisions in obtaining employment. Although the risks and uncertainty in developing innovations are less when working for a larger firm,<sup>65</sup> the protection of one’s “individual genius,” that was prevalent and supported by the legal system for many years<sup>66</sup> is lost when assignments are construed to be automatic.

#### IV. THE IMPORTANCE OF PATENTS AND INNOVATIONS TO EMPLOYERS AND EMPLOYEES

The reasoning behind employees’ decisions to maintain jobs at firms with significant research and development divisions is often questionable because of the control that employees may lose over their ideas and

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62. See *supra* note 50 and accompanying text (discussing the employment contract at issue in *DDB Technologies*); *infra* note 104 (examining similar disputes that arise under copyright law, 17 U.S.C. §§ 101, 201(b) (1976)). In addition, in academia settings, it has been argued that after *DDB Technologies* “draftspersons of university intellectual property policies charged with creating an automatic assignment would be well-served to include express language to the effect that the assignment is automatic.” Anthony J. Luppino, *Fixing a Hole: Eliminating Ownership Uncertainties to Facilitate University-Generated Innovation*, 78 UMKC L. REV. 367, 392-93 (2009).

63. Robert N. Holtzman et al., *Employment Law and Intellectual Property Alert: Federal Circuit Supplants State Law to Interpret Patent Assignments in Employment Agreements*, KRAMER LEVIN (Nov. 2008), [http://www.kramerlevin.com/files/Publication/6f9ad442-24de-4da7-978f-01cb5697ac73/Presentation/PublicationAttachment/2b14750e-6f78-401e-8303-056221f91727/Employment%20Law\\_IP%20Alert.pdf](http://www.kramerlevin.com/files/Publication/6f9ad442-24de-4da7-978f-01cb5697ac73/Presentation/PublicationAttachment/2b14750e-6f78-401e-8303-056221f91727/Employment%20Law_IP%20Alert.pdf).

64. See *Bd. of Trustees of the Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 583 F.3d 832, 840-41 (Fed. Cir. 2009) (reaffirming the holding in *DDB Technologies* with respect to statutes of limitations and automatic assignments); *Rothschild v. Cree, Inc.*, 711 F. Supp. 2d 173, 182 (D. Mass. 2010) (“There is a distinction between an agreement that automatically assigns the patent as soon as the invention comes into being, and an agreement that merely creates an obligation to assign the patent in the future.”); *EMD Crop Bioscience, Inc. v. Becker Underwood, Inc.*, No. 10-cv-283, 2010 U.S. Dist. LEXIS 116626, at \*13 (W.D. Wis. Oct. 28, 2010) (explaining that the Federal Circuit “applies federal law to determine the validity and terms of an assignment for patent rights”); *STMicroelectronics, Inc. v. Harari*, No. 05- 04691, 2008 BL 192449 (N.D. Cal. Aug. 26, 2008) (applying the *DDB Technologies* standard that automatic assignments of patents is governed by federal law).

65. *Merges*, *supra* note 34, at 30. Risks and uncertainty are considered less when employed by a larger firm because of the increased access to financial and technological resources.

66. See discussion *supra* Part II.A.

innovations. Employees are likely to be disadvantaged in the protection and ultimate ownership of their inventions when working for larger corporations. However, obtaining such employment reduces the high degree of uncertainty and risk associated with research and development.<sup>67</sup> While “[i]t is clear . . . that an inventor may use the services, ideas, and aid of others in the process of perfecting his invention without losing his *right* to a patent,”<sup>68</sup> there is still a question of who obtains the rights when the patent is granted, especially when the inputs into the development of the idea belong to a company.<sup>69</sup>

*A. Employees’ Incentives at Larger Firms*

Innovators who seek to establish disruptive technologies<sup>70</sup> are faced with two general options: to work for a large firm with significant research and development resources or to launch an entrepreneurial start-up venture.<sup>71</sup> The latter choice has greater risk but offers higher returns and grants an inventor more control over the process.<sup>72</sup> When an employee is strictly hired to *invent*, it is reasonable for the employer to expect to obtain full ownership and rights to any innovations and patents established under employment-related projects and obligations.<sup>73</sup> However, when the invention is not directly related to the employee’s responsibilities or the nature of the company’s business, it is questionable whether the firm should acquire all the benefits. Consequently, the specific language used in an employment contract is vital in resolving such disputes.<sup>74</sup>

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67. Merges, *supra* note 34, at 30. Such uncertainties include the risks an innovator undertakes when investing various resources into new and not yet developed ideas.

68. *Hobbs v. U.S. Atomic Energy Comm’n*, 451 F.2d 849, 864 (5th Cir. 1971) (emphasis added).

69. These inputs include, but are not limited to, labor, financial resources, and technical and lab equipment. A company’s type of business and its divisions greatly affect the resources available to its employees and the extent to which collaboration (or co-authorship for copyrights) is possible.

70. See *supra* note 31 and Part II.B (discussing disruptive technologies).

71. Merges, *supra* note 34, at 31.

72. Entrepreneurs are frequently also the engineers and inventors behind the technology or product prompting the start of a new company. Hedvat, *supra* note 30. Such firms are often smaller because “in industries that are highly innovative and comprise predominantly of large firms, the relative innovative advantage [is] found to be held by small enterprises.” AUDRETSCH, *supra* note 31, at 38.

73. If employees were permitted to allocate all the risk of innovation to a firm but then reap the benefits (of ownership and patent rights) if and when the invention succeeds, then “employees would claim ownership of valuable inventions, leaving the firm with worthless ones, and corporate [research and development] would grind to a halt.” Merges, *supra* note 34, at 31. A balance is necessary when evaluating the costs and benefits of owning employee innovations and patents.

74. See *supra* Part III (discussing the effects of assignment language in employment

In addition, courts have opposed the argument that innovation and trade will be stifled if employers continue to obtain rights to all future inventions of employees.<sup>75</sup> The basis for this reasoning is founded in the belief that if inventors are unable to utilize the resources and opportunities given while employed at a large and successful corporation, then the public will not benefit from such inventors' potential.<sup>76</sup> If the employee does not have the resources to pursue her ideas before obtaining employment, then when she is employed she is arguably afforded access to greater assets for the invention process while also being compensated through her salary.<sup>77</sup> Nonetheless, when drafting employment contracts it is unlikely that employers consider the public's and the inventor's best interests, especially in light of the incentives companies have in obtaining control of patent and invention rights from their employees.<sup>78</sup>

*B. Employee Patents and the Effect on Competition and Antitrust Policies*

In a study analyzing the value of 222 patents in the United States, participant companies reported that almost 10% of their patents were worth over \$100 million.<sup>79</sup> Furthermore, 50.2% were valued above \$1 million.<sup>80</sup> Companies in these particular sectors, such as high-technology firms and venture-backed technology start-ups,<sup>81</sup> have a significant economic and

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contracts).

75. *Hulse v. Bonsack Mach. Co.*, 65 F. 864, 868-69 (4th Cir. 1895); *Merges*, *supra* note 34, at 31. This view is supported by a more recent argument that intellectual property is *not* essential in encouraging innovation. Boldrin & Levin, *supra* note 28. Therefore, if intellectual property rights are the main assignments issued to employers (through employment contracts), then this reasoning is significant. Moreover, the more substantial resources provided by and available at a firm are the foundation for the support of continuing innovation. *Id.*

76. See *Hulse*, 65 F. at 868 (holding that an employment contract was not against public policy as it allowed the inventor to benefit from the corporation's resources); *Merges*, *supra* note 34, at 31 (stating that a reason why inventors seek employment in research and development units of firms is to benefit from investments of the firms that are key to the invention).

77. An employee's salary is a benefit, on some levels, because if one were to launch her own venture, it is likely that she would be dependent upon investors and debt while lacking an independent source of income. Nonetheless, the risks associated with not having a steady salary (i.e., starting a new business) often reap greater results that *do* benefit the public (i.e., radical technological advancements and innovations).

78. Bigger firms, with higher employment, may benefit most because of the increased probability of invention development across the larger number of employees. Coffee, Jr., *supra* note 56, at 1225.

79. F.M. SCHERER, PATENTS: ECONOMICS, POLICY AND MEASUREMENT, 269 (2005).

80. *Id.*

81. Another sector where patent rights, particularly in software, have had an increasing importance is the financial industry. Robert P. Merges, *The Uninvited Guest: Patents on*

competitive motivation in seeking the automatic assignment of employees' inventions, particularly given the high value of radical patents.<sup>82</sup> Many firms may find it more efficient to control inventions that correspond to their commercial and technological profile because they can assemble the complementary skills and resources necessary to maximize innovations' uses.<sup>83</sup> Consequently, the *DDB Technologies* holding, by appearing to favor employers,<sup>84</sup> only furthers their competitive advantages in not only negotiating employment contracts but also in gaining market power.

Competition and antitrust policies are also directly related to intellectual property rights.<sup>85</sup> For example, the *Global Competitiveness Report*, produced annually by the World Economic Forum, ranked the United States, for 2009-2010, in the top ten of 133 countries for capacity for innovation, company spending research and development, and availability of scientists and engineers, among other areas.<sup>86</sup> Furthermore,

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*Wall Street*, in PROPERTY RIGHTS DYNAMICS: A LAW AND ECONOMICS PERSPECTIVE, *supra* note 15, at 116, 117-19.

82. Radical patents and innovations are similar to disruptive technologies. *See supra* note 31. Radical inventions are often compared to incremental innovations. The "disruptive quality" and characteristics of radical innovations include being "outside the predicted pattern." *What is Accelerated Radical Innovation?*, INTERNATIONAL WORKSHOP ON ACCELERATED RADICAL INNOVATION, 1 (Mar. 2005), <http://www-iwari2005.eng.utoledo.edu/pages/pdfs/WhatIsAcceleratedRadicalInnovation.pdf> (citing JOHN A. BERS & JOHN P. DISMUNKES, ROADMAP FOR A RADICAL INNOVATION COMMUNITY OF RESEARCH AND PRACTICE (2004) (unpublished manuscript)). "Unlike most incremental innovation, which is based either on well-developed science or existing technology, radical innovation makes a dramatic impact on innovation performance by explicitly linking directly into the concurrently expanding scientific frontiers of pure and user-inspired basic research . . ." *Id.* at 2.

83. VAN CAENEGEM, *supra* note 18, at 95.

84. *See* Stephen G. Charkoudian et al., *Patents, Employment Contracts and Automatic Assignment: Federal Law Holds Sway*, IP ADVISOR (Goodwin Procter, Boston, Mass.) Apr. 2008, <http://www.goodwinprocter.com/Publications/Attorney-Articles/2008/Automatic-Assignment-IP-Advisor-April-2008.aspx> (stating that if assignment-of-invention clauses are drafted properly, employers can seek comfort in the fact that they will automatically own employees' inventions at the time of creation); Holtzman et al., *supra* note 63 (stating that employers can be reasonably certain assignment-of-invention clauses will be uniformly interpreted under federal law to automatically assign ownership of employees' inventions to employers regardless of contrary state law). *See also* Lisa Treannie & Howard Zaharoff, *DDB Technologies: Beware the IP Assignment Clause*, IP NEWS (Morse Barnes-Brown Pendleton PC, Waltham, Mass.), Jan. 2009, <http://www.mbbp.com/resources/iptech/newsletters/pdfs/IPNews-IPAssignmentClause.pdf>; Darin Snyder, *Employment Agreements and Assignment of Patents by Employees*, O'MELVENY & MYERS LLP (Mar. 21 2008), <http://www.omm.com/newsroom/publication.aspx?pub=607>.

85. Mattias Ganslandt, *Intellectual Property Rights and Competition Policy*, in FRONTIERS OF ECONOMICS AND GLOBALIZATION: INTELLECTUAL PROPERTY, GROWTH AND TRADE 233 (Keith E. Maskus ed., 2008).

86. WORLD ECON. FORUM, GLOBAL COMPETITIVENESS REPORT 2009-2010, 15 (Klaus Schwab ed., 2009) [hereinafter WORLD. ECON. FORUM 2009-2010], *available at*

in 2006-2007, the correlation between the index for antitrust effectiveness<sup>87</sup> and the index of intellectual property protection<sup>88</sup> was 0.90 in the United States.<sup>89</sup> These indices and rankings, particularly in the United States, further emphasize the strong relationship between a firm's position and market control in its business sector and its intellectual property rights, protection, and developments.

Therefore, companies are incentivized to seek acquisition of their employees' inventions that will or have already resulted in patent protection. While supply of the labor to produce such intellectual property is high,<sup>90</sup> demand is also at its peak as the advantages of acquiring such employees provide economic, financial, and competitive benefits for a company, in its respective market(s). Although a higher supply may yield greater negotiating power for the employers when seeking innovators, employers are not benefited by contractual terms below those automatically assigning all patent and invention rights to the company. These provisions, however, are not favored by the sought-after employees.

Nonetheless, while innovation enhances the efficiency and growth of a particular firm in its respective market,<sup>91</sup> the incentive to innovate may be stifled if the firm is unable to acquire the necessary talent.<sup>92</sup> Employees may not accept particular employment if a similar situation to that in *DDB Technologies* arises or may arise.<sup>93</sup> Furthermore, if an employee needs an

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<https://members.weforum.org/pdf/GCR09/GCR20092010fullreport.pdf>.

87. While there is variation in how "antitrust effectiveness" may be defined, elements considered in the analysis and computation of the figure include a region's local competition level, commitment to corruption, and effective decision-making and regulation of antitrust policy. D. Daniel Sokol, *The Future of International Antitrust and Improving Antitrust Agency Capacity*, 103 NW. U. L. REV. 1081, 1081 n.4 (2009).

88. The International Intellectual Property Rights Index ("IPRI") captures countries' "strength and effectiveness [in] their property rights protection . . . [as] a useful tool for policymakers, academics, business leaders, think tanks, and other researchers." ALEXANDRA C. HORST, INTERNATIONAL PROPERTY RIGHTS INDEX (IPRI): 2007 REPORT 1 (2007), [http://www.internationalpropertyrightsindex.org/UserFiles/File/PRA\\_Interior\\_LowRes.pdf](http://www.internationalpropertyrightsindex.org/UserFiles/File/PRA_Interior_LowRes.pdf).

89. Ganslandt, *supra* note 85, at 235 (citing WORLD ECON. FORUM, GLOBAL COMPETITIVENESS REPORT 2006-2007 (2006)).

90. WORLD ECON. FORUM 2009-2010, *supra* note 86, at 14.

91. Ganslandt, *supra* note 85, at 234.

92. Although courts previously rejected the proposition that employers' ownership of employees' patents would stifle innovation, *Hulse v. Bonsack Mach. Co.*, 65 F. 864 (4th Cir. 1895); *Merges*, *supra* note 34, at 31, the position is stronger now after the decision in *DDB Technologies* granting employers even greater control and authority over inventions of their employees.

93. In particular, the ability of a firm to claim ownership of a (former) employee's patent(s), after not demonstrating any intent or authority over such innovations for more than ten years, raises concerns for potential employees. Furthermore, although the time allowed in *DDB Technologies* was partially dependent upon the state law under which the agreement was made, the effects of the decision are undoubtedly beneficial for employers



income and therefore opts to obtain a position at a larger firm, she may be reluctant to further the development of an idea or innovation.<sup>94</sup> The inclination to stall the growth of her invention may be grounded in the fact that her employer, potentially in an unrelated industry to her idea, may be the automatic owner of any future patents and inventions. In addition, employers are now instructed by legal counsel<sup>95</sup> to be more diligent in making certain that assignment provisions are carefully drafted to encompass the maximum coverage possible.<sup>96</sup> Employees, however, do not always have equal access to legal advice and support.

#### V. HOW EMPLOYERS' ACTIONS AND DECISIONS MAY CHANGE

Employers, among other groups, are affected by the *DDB Technologies* decision on different levels.<sup>97</sup> However, the effects and changes that will be witnessed over the next several years are uncertain as this case was one of “first impression.”<sup>98</sup> The Federal Circuit explained that even if a contract asserts that it is established under a particular state’s law, provisions regarding patent assignments will nonetheless be regulated under *federal law*.<sup>99</sup> Consequently, decisions to incorporate under or to enter into contracts subject to a specific state’s law and jurisdiction are no longer as controlling and significant, at least when seeking a legal system favoring employers’ rights to employees’ inventions.<sup>100</sup> This also influences consultant and contractor agreements that cover various territories and extend over state lines. Therefore, such agreements may be subject to differing legal authorities.<sup>101</sup> Uniformity, however, has

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especially since federal law has been deemed to control such provisions’ interpretation. *Bd. of Trustees of the Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 583 F.3d 832, 848 (Fed. Cir. 2009); *DDB Technologies, LLC v. MLB Advanced Media, LP*, 517 F.3d 1284, 1290 (Fed. Cir. 2008).

94. Her opportunity cost of giving up the development of her invention for employment (and an income) may be low enough to justify her not spending “work” time to further develop a personal innovation. For a discussion on opportunity costs, see *supra* note 25.

95. For examples of law firms’ memorandums and news releases on *DDB Technologies* and its effects on employers (and employees), see *supra* note 84.

96. *Treannie & Zaharoff*, *supra* note 84.

97. For a further discussion, see *supra* Parts III and IV.

98. *Baniak & Dawson*, *supra* note 4, at 307.

99. *DDB Technologies, LLC v. MLB Advanced Media, LP*, 517 F.3d 1284, 1290 (Fed. Cir. 2008).

100. *See contra id.* at 1294 (Newman, J., dissenting) (explaining that contract interpretations and disputes are matters left to *state law*). *See also Baniak & Dawson*, *supra* note 4, at 308 (stating that the decision to grant federal jurisdiction over patent assignment clauses is justified particularly because patents are “federal concepts” and some employees are located in “nonemployer-based” states).

101. *See Samuel W. Apicelli & Jane Leslie Dalton, Duane Morris LLP, When ‘Will’ Won’t Do In Employment Agreements*, LAW 360 (Portfolio Media, Inc., New York, N.Y.),

advantages as employers and employees can more easily anticipate the potential consequences of including or excluding certain language.<sup>102</sup>

Although patents are governed by federal law, other areas of intellectual property may not be subject to the same treatment. Therefore, the effects of the *DDB Technologies* decision may be limited to patents and, as a result, only to certain industries.<sup>103</sup> The strength of the uniformity argument for the decision consequently is diminished; while consistency may be imparted in patent assignment disputes, it is not the case for disagreements over the assignments of *all* intellectual property developed under employment.<sup>104</sup>

In addition, disputes often arise over intellectual property ownership in academic and university settings. “Transition to a more patent-sensitive environment has particular implications for the academic sector, [in addition to] industrial sectors that traditionally rely on free and open exchange . . . .”<sup>105</sup> Some universities are “fighting for talent” while becoming more liberal because they are trying to bring in (graduate) students and professors who will succeed in inventing products or ideas and/or even launching start-ups,<sup>106</sup> a potential effect that may occur in the corporate setting if the need for inventive labor is high and the demand is even greater. Nonetheless, professors and graduate students, in certain

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Sept. 22, 2008, [http://www.duanemorris.com/articles/static/apicellidaltan\\_law360\\_0908.pdf](http://www.duanemorris.com/articles/static/apicellidaltan_law360_0908.pdf) (explaining that uniformity of federal interpretation is beneficial for companies with employees in multiple states).

102. Boilerplate contracts, for example, help parties to an agreement anticipate potential provisions and terms. In particular, boilerplates have been found to be “a trade-off between communicating intensively in a narrow sphere or communicating in a more stripped-down formal way in a wider variety of contexts.” Henry E. Smith, *Modularity in Contracts: Boilerplate and Information Flow*, 104 MICH. L. REV. 1175, 1175-76 (2006).

103. The industries significantly impacted by the *DDB Technologies* decision may not be limited to those industries dependent upon patented inventions (such as high-technology and pharmaceutical companies). However, it is more likely to be of higher significance to employers seeking innovative development (that may result in patents) from their employees than to employers participating in other types of business sectors. Nonetheless, from an efficiency and cost-benefit perspective, employers would prefer employee time be dedicated to *company-related* projects rather than individually-driven developments, particularly with unknown ownership of certain future innovations.

104. In copyright law, employment related disputes that often arise are under the “work made for hire” provisions of the Copyright Act of 1976, 17 U.S.C. §§ 101, 201(b) (1976). The statute(s) requires an inquiry into the employment relationship and the scope of the employment at issue. *See e.g.*, *Avtec Sys. v. Pfeiffer*, 67 F.3d 293 (4th Cir. 1995) (holding that the employee’s software program developed at home was not a work made for hire because it was unrelated to assignments under his employment); *Cramer v. Crestar Fin. Corp.*, 67 F.3d 294 (4th Cir. 1995) (emphasizing that the computer program Cramer developed was the type of work he was hired to perform even though it was created at home and on his own initiative).

105. VAN CAENEGEM, *supra* note 18, at 96.

106. Baniak & Dawson, *supra* note 4, at 313.

programs, are in similar situations when evaluating where to attend and how the products of their “intellectual genius” will be protected or owned.<sup>107</sup>

Finally, investors’ decisions to financially support different companies, particularly new ventures, may be affected by the *DDB Technologies* decision. Although many start-up companies are founded by the entrepreneurial engineer behind a groundbreaking idea,<sup>108</sup> often times companies acquire a variety of talent in order to see that they succeed.<sup>109</sup> Consequently, employment contracts in these situations must be carefully drafted to ensure that the start-up will obtain all rights and ownership upon the patenting of employee-driven inventions. The guarantee of innovation ownership will be of high importance to potential angel investors and venture capitalists.<sup>110</sup> “In the technology industries that venture capitalists target, sustainable competitive advantages normally derive from intellectual property and innovative ability. Unless a venture firm sees the potential for patents or some other form of protected intellectual property, it is unlikely to invest.”<sup>111</sup> Therefore, new companies seeking investment will have to balance between demonstrating their ability to obtain the necessary talent<sup>112</sup> to achieve their goals while also establishing and enforcing employment provisions assigning patent ownership and rights to the firm.

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107. Although beyond the scope of this study, please refer to the following for an analysis of patent and invention ownership in the academic setting: Sunil R. Kulkarni, *All Professors Create Equally: Why Faculty Should Have Complete Control over the Intellectual Property Rights in their Creations*, 47 HASTINGS L.J. 221 (1995); Sandip H. Patel, *Graduate Students’ Ownership and Attribution Rights in Intellectual Property*, 71 IND. L.J. 481 (1996).

108. See *supra* note 72 for a discussion on “entrepreneurial engineers.”

109. See JIM COLLINS, *GOOD TO GREAT: WHY SOME COMPANIES MAKE THE LEAP . . . AND OTHERS DON’T*, 41-65, 216-17 (2001) (noting the significance of acquiring the right “people” in order for a company to succeed, especially as a start-up venture).

110. Venture capitalists evaluate various aspects of a company when considering investment. Six key principles have been used by venture firms when determining the (potential) success of a (start-up) company: full-time mentor, initial business model, CEO hiring, money spending patterns, want for the product(s), and “special people.” Michael J. Roberts & Nicole Tempest, *ONSET Ventures*, HARV. BUS. REV. 1, 2-3 (Mar. 1998). According to executives at ONSET Ventures, a venture capital firm that focuses on “seed-stage start-ups,” “special people” are vital aspects of a business’ ultimate success. *Id.*

111. PAUL A. GOMPERS & JOSH LERNER, *MONEY OF INVENTION: HOW VENTURE CAPITAL CREATES NEW WEALTH* 78 (2001).

112. See COLLINS, *supra* note 109, at 41-65 (discussing methods through which new companies may acquire the “right people” and talent to launch a successful venture).

## VI. CONCLUSION

The *DDB Technologies* decision has and will continue to change and affect the way in which employment contracts are formed and interpreted. In addition, corporate decisions and activities will also be modified in response to *DDB Technologies*, particularly in industries interdependent upon innovation and its legal protection and ownership. Although the ultimate effects of the case are uncertain and will become more apparent as courts begin to address similar issues as that in *DDB Technologies*, it is clear that debates and disputes will nonetheless occur because employer and employee goals and objectives often differ with respect to employees' individual inventions. Notwithstanding the uncertainty of *DDB Technologies*'s future effects, employers will seek to utilize language in employment contracts that establish a *per se* automatic assignment of patent rights and ownership. Consequently, potential employees may stifle their "individual genius" innovation development or refrain from obtaining employment at particular firms. If the talent needed to develop the ground-breaking, radical, and disruptive technologies is no longer afforded the benefits of large research and development divisions at various companies, the consequences on innovation and patents may be chilling.

Nonetheless, the uniformity established by the Federal Circuit in *DDB Technologies* creates a new era where contracts are no longer strictly subject to state law. This may undermine a corporation's strategic and careful choice of regional law governing its contracts and more significantly the state in which it selects to be incorporated. However, uniformity in the interpretation of patent assignment provisions creates a potential inconsistency with similar terms for other forms of intellectual property, such as copyrights, trademarks, and trade secrets, created by employees. As a result, the "first impression" decision by the Federal Circuit not only affects the ownership and rights over patentable developments by employees but more significantly the decisions behind employment contracts and corporate structure.