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Xuan-Thao Nguyen

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ZOMBIE PATENTS AND ZOMBIE COMPANIES WITH PATENTS

Xuan-Thao Nguyen *

INTRODUCTION	1147
I. STATUTORILY CREATED ZOMBIE PATENTS	1148
II. JUDICIALLY PROLONGED ZOMBIE PATENTS	1149
III. ZOMBIE PATENTS AND “EVERGREENING”	1154
IV. ZOMBIE COMPANIES WITH PATENTS.....	1155
CONCLUSION.....	1156

INTRODUCTION

The word “Zombie” has its roots in the Haitian French language, referring to the reanimation of the human corpse.¹ “Zombie” has become ubiquitous in American popular culture; zombies seem to be everywhere from films, novels, comic books, video games,² and botnets to tax. Of course, science fiction reincarnates zombies as *post*-human, appearing in different forms of the undead through viruses, diseases, and experimental accidents, among others. Debates about zombies find no agreement, but we can all agree that we know a zombie when we see it, and we don’t like what we see.

While a zombie is the undead and has no expiration, patents do. A patent comes into existence the moment the government, through the United States Patent and Trademark Office (USPTO), examines the invention application and issues a grant of patent. From that birth, a patent will have a lifetime of only twenty years from the date of filing the application. Patents expire and have no life after the twenty-year period.

Some patents die when the patentees abandon them by not paying maintenance fees. Dead patents must remain dead and become part of the

* Gerald L. Bepko Chair in Law & Director, Center for Intellectual Property & Innovation, Indiana University Robert H. McKinney School of Law; Former IP Associate, Fried Frank Harris Shriver & Jacobson (NYC) and Pryor Cashman Sherman & Flynn (NYC). Special thanks to Erik Darwin Hille and Khai-Leif Nguyen-Hille for their love, patience, and support. Copyright 2016.

1. Adam Chodorow, *Death and Taxes and Zombies*, 98 IOWA L. REV. 1207, 1210–11 (2013) (discussing “zombie” origin and meanings).

2. See, e.g., BETTER OFF DEAD: THE EVOLUTION OF THE ZOMBIE AS POST-HUMAN (Deborah Christie & Sarah Juliet Lauro eds., 2011); KYLE WILLIAM BISHOP, AMERICAN ZOMBIE GOTHIC: THE RISE AND FALL (AND RISE) OF THE WALKING DEAD IN POPULAR CULTURE (2010); GENERATION ZOMBIE: ESSAYS ON THE LIVING DEAD IN MODERN CULTURE (Stephanie Boluk & Wylie Lenz eds., 2011).

public domain. Unfortunately, this Essay observes that dead patents are not dead. Recent statutory amendments, and U.S. Court of Appeals for the Federal Circuit decisions, allow dead patents to become undead, haunting the living businesses, as seen in Parts I and II, respectively. Notably, the Federal Circuit's trio of cases has judicially prolonged zombie patents by wrongly eliminating any pathway to challenge improper revivals of dead patents or to raise improper revival as a defense in patent infringement actions. In addition, there is a zombification process that some drug companies have employed on certain patents at the expense of the consuming public, as Part III describes. Along with zombie patents, some companies that were thought to be dead have now resurfaced with patent portfolios to frighten others, as Part IV illustrates.

Zombie patents and zombie companies with patents raise serious questions about what patents are, what patents should be, and whether patents have strayed too far from the constitutional vision of patents, which is to promote the progress of science and the useful arts.³

I. STATUTORILY CREATED ZOMBIE PATENTS

Congress passed the Patent Law Treaties Implementation Act (PLTIA)⁴ to ensure that federal patent law harmonizes with provisions of the Patent Law Treaty. Specifically, the provisions purport to streamline formal procedures for filing and processing patent applications. The PLTIA, however, has made a drastic change to the patent statute reviving abandoned patents and patent applications.

The new law allows patents expired, due to a patentee's failure to pay maintenance fees, to be revived.⁵ The statutory change removes the twenty-four-month period, allowing such dead patents to be revived at any time, as long as the patentee submits a statement that the patentee's failure to pay maintenance fees was unintentional.⁶ Not only has the time period been removed, the new law also deleted the stringent "unavoidable" and allowed the lenient "unintentional" delay.⁷ In other words, dead patents become undead, which terrifies businesses that have relied on the patents being dead and exposes them to potential dire consequences and uncertainty. In addition to the rebirth of dead patents, dead patent applications enjoy the same privilege. Under Section 27 of

3. U.S. CONST. art. I, § 8.

4. Pub. L. No. 112-211, 126 Stat. 1527 (2013) (codified as amended in scattered sections of 35 U.S.C.).

5. *Id.*; see also *Patent Law Treaty*, USPTO (Oct. 29, 2014, 4:38 PM), <http://www.uspto.gov/patent/initiatives/patent-law-treaty>.

6. 35 U.S.C. § 41(c)(1) (2012).

7. *Glycobiosciences, Inc. v. Innocutis Holdings, LLC*, No. 12-1901 (RDM), 2015 WL 3609343, at *1 (D.C. Cir. June 10, 2015).

the patent statute and relevant regulation, if dead patent applications were abandoned unintentionally due to failure to file a timely response to the USPTO's action, they can be revived at any time.⁸

Like zombies wreaking havoc on the living, the statutorily created zombie patents have consequences on businesses with technology practices covering the invention claimed in the once-abandoned but now-revived patents or patent applications.⁹ The businesses do not receive much comfort, although they can attempt to rely on the pre-existing intervening rights provision of 35 U.S.C. § 41(c)(2).¹⁰

II. JUDICIALLY PROLONGED ZOMBIE PATENTS

If businesses seek assistance from the court to kill off zombie patents revived by the new law, there is no magic solution. The Federal Circuit's recent decisions related to zombie patents are dreadfully frightening to businesses. In three decisions, the Federal Circuit held that erroneous revival of zombie patents is not available as an invalidity defense or unenforceability defense in patent infringement actions or third party challenges under the Administrative Procedure Act (APA).¹¹

In *Network Signatures, Inc. v. State Farm Mutual Automobile Insurance*,¹² the Naval Research Laboratory (NRL) obtained a patent pertaining to internet security and intentionally allowed the patent to expire by not paying the 7.5 year maintenance fee due to lack of commercial interest from third parties on the patent.¹³ Two weeks after the final payment date, NRL received an inquiry from Network Signatures about licensing the patent.¹⁴ NRL then filed a petition with the USPTO for the delayed payment of the maintenance fee, along with a statement that the delay was "unintentional."¹⁵ The USPTO approved the delayed payment and NRL licensed the revived patent to Network Signatures.¹⁶ Seven years later, Network Signatures brought an infringement suit against State Farm Mutual Automobile Insurance Company.¹⁷ State Farm asserted that NRL committed inequitable conduct

8. 35 U.S.C. § 27; 37 C.F.R. § 1.137 (2015).

9. John Griem, Jr. & Theodore Y. McDonough, *Zombie Patents: Stronger Than Ever*, CARTER LEDYARD & MILBURN LLP, (May 14, 2014), <http://www.clm.com/publication.cfm?ID=489> (noting the harms Zombie patents inflict on businesses).

10. 35 U.S.C. § 41(c)(2).

11. Pub. L. No. 79-404, 60 Stat. 237 (1946) (codified as amended in scattered sections of 5 U.S.C.).

12. 731 F.3d 1239 (Fed. Cir. 2013).

13. *Id.* at 1240–41.

14. *Id.* at 1241.

15. *Id.*

16. *Id.*

17. *Id.*

in petitioning the USPTO because the delay was intentional and NRL paid the fee after Network Signatures contacted NRL for the license.¹⁸ State Farm moved for summary judgment of the unenforceability of the patent.¹⁹ The district court found for State Farm on the unenforceability defense of the patent's improper revival.²⁰ On appeal, the Federal Circuit reversed, stating that NRL's conduct did not constitute material misrepresentation with intent to deceive the USPTO.²¹ The Federal Circuit declined to second-guess the USPTO's decision on the present matter as it was unrelated to the substantive criteria of patentability and within the USPTO's authority.²²

In *Aristocrat Technologies Austria PTY Ltd. v. International Game Technologies*,²³ the Federal Circuit held that a patent application's improper revival after abandonment was not an invalidity defense in a patent infringement action.²⁴ In that case, Aristocrat competed in the market for electronic gaming machines against International Game Technologies (IGT).²⁵ Aristocrat filed a Patent Cooperation Treaty (PCT) application in Australia on July 8, 1997.²⁶ Aristocrat was required to pay the fee for the U.S. national stage of the PCT application by January 10, 2000, thirty months after the first filing, to claim priority.²⁷ The USPTO received Aristocrat's national filing fee on January 11, 2000, and issued a notice of abandonment to Aristocrat, which stated that Aristocrat may consider a petition to the Commissioner for a revival.²⁸ Instead of filing such a petition, Aristocrat filed a Petition to Correct the Date, i.e. to correct the date on which the USPTO received the national filing fee.²⁹ Aristocrat, however, did not submit sufficient evidence to corroborate the date the filing fee was mailed, and the USPTO denied the petition.³⁰ Later, Aristocrat filed a petition to revive the patent application, claiming that its failure to timely pay the national state filing fee was "unintentional."³¹ The USPTO granted the petition to revive on

18. *Id.*

19. *Id.*

20. *Id.* at 1242.

21. *Id.* at 1242–43.

22. *Id.* at 1243–44.

23. 543 F.3d 657 (Fed. Cir. 2008).

24. *Id.* at 661.

25. *Id.* at 659.

26. *Id.*

27. *Id.*

28. *Id.*

29. *Id.*

30. *Id.*

31. *Id.* at 659–60.

September 3, 2002.³² When the USPTO later granted a patent on the application, Aristocrat brought an infringement action against IGT.³³ IGT moved for summary judgment, arguing that the patent was invalid because after the patent application abandonment, Aristocrat was required to show that its delay was “unavoidable,” but was permitted to show its delay was “unintentional” by the PTO. The district court ruled in favor of IGT.³⁴ On appeal, the Federal Circuit reversed, ruling that “‘improper revival’ is not a cognizable defense in an action involving the validity or infringement of a patent.”³⁵ The Federal Circuit relied on various sections of the patent statute and found Congress did not intend the statute to have a defense pertaining to revival of an abandoned application.³⁶ The Federal Circuit flatly rejected IGT’s argument.

As well as eliminating the availability of unenforceability and invalidity defenses, the Federal Circuit has allowed zombie patents to proliferate by shutting down a third-party collateral challenge to the USPTO’s improper revival decision. In *Exela Pharma Sciences, LLC v. Lee*,³⁷ SCR Pharmatop filed its original patent application in France on June 6, 2000, and filed an international patent application identifying the United States as the designated state under the Patent Cooperation Treaty.³⁸ SCR Pharmatop had thirty months after the original filing to submit required documents for the U.S. application.³⁹ The deadline was December 6, 2002, and SCR Pharmatop did not submit the documents and the application was deemed abandoned.⁴⁰ Almost a month later, on January 2, 2003, SCR Pharmatop filed a petition to revive the abandoned application on the ground of “unintentional” delay.⁴¹ The USPTO granted the petition on April 25, 2003.⁴² The patent application was subsequently granted on January 31, 2006.⁴³ Five years later, in August 2011, SCR Pharmatop and its exclusive sublicensee brought a patent infringement suit against Excelsa.⁴⁴ In light of the *Aristocrat* decision, without the availability of asserting the invalidity defense, Excelsa filed a petition in the USPTO under the APA to challenge the USPTO’s revival of the

32. *Id.* at 660.

33. *Id.*

34. *Id.*

35. *Id.* at 659.

36. *Id.* at 662–63.

37. 781 F.3d 1349 (Fed. Cir. 2015) (per curiam).

38. *Id.* at 1350.

39. *Id.*

40. *Id.* at 1350–51.

41. *Id.* at 1351.

42. *Id.*

43. *Id.*

44. *Id.*

patent application that led to the patent at issue.⁴⁵ The USPTO rejected Excela's petition, stating that no statute authorizes a third-party challenge to a USPTO decision concerning revival of a patent application.⁴⁶ Excela then filed an action under the APA in the district court requesting the court to compel the USPTO to vacate its revival decision.⁴⁷ The district court denied and Excela appealed to the Federal Circuit.⁴⁸ Framing the question for consideration as "whether a third party may collaterally challenge and obtain judicial review of a USPTO revival ruling concerning an unrelated patent application," the Federal Circuit swiftly decided in the negative.⁴⁹ The Federal Circuit explained that the structure of the Patent Act dictates that "third party challenge of USPTO revival rulings under the APA is not legislatively intended."⁵⁰

The trio, *Network Signatures*, *Aristocrat* and *Excela*, is troublesome. Under *Network Signatures* and *Aristocrat*, defendants in patent infringement cases are not allowed to assert unenforceability and invalidity defenses when patentees' conduct of abandoning the patents and patent applications is in question. The justification for the bar is the Federal Circuit's reading of the Patent Act to mean that the statute's grounds for challenges to issued patents do not include USPTO's revival of abandoned application decisions.⁵¹ That means the defendants must turn to the only available route to review the USPTO's decision, the APA, because there is a "strong presumption that Congress intends judicial review of administrative action."⁵² But the *Excela* decision shut down APA review brought by defendants-turned-third party.⁵³ The trio of cases leaves no room to challenge zombie patents.

While the Federal Circuit is correct in holding that the structure of the Patent Act's "intricate scheme for administrative and judicial review of USPTO patentability determination[]," and "the Patent Act's careful framework for judicial review at the behest of particular persons through particular procedures" bar third-party APA challenges to patent validity based on the USPTO's improper revival of an abandoned patent application,⁵⁴ the Federal Circuit ignores the fact that its decisions expose a glaring inconsistency in the statutory scheme of the Patent Act and the

45. *Id.*

46. *Id.*

47. *Id.* at 1352.

48. *Id.*

49. *Id.* at 1353.

50. *Id.*

51. *Id.* (Newman, J., concurring).

52. *Id.* at 1354 (Dyk, J., concurring) (quoting *Bowen v. Mich. Acad. of Family Physicians*, 476 U.S. 667, 670 (1986)).

53. *Id.* at 1350 (per curiam).

54. *Id.* at 1353 (quoting *Pregis Corp. v. Kappos*, 700 F.3d 1348, 1357 (Fed. Cir. 2012)).

APA review. The Patent Act permits third-party challenges to patent invalidity in only two ways: as defenses to patent infringement actions in the district court or as challenges brought at the USPTO in *inter partes* review, post grant review, or *inter partes* reexamination.⁵⁵ Under *Aristocrat*, the Federal Circuit interpreted the Patent Act to bar an invalidity defense based on improper revival of an abandoned patent, and under *Excelsa*, the Federal Circuit interpreted the Patent Act to bar APA review of a USPTO decision on improper revival of an abandoned patent application. Consequently, Judge Timothy Dyk exposed this inconsistency in his concurring opinion in *Excelsa* when he stated that the Patent Act's "statutory scheme is inconsistent with [third-party] APA review . . . in the district court."⁵⁶ That cannot be the result, and the culprit for causing the inconsistency is the Federal Circuit's *Aristocrat* decision.

Judge Dyk explained that the *Aristocrat* decision is "problematic" and urged the Federal Circuit to have an en banc action to reconsider *Aristocrat* for four reasons.⁵⁷ First, because the *Excelsa* holding denies APA review for improper revivals of abandoned patent application and because there is no alternative review, the invalidity defense would be the only route available for judicial review.⁵⁸ *Aristocrat* blocks the defense, incorrectly. Second, *Aristocrat* treats abandoned patents matter as minor procedural error.⁵⁹ To the contrary, the abandoned patents matter is important because Congress has considered the gravity of the matter and allowed the USPTO to reinstate the patent only when specific criteria were satisfied.⁶⁰ Third, *Aristocrat* fails to reconcile "why a third party facing liability for infringement of the patent cannot seek judicial review of a revival decision if the patent applicant can do so" under the Federal Circuit's prior precedent.⁶¹ Lastly, *Aristocrat* fails to recognize that there are many judicially created defenses to patent infringement.⁶² The Patent Act does not list these defenses.⁶³ These defenses "cannot be so easily distinguished from" the improper revival of the abandoned patent invalidity defense asserted in *Aristocrat*.⁶⁴

In summary, *Aristocrat* is wrong to block the invalidity defense when there is no avenue of review available. *Aristocrat* causes the Patent Act to be inconsistent with third-party APA review. If a future court reconsiders *Aristocrat* in an en banc decision and declares it incorrect, the

55. *Id.* at 1354 (Dyk, J., concurring).

56. *Id.*

57. *Id.* at 1355.

58. *Id.*

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.* at 1356.

invalidity defense based on an improper revival of abandoned patent could be available in infringement actions. That will ensure that the Patent Act's statutory scheme for third-party challenges to patent invalidity is consistent with the APA. As *Aristocrat* still stands, zombie patents continue to be undead, because defendants in patent infringement actions are blocked from raising an invalidity defense.

III. ZOMBIE PATENTS AND "EVERGREENING"

On one spectrum, drug companies have been accused of manipulating the patent system to create zombie patents by "extending the lifespan of patents, at consumers' expense."⁶⁵ Specifically, drug companies can seek to patent a closely related compound when the original patented compound is to expire and devote a significant marketing campaign to shift the consumers to the new patented drug.⁶⁶ This type of patent zombification has another name, "evergreening."⁶⁷ Also, drug companies attempt to lengthen the lifespan of a patent by creating a demand for the once-patented drug through brand-specific demand.⁶⁸ For example, the drug company for ibuprofen strategically created Nurofen, or branded ibuprofen, in 1983, the year before the patent for ibuprofen expired.⁶⁹ Nurofen came to the market in 2006 and became lucrative for the company, as Nurofen costs five times more than generics.⁷⁰

65. *Zombie Patents: Drug Companies Are Adept at Extending the Lifespan of Patents, at Consumers' Expense*, ECONOMIST (June 21, 2014), <http://www.economist.com/news/finance-and-economics/21604575-drug-companies-are-adept-extending-lifespan-patents-consumers> [hereinafter *Zombie Patents*].

66. *Id.* (reporting that in addition to a "chemical tinkering" strategy, drug companies also pay makers of generics not to compete through "pay for delay" agreements); see also *21st Century Cures: Examining the Role of Incentives in Advancing Treatments and Cures for Patients: Hearing Before the Subcomm. on Health of the H. Comm. on Energy & Commerce*, 113th Cong. 5 (2014) (statement of C. Scott Hemphill, Professor of Law, Columbia Law School) (explaining the problems of evergreening patents and "product hopping," where drug companies have the incentive "to shift patients and doctors to a line extension before generic entry occurs" by promoting the new product).

67. Stephen Shepherd, *Patent Necromancy or Domestic and Foreign Treatment of Patentability and Infringement Concerning Pharmaceutical Salts and Polymorphs*, HEAD, JOHNSON & KACHIGIAN, PC, <https://www.hjkwlaw.com/single-post/2015/02/18/Patent-Necromancy---or---Domestic-and-Foreign-Treatment-of-Patentability-and-Infringement-Concerning-Pharmaceutical-Salts-and-Polymorphs> (last visited Apr. 5, 2017) (stating that "'evergreening,' is the term generally applied to pharmaceutical companies' attempts to use continuing research to maintain and extend patent protection on previously developed drug lines").

68. *Zombie Patents*, *supra* note 65.

69. *Id.*

70. *Id.*

IV. ZOMBIE COMPANIES WITH PATENTS

On the other spectrum, in the tech industry, companies whose business collapsed in the face of fierce competition have resurfaced with their patent portfolios as a new weapon. For example, Lycos was a pioneer search engine company in the internet's early days because it was the first search company to implement spider web indexing.⁷¹ In the dotcom boom peak year of 2000, Lycos was sold to Terra Networks for \$12.5 billion.⁷² Lycos faced death when Google launched its ad program for searches that align the interests of the advertiser and the user.⁷³ By 2010, Lycos was sold again—to an India-based company, Ybrant Digital—and this time the price tag was a meager \$36 million.⁷⁴ With its search business evaporated, most thought Lycos was dead in the marketplace.⁷⁵ Recently, Lycos has resurfaced like a zombie “for one last breath” solely for the purpose of selling its patent portfolios.⁷⁶ The reason for the zombie's resurrection has much to do with the zombie's patents, as they are viewed as potent weapons that can be utilized either as offensive weapons to “extract licensing fees or litigation victories against alleged infringers” or as defensive weapons for “a potential ‘mutually assured destruction’ deterrent or to preemptively remove them from potential adversaries’ arsenals.”⁷⁷ Using euphemistic phrases, Lycos unleashed its news release about its repurposed patents “in an effort to foster a collaborative and mutually beneficial relationship with partners and industries.”⁷⁸ Overall, Lycos can be a zombie because of its patent portfolio ranging from search engine technology, to online advertising, to online gaming.⁷⁹ In reality,

71. Andrew Tarantola, *90s Web Portal Lycos Returns to Sell Its Patents*, ENGADGET (May 20, 2015), <http://www.engadget.com/2015/05/20/lycos-selling-patent-portfolio>.

72. Duncan Riley, *Lycos Is Looking to Sell Its Search Patents, and Yes, Lycos Still Exists*, SILICONANGLE (May 21, 2015), <http://siliconangle.com/blog/2015/05/21/lycos-is-looking-to-sell-its-search-patents-and-yes-lycos-still-exists>.

73. Jim Gilliam, *How Lycos Almost Won the Search Engine Wars*, GIZMODO (July 22, 2015), <http://gizmodo.com/how-lycos-almost-won-the-search-engine-wars-1719546124> (recounting the race to conquer the internet search's ultracompetitive environment).

74. Curt Woodward, *Internet Search Pioneer Lycos Puts Patents up for Sale*, BETA BOS (May 20, 2015), <http://www.betaboston.com/news/2015/05/20/internet-search-pioneer-lycos-puts-patents-up-for-sale> (discussing Lycos's fate from early stage to present time).

75. Matthew S. Yungwirth & John R. Gibson, *Zombie Companies: When Businesses Die, Their Patents Live On*, DUANE MORRIS (Aug. 11, 2015), http://www.duanemorris.com/articles/zombie_companies_when_businesses_die_their_patents_live_on_at_issue_10089.html (describing Lycos's recent return to sell its patents).

76. *Id.*

77. *Id.*

78. Woodward, *supra* note 74.

79. Press Release, Lycos, *Lycos Puts Its Stable of Innovative IP Patents up for Sale* (May 21, 2015), <http://corp.lycos.com/wp-content/uploads/2014/11/Lycos-Patent.pdf>.

Lycos has been waiting for the optimal time with “hopes of gaining entitlement for IP external innovation.”⁸⁰

Lycos, as others note, is not the only zombie company. Nortel, dead in bankruptcy, extended its death hands through its patent portfolio. Motorola was slowly killed into two parts,⁸¹ and Motorola Mobility, the part with the patent portfolio, was purchased by Google for the price tag of \$12.5 billion for its defensive purpose of protecting its “Android ecosystem.”⁸²

CONCLUSION

It is time that the Federal Circuit stop prolonging zombie patents. Zombie patents and zombie companies with patents are the latest signs that patents can serve as corporate weapons that inflict harm and increase costs, rather than as legal protection for innovations, in accordance with the constitutional vision of “promot[ing] the Progress of Science and useful Arts.”⁸³

80. *Id.*

81. Ted C. Fishman, *What Happened to Motorola*, CHI. MAG. (Aug. 25, 2014, 11:50 AM), <http://www.chicagogamag.com/Chicago-Magazine/September-2014/What-Happened-to-Motorola> (reporting that Motorola was finally divided into two companies in 2011, “the cleaving of Motorola Mobility (the mobile phone company) from Motorola Solutions (the public safety and enterprise company),” and that Google’s purchase of Motorola Mobility was for patent reasons).

82. Yungwirth & Gibson, *supra* note 75.

83. U.S. CONST. art. I, § 8, cl. 8.