

2016

## The Digital Inheritance of Mobile Apps: Where's the App for That?

Edwin Cruz

[cruz2016@nlaw.northwestern.edu](mailto:cruz2016@nlaw.northwestern.edu)

---

### Recommended Citation

Edwin Cruz, *The Digital Inheritance of Mobile Apps: Where's the App for That?*, 14 NW. J. TECH. & INTELL. PROP. 111 (2016).  
<https://scholarlycommons.law.northwestern.edu/njtip/vol14/iss1/5>

This Comment is brought to you for free and open access by Northwestern Pritzker School of Law Scholarly Commons. It has been accepted for inclusion in Northwestern Journal of Technology and Intellectual Property by an authorized editor of Northwestern Pritzker School of Law Scholarly Commons.

# The Digital Inheritance of Mobile Apps: Where's the App for That?

By Edwin Cruz\*

## ABSTRACT

*Digital inheritance laws relating to mobile applications are largely unsettled as courts and legislatures grapple with how to treat new types of digital property. As developers of mobile applications pass away, many revenue-producing applications may become ownerless, which would remove the benefit to both developers' heirs and to the public user base. Moreover, successors with motives and skills not aligned with those of the original developers may prove to be harmful to the financial viability and character of an otherwise profitable app. Currently, successors view profitable mobile applications left by deceased developers as meal tickets and nothing more. This can lead to the deterioration of an otherwise useful mobile application. In order to protect the intellectual property rights of developers, as well as preserve economic benefit for both individual developers and their users, courts should not allow digital inheritance of mobile applications. Most commentators on digital inheritance analyze digital assets like online music libraries, which are obtained but not created by an individual. Mobile applications present a different type of digital property that requires developers to exercise independent, original creation, which results in a product that is then obtained by other users. For this reason, developers' rights should be respected in the same way as authors of other original works.*

*This note argues that in order to encourage developers to legitimately transfer ownership of a mobile application to a valid successor, courts should disallow for the inheritance of mobile applications in intestate scenarios. By denying access to potential successors, courts can signal to developers to protect their valuable assets after death. For developers who fail to include mobile applications in their estate, the worst case scenario is that a mobile application becomes obsolete. By denying access to potential successors, courts would incentivize developers to take active steps to prevent the deprecation of their mobile applications.*

---

\* J.D. Candidate, Northwestern University Pritzker School of Law, 2016; B.A., University of California, Los Angeles, 2010. I would like to thank Olga Voronina for her thoughtful contributions and feedback. I would also like to say a special thank you to my mother, Leilani Morales Cruz, who has provided unconditional and unwavering support, and has always reminded me to advance my intellectual curiosity.

## TABLE OF CONTENTS

Introduction.....	113
I. Digital Inheritance of Intellectual Property .....	114
A. The Intersection of Estate and Intellectual Property Law.....	114
B. Mobile Apps: A Unique Type of Digital Assets.....	115
1. Pure End-Users of Digital Media.....	115
2. App Developers as Both End-Users and Providers Themselves .....	117
C. Profitability of Mobile Apps.....	117
II. Insufficiency Of Existing Digital Inheritance Law.....	118
A. The Inadequacy of Statutory Contemplation of Mobile Apps.....	118
1. Traditional Probate Statutes.....	118
2. The Role of Federal Copyright Law .....	118
3. Statutes Specifically Addressing Digital Assets .....	119
4. Digital Estate Planning Services.....	123
B. The Active Developer Requirement .....	124
C. The Willingness of Courts to Grant Access.....	125
D. The Increasing Importance for Developers to Plan Ahead.....	126
III. Courts Should Deny Access To Successors.....	126
A. Encourages Developers to Plan Ahead .....	126
B. Developer Intent Should Be Respected .....	127
C. A Clean Mechanism for Transferring Apps.....	128
D. Costs of Proposed Solution.....	128
E. A Workable Rule .....	128
Conclusion .....	129

## INTRODUCTION

¶1 As mobile applications,<sup>1</sup> (*hereinafter* “mobile apps”) continue to be published in growing numbers, there is an increasing need to protect the intellectual property rights of developers and the digital content they create. The need for protection is especially important for paid applications, which not only generate revenue for both developers and the distribution platforms they use, but also command a loyal base of end-users.<sup>2</sup> With respect to the intellectual property that comprises an app, which includes copyrightable code, patentable app design, and titles capable of trademark protection, developers often overlook the consequences of an unexpected or untimely death. Traditional probate law appears to fall short of adequately addressing the rights of successors to digital assets. As a result, commentators are calling for legislative action to provide guidance in this emerging area of law.<sup>3</sup>

¶2 This note focuses on the issue of digital inheritance with respect to mobile apps, a narrow subset of digital property with unique characteristics.<sup>4</sup> While thirty-one percent of Americans have completed wills, only a mere six percent of Americans under the age of thirty have done so.<sup>5</sup> As app developers, who tend to be part of the younger generation, pass away without specifying successors to their apps, contested battles are likely to present themselves to courts. In order to preserve economic benefit, courts have been tempted to grant access to apps to successors.

¶3 With the growth of computer science, courts are being called upon to venture into less familiar waters.<sup>6</sup> This note argues that in order to protect the intellectual property rights of developers, courts should not allow digital inheritance for mobile apps. Part I introduces the issue of digital inheritance particularly with respect to mobile apps. Part II provides a background of digital inheritance and discusses the relatively undeveloped law regarding original works of mobile app developers. Part III explains the difficulty in courts applying digital inheritance laws to mobile apps. Part IV concludes by recommending that courts deny access to any successor not specified in an app developer’s will, while analyzing the

<sup>1</sup> The American Dialect Society recently voted the word “app” as word of the year in 2010. The organization defines “app,” an abbreviation for application, as a software program for a phone operating system. “App” voted 2010 word of the year by American Dialect Society (UPDATED), AMERICAN DIALECT SOCIETY (Nov. 19, 2013, 2:25 PM), <http://www.americandialect.org/app-voted-2010-word-of-the-year-by-the-american-dialect-society-updated> [<http://perma.cc/FU8G-EFLN>].

<sup>2</sup> One analyst estimates Google Play’s revenue to increase from \$1.3 billion in 2013 to \$5.2 billion in 2017. Brad Reed, *Move over, iTunes: Google Play is becoming a major cash cow*, BGR, <http://bgr.com/2013/11/19/google-play-annual-revenue/> [<http://perma.cc/QAG3-F4P8>]. The revenue split between the developer and the distribution platform is typically 70/30. *Transaction Fees*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/112622?hl=en> [<http://perma.cc/5X5W-JXXX>].

<sup>3</sup> Jonathan J. Darrow & Gerald R. Ferrera, *Who Owns A Decedent's E-Mails: Inheritable Probate Assets or Property of the Network?*, 10 N.Y.U. J. LEGIS. & PUB. POL’Y 281, 284 (2007).

<sup>4</sup> An important distinction must be drawn between mobile apps, which are original works created by developers, and other digital content that is acquired (but not created) by users. The latter category includes digital music libraries and eBooks. *See, e.g.*, Charles Phelps, *More Inheritable Rights for Digital Assets*, 41 RUTGERS L. REC. 131, 133-35 (2014). A related third category includes content generated by the user, but unlike mobile apps, does not have a structured revenue system with paying consumers of the content itself. This category includes emails and social media profiles. *Id.* at 135-37.

<sup>5</sup> Alyssa A. DiRusso, *Testacy and Intestacy: The Dynamics of Wills and Demographic Status*, 23 QUINNIPIAC PROB. L.J. 36, 54 (2009).

<sup>6</sup> *Comput. Assocs. Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 696 (2d Cir. 1992).

benefits and drawbacks of leaving a developer's final app version untouched. It also proposes that restricting access comports best with both developers' intent and established intellectual property law.

## I. DIGITAL INHERITANCE OF INTELLECTUAL PROPERTY

### A. *The Intersection of Estate and Intellectual Property Law*

¶4 In the traditional intestate scenario, a decedent's estate is passed onto his heirs in a specified order as provided by state probate law.<sup>7</sup> In California for example, property passes to a decedent's spouse and then to his or her children.<sup>8</sup> Digital assets have complicated this system due to their unique characteristics. Indeed, there is not much case law that defines exactly what types of property constitute "digital assets."<sup>9</sup> Subpart B of this section, to follow, discusses two broad categories for defining digital assets.

¶5 Much of the focus of digital inheritance has, until this point, been on digital assets that have been acquired, but not created by the decedent. Content such as online music libraries are governed not by traditional copyright doctrine, but rather an end user license agreement ("EULA").<sup>10</sup> These agreements can significantly curtail a decedent's rights to do as he pleases with his or her digital property.<sup>11</sup> Courts have ruled that digital music is not entitled to the same protections as tangible CDs and records.<sup>12</sup> Courts have also expressly rejected traditional copyright notions such as the First Sale Doctrine, holding that a fundamental distinction exists between tangible media and digital assets.<sup>13</sup>

¶6 On the statutory front, legislatures have given digital assets little attention, which has resulted in an unsettled area of law.<sup>14</sup> Until 2012, only five states had estate laws that addressed digital assets.<sup>15</sup> Among these states, laws vary with respect to the scope of digital assets that are covered by the statute.<sup>16</sup> In August 2014, Delaware became the first state to pass a broad digital inheritance law, allowing heirs and executors to take control of digital

---

<sup>7</sup> See, e.g., Cal. Prob. Code §§ 6400-6402 (West, Westlaw through 2014 Reg. Sess.).

<sup>8</sup> *Id.*

<sup>9</sup> Nathan J. Dosch & Joseph W. Boucher, *E-Legacy: Who Inherits Your Digital Assets?*, WISCONSIN LAWYER, <http://www.wisbar.org/NewsPublications/WisconsinLawyer/Pages/Article.aspx?Volume=83&Issue=12&ArticleID=1907> [<http://perma.cc/MAH9-QTHL>].

<sup>10</sup> Siobhán Kinealy, *Night of the Living Data: Estates Law and the Phenomenon of Digital Life After Death*, 11 RUTGERS BUS. L.J. 37, 45 (2014).

<sup>11</sup> See, e.g., *Terms and Conditions*, APPLE, <http://www.apple.com/legal/internet-services/itunes/us/terms.html> [<http://perma.cc/8DMM-RWQW>] (granting a license that the licensee may not rent, lease, lend, sell, or transfer).

<sup>12</sup> Kinealy, *supra* note 10, at 46.

<sup>13</sup> *Id.*

<sup>14</sup> Roger Yu, *Digital Inheritance Laws Remain Murky*, USA TODAY (Sept. 19, 2012, 2:55 PM), <http://usatoday30.usatoday.com/tech/story/2012/09/19/digital-inheritance/57804428/1> [<http://perma.cc/6YP5-LEVH>].

<sup>15</sup> Jessica Hopper, *Digital Afterlife: What Happens to Your Online Accounts When You Die?*, NBC NEWS ROCK CENTER WITH BRIAN WILLIAMS (June 1, 2012, 7:53 AM), [http://rockcenter.nbcnews.com/\\_news/2012/06/01/11995859-digital-afterlife-what-happens-to-your-online-accounts-when-you-die?lite](http://rockcenter.nbcnews.com/_news/2012/06/01/11995859-digital-afterlife-what-happens-to-your-online-accounts-when-you-die?lite) [<http://perma.cc/D7R5-9AJP>]. The five states are Connecticut, Rhode Island, Oklahoma, Indiana and Idaho. *Id.*

<sup>16</sup> *Id.*

assets as if they were physical items.<sup>17</sup> Because of the unique characteristics of mobile apps, even Delaware's expansive law may not adequately address the issues that arise when an app developer fails to complete a formal transfer of his apps before death.

### B. Mobile Apps: A Unique Type of Digital Assets

#### 1. Pure End-Users of Digital Media

¶7 Digital assets can be grouped into two broad categories: (1) online accounts and (2) files stored on a computer or server.<sup>18</sup> Mobile apps are somewhat of a hybrid; access is granted simply by signing-in to an online account with a username and password. Once access is granted, files are uploaded and stored on the distribution platform's servers.<sup>19</sup> Mobile apps thus involve an element of an online account, as well as an element of intellectual property rights in the digital content uploaded and managed via that account.

¶8 To date, most digital inheritance cases have involved successors seeking to gain access to a family member's online account. These cases can be seen as involving only the end-user side of digital assets. In one case, the father of a deceased soldier sought to recover the contents of that soldier's Yahoo email account.<sup>20</sup> The probate court ultimately issued an order granting the family access to the account, effectively overriding Yahoo's policy of restricting access to account credentials to anyone besides the account holder.<sup>21</sup> In another case, social media accounts were at issue. The decedent's sister was able to crack the password for the accounts to gain access to her sister's Facebook, Twitter and Tumblr accounts.<sup>22</sup> When Facebook discovered that the account owner had passed away, it changed the password and removed the account altogether.<sup>23</sup> Eventually, Facebook reinstated the account to memorialization status, a status which prevents anyone from signing-in to that account.<sup>24</sup>

---

<sup>17</sup> James Woodfin, *Delaware Becomes First US State to Pass "Digital Inheritance" Law*, NEOWIN (Aug. 20, 2014), <http://www.neowin.net/news/delaware-becomes-first-us-state-to-pass-digital-inheritance-law> [<http://perma.cc/FAS7-GZ6Z>].

<sup>18</sup> Dosch & Boucher, *supra* note 9.

<sup>19</sup> Google Play, one of the two leading distribution platforms (the other is Apple's App Store), charges developers with maintaining their credentials for accessing the Google Play Developer Console. *Google Play Developer Distribution Agreement*, GOOGLE PLAY, <http://play.google.com/about/developer-distribution-agreement.html> (last updated May 5, 2015) [<http://perma.cc/L8NL-G3Q8>]. The same agreement defines the Developer Console as "The console or other online tool provided by Google to developers to manage the distribution of Products and related administrative functions", indicating that files are uploaded, stored, and managed via the distribution platform's, i.e., Google's, product and servers. *Id.*

<sup>20</sup> Jim Hu, *Yahoo Denies Family Access to Dead Marine's E-mail*, CNET (Dec. 21, 2004, 2:49 PM), [http://news.cnet.com/Yahoo-denies-family-access-to-dead-marines-e-mail/2100-1038\\_3-5500057.html](http://news.cnet.com/Yahoo-denies-family-access-to-dead-marines-e-mail/2100-1038_3-5500057.html) [<http://perma.cc/GLY3-6B8Q>].

<sup>21</sup> See Stefanie Olsen, *Yahoo Releases E-Mail of Deceased Marine*, CNET (Apr. 22, 2005, 6:29 AM), [http://news.cnet.com/Yahoo-releases-e-mail-of-deceased-Marine/2100-1038\\_3-5680025.html](http://news.cnet.com/Yahoo-releases-e-mail-of-deceased-Marine/2100-1038_3-5680025.html) [<http://perma.cc/8C8H-VNDN>].

<sup>22</sup> Geoffrey A. Fowler, *Life and Death Online: Who Controls a Digital Legacy?*, WALL ST. J. (Jan. 5, 2013, 7:30 AM), <http://www.wsj.com/articles/SB10001424127887324677204578188220364231346> [<http://perma.cc/333G-D4M7>].

<sup>23</sup> *Id.*

<sup>24</sup> Matt Borden, *Covering Your Digital Assets: Why the Stored Communications Act Stands in the Way of Digital Inheritance*, 75 OHIO ST. L.J. 405, 409-10 n. 26 (2014); *What Will Happen to My Account If I Pass Away*, FACEBOOK (last updated Feb. 2014), <http://www.facebook.com/help/103897939701143> [<http://perma.cc/47BR-K5JB>].

¶9 While the mechanism for gaining access to both email and social media accounts is essentially identical to the process for access to mobile apps, there are at least three fundamental differences with respect to the type of assets themselves. First, email and social media accounts typically contain content that is generally non-copyrightable.<sup>25</sup> Copyrighted material must possess some minimal level of originality.<sup>26</sup> For that reason, facts are not copyrightable.<sup>27</sup> An example of a non-copyrightable fact that might appear on an email or on social media is that a kidnapping had occurred on a particular date.<sup>28</sup> If facts were copyrightable, owners of the copyright to such facts would require licenses from any subsequent user wishing to use the material. Any person who wanted to email a friend about that kidnapping would be an infringer unless he or she obtained a license to use the fact. To prevent such an absurd situation, facts are not copyrightable and belong in the public domain.<sup>29</sup>

¶10 Moreover, the Copyright Act specifically excludes from copyright protection ideas, procedures, processes, concepts and principles.<sup>30</sup> To the extent that email and social media content consists of these features, such content is not eligible for copyright protection.

¶11 Second, mobile apps are governed by terms of service that are entirely different from the terms for email and social media accounts.<sup>31</sup> The unique character of mobile apps requires a separate agreement to adequately address the distinguishable needs of developers with respect to their apps compared to the needs of users of an email service.<sup>32</sup>

¶12 Third, a dormant developer account presents more complications than does a dormant email or social media account. One such complication is that a developer account assumes an active developer. That active developer is expected to manage product updates, bring apps into compliance with continuously changing policy, protect content from security attacks, and most importantly, serve a dynamic user base.<sup>33</sup>

¶13 Thus, an important distinction exists between an end-user of an online service, such as Facebook, and an app developer. While a Facebook user simply consumes a digital service and can terminate such consumption at any time, an app developer is both a consumer of a digital platform as well as a provider of a product and services to his or her own end-users. The continuing obligations an app developer owes to his or her end-users raise issues in the context of that developer's death.

---

<sup>25</sup> See *Statement of Rights and Responsibilities*, FACEBOOK, <http://www.facebook.com/legal/terms> (last updated Nov. 13, 2013) [<http://perma.cc/AW9V-4M47>]. These terms specify that when a user posts information using the "public" setting, the user has consented to the public accessing and using that information. *Id.*

<sup>26</sup> *Feist Publ'ns., Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991).

<sup>27</sup> *Id.*

<sup>28</sup> See *Miller v. Universal City Studios, Inc.*, 650 F.2d 1365, 1367 (5th Cir. 1981).

<sup>29</sup> *Id.*

<sup>30</sup> 17 U.S.C. § 102(b) (2012).

<sup>31</sup> See, e.g., *Google Terms of Service*, GOOGLE, <http://www.google.com/intl/en/policies/terms/> [<http://perma.cc/2ZPU-6ED7>]; *Statement of Rights and Responsibilities*, *supra* note 25.

<sup>32</sup> See *Google Play Developer Distribution Agreement*, *supra* note 19.

<sup>33</sup> See *Policy Guidelines & Practices*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/113474?hl=en> [<http://perma.cc/NW3M-X58L>].

## 2. App Developers as Both End-Users and Providers Themselves

¶14 Despite the assumption that an active developer is behind all apps, it is possible that apps remain on the market after their developer has passed away. Outside of a developer failing to take a required action, like bringing an app in compliance with a new policy, there is no mechanism to alert distribution platforms that developers are no longer able to manage their apps. Thus, apps may remain available for consumers to purchase, generating revenue for an absent developer.<sup>34</sup> Part III analyzes these issues in more depth. The main point is that special characteristics of mobile apps isolate them from being satisfactorily addressed by statutes and case law involving other types of digital content.

### C. Profitability of Mobile Apps

¶15 Mobile apps generate significant revenue for both developers and distribution platforms such as Apple's App Store (*hereinafter* "App Store") and Google Play. Apple estimates that the total revenue for developers on the App Store in 2013 was over \$10 billion.<sup>35</sup> In the same year, Google Play's total revenue was \$1.3 billion.<sup>36</sup> From 2012 to 2013, the year-on-year growth of revenue from the global apps business was up a staggering 62%.<sup>37</sup> The industry appears to be headed for continued growth in years to come.<sup>38</sup> This growth is apparent not only for developers, but for users of mobile apps as well.<sup>39</sup> Successors will likely seek to capitalize on this profitability and claim an interest in the revenues that will continue to be generated after the developers have passed. Of course, the apps with the largest revenue tend to be developed by large app development companies, practically ensuring that qualified and rightful successors are available. But there are also a significant number of popular apps developed by independent developers.<sup>40</sup>

---

<sup>34</sup> Even after a user has uninstalled an app, he or she may reinstall that app at any time. Thus, even unpublished apps are theoretically perpetually available to any user who has previously installed it. See *Google Play Developer Distribution Agreement*, *supra* note 19.

<sup>35</sup> *App Store Sales Top \$10 Billion in 2013*, APPLE PRESS INFO (Jan. 7, 2014), <http://www.apple.com/pr/library/2014/01/07App-Store-Sales-Top-10-Billion-in-2013.html> [<http://perma.cc/B73K-7CKA>].

<sup>36</sup> Conner Forrest, *Google Play v. Apple App Store: The Battle for the Mobile App Market*, TECHREPUBLIC (Sep. 3, 2014, 5:00 AM), <http://www.techrepublic.com/article/google-play-v-apple-app-store-the-battle-for-the-mobile-app-market/> [<http://perma.cc/E94R-VG7J>].

<sup>37</sup> Scott Austin, *The Surprising Numbers Behind Apps*, WALL ST. J. DIGITS (Mar. 11, 2013, 10:34 AM), <http://blogs.wsj.com/digits/2013/03/11/the-surprising-numbers-behind-apps/> [<http://perma.cc/4DYU-KGMG>].

<sup>38</sup> A Citigroup analyst projects that Google Play's revenue will rise from \$1.3 billion in 2013 to \$5.2 billion in 2017. Tiernan Ray, *Google: Give 'Play' Store, Not Just Facebook, Apple, Credit, Says Citi*, BARRON'S (Nov. 18, 2013, 12:24 PM), <http://blogs.barrons.com/techtraderdaily/2013/11/18/google-give-play-store-not-just-facebook-apple-credit-says-citi/> [<http://perma.cc/3JD4-A33L>].

<sup>39</sup> In August 2010, the total number of installations from Google Play was one billion. As of July 2013, that figure grew to 50 billion installations. *Cumulative Number of Apps Downloaded From the Google Play Android App Store as of July 2013 (in billions)*, STATISTA, <http://www.statista.com/statistics/281106/number-of-android-app-downloads-from-google-play/> [<http://perma.cc/FF67-585G>].

<sup>40</sup> Marco Tabini, *Why Apple Should Pay More Attention to Indie Developers in the App Store*, MACWORLD.COM (Aug. 4, 2014, 4:30 AM), <http://www.macworld.com/article/2459976/why-apple-should-pay-more-attention-to-indie-developers-in-the-app-store.html> [<http://perma.cc/M33V-X4MS>].



This note focuses on the latter set of apps, which tend to give rise to more issues relating to digital inheritance.

## II. INSUFFICIENCY OF EXISTING DIGITAL INHERITANCE LAW

### A. *The Inadequacy of Statutory Contemplation of Mobile Apps*

#### 1. Traditional Probate Statutes

¶16 State statutes govern the standard intestate scenario. Most statutes specify an order of heirs that receive property not allocated in a will.<sup>41</sup> In the case of an unmarried developer without any children, statutes typically provide that the assets pass to the decedent's parents.<sup>42</sup> In this situation, it might be unlikely that the app could continue to be managed properly by parties that are not as familiar with that particular app, let alone app development in general. A friend or co-developer of the app may be a more suitable and qualified successor, but statutes specifying family members as successors hinder this potential solution. Typically, family members of app developers are not familiar with the technical aspects that app development entails. Probate statutes overlook this premise, opting for a standard chain of distribution of assets after a person dies. While the statutes provide certainty and workability, they are not flexible enough to resolve the unique issues that arise with digital assets, particularly with mobile apps.

¶17 The obvious solution would be for a developer to, in addition to planning a will, be cognizant of the need to allocate intellectual property in such a will. But statistics indicate that developers, who tend to be part of the younger generation, may not exercise the amount of foresight necessary to specify such an allocation.<sup>43</sup> Thus, state statutes simply do not provide a sufficient solution. This note suggests that state statutes should exempt mobile apps from the traditional probate solution. If courts disallow the scheme of distribution as outlined by the probate statutes, they can effectively incentivize developers to create wills that ensure mobile apps end up within the management of qualified successors. These wills do not have to be created prior to a developer publishing an app; on the contrary, a developer that determines she has an app worth protecting can create a will upon making that determination. The will would specify what would happen to her valuable property upon her death.

#### 2. The Role of Federal Copyright Law

¶18 Both the object code and source code of an app qualify as protectable "literary works" under the Copyright Act of 1976 ("Copyright Act").<sup>44</sup> While registration of a copyright is prerequisite to bringing an action for infringement, registration is not required to possess the copyright itself.<sup>45</sup> Thus, app developers may possess copyrights in their code

---

<sup>41</sup> See, e.g., Cal. Prob. Code § 6402 (West, Westlaw through 2014 Reg. Sess.).

<sup>42</sup> See, e.g., *id.*

<sup>43</sup> See DiRusso, *supra* note 5, at 54.

<sup>44</sup> *Apple Comput., Inc. v. Franklin Comput. Corp.*, 714 F.2d 1240, 1249 (3d Cir. 1983); 17 U.S.C. § 102(a)(1) (2012).

<sup>45</sup> *Copyright Basics*, UNITED STATES COPYRIGHT OFFICE (last reviewed May 2012), <http://www.copyright.gov/circs/circ01.pdf> [<https://perma.cc/R9RN-7CH4>].

without taking any formal registration action. The Copyright Act vests the owner of a copyright with a full suite of exclusive rights, including the right to distribute copies of the work to the public by sale.<sup>46</sup> Without authorization from the developer owning the copyright for an app, it would be difficult for a successor stepping into the shoes of the developer not to commit infringement of the copyright author's exclusive rights. Because copyright protection extends 70 years past an author's death,<sup>47</sup> an immediate successor of an app could face challenges from a developer claiming to be a co-author and co-owner of the exclusive rights to distribute.<sup>48</sup> It is worth noting that the Copyright Act honors transfers of copyright via wills or intestate laws.<sup>49</sup> This flexibility allows for a clean transfer of exclusive copyright privileges in digital assets, as long as the process specified by probate law is adhered to. An alternative scenario is that the successor to the asset is the same person as the successor to the copyright. In this situation, the problems discussed in Section B of this part arise.

¶19 One other important provision of the Copyright Act may be in conflict with courts granting successors access to mobile apps. Under the Copyright Act, involuntary transfers cannot be given effect by a governmental body or other official purporting to transfer rights of copyright ownership.<sup>50</sup> This provision seems to be a clear indication by Congress that developer consent would be required to effectuate a transfer of copyright in mobile apps.

### 3. Statutes Specifically Addressing Digital Assets

¶20 Through August 2013, only seven states had enacted specific laws addressing fiduciary access to online accounts.<sup>51</sup> Among these statutes, Oklahoma's law was the most robust, providing that an "executor of an estate shall have the power, where otherwise authorized, to take control of, conduct, continue or terminate any accounts of a deceased person on any social networking website, any microblogging or short message service website or any email service websites."<sup>52</sup> Mobile apps do not fall within any of the specified types of accounts that executors are able to take over. Thus, even Oklahoma's relatively inclusive statute did not cover mobile apps.

¶21 In August 2014, Delaware became the first state to enact a broader law regarding digital assets.<sup>53</sup> Delaware modeled its statute after the Uniform Law Commission's Uniform Fiduciary Access to Digital Assets Act ("UFADAA").<sup>54</sup> The Delaware statute grants successors the legal authority to take control of any digital asset as if it were a

---

<sup>46</sup> 17 U.S.C. § 106(3) (2012).

<sup>47</sup> 17 U.S.C. § 302(a) (2012).

<sup>48</sup> 17 U.S.C. § 201(a) (2012).

<sup>49</sup> 17 U.S.C. § 201(d) (2012).

<sup>50</sup> 17 U.S.C. § 201(e) (2012).

<sup>51</sup> Jim Lamm, *August 2013 List of State Laws and Proposals Regarding Fiduciary Access to Digital Property During Incapacity or After Death* (Aug. 20, 2013), <http://www.digitalpassing.com/2013/08/30/august-2013-list-state-laws-proposals-fiduciary-access-digital-property-incapacity-death/> [https://perma.cc/R9JS-YXWC].

<sup>52</sup> Charles Phelps, *More Inheritable Rights for Digital Assets*, 41 Rutgers L. Rec. 131, 152 (2014); OKLA. STAT. tit. 58 § 269 (West, Westlaw through 2014 legislation).

<sup>53</sup> Woodfin, *supra* note 17.

<sup>54</sup> See *Fiduciary Access to Digital Assets*, Uniform Law Commission, <http://www.uniformlaws.org/Committee.aspx?title=Fiduciary%20Access%20to%20Digital%20Assets> [https://perma.cc/3PL5-APZ7].

physical item.<sup>55</sup> The statute expressly defines “digital asset” as including computer source codes, computer programs, and software.<sup>56</sup> Moreover, “digital account” is broadly defined as an

[E]lectronic system . . . which provides access to a digital asset . . . including but not in any way limited to, . . . other online accounts which currently exist or may exist as technology develops or such comparable items as technology develops.<sup>57</sup>

Since this statute also expressly covers email accounts, a successor that is able to obtain the credentials to a decedent developer’s email account will also possess access to the developer’s apps on the distribution platform, which uses the same log-in username and password. Delaware’s statute makes it easier for a successor to reap the financial benefits of an app that he or she may not be qualified to maintain.

¶22 Even in cases where the successor is knowledgeable enough about app development to resume management of an app, he or she may not be able to “sign” an app’s manifest file without its keystore certificate.<sup>58</sup> A keystore is a file containing private keys that authenticate the author of an app.<sup>59</sup> It essentially brands an app with a developer’s distinct mark, making it much more difficult for an unauthorized person to make changes to an app’s code.<sup>60</sup> Without a proper signature by a keystore, an app cannot be updated. Even rightful developers can mistakenly lose their keystore, an issue for which there is no solution other than to build a new app from scratch. Thus, the keystore is a powerful tool to protect the security of an app’s code.<sup>61</sup>

¶23 Keystore certificates are typically stored on a developer’s own machine; distribution platforms do not store a copy of them. Thus, a keystore certificate is an indispensable tool for any person who wishes to, or is required to, update an app. When a successor has access to the distribution platform but has no ability to update an app, courts as well as distribution platforms may be called to step in to facilitate the process of granting that successor full access to an app. If the keystore certificate itself is deemed to be a digital asset that a successor may obtain, high costs would result from retrieving such a certificate file from a decedent’s private files on his or her computer, which may itself be protected by another password. Furthermore, the issue of privacy arises because some developers may not want to share digital assets such with their successors, even if they are close relatives.<sup>62</sup> An

---

<sup>55</sup> *Id.*

<sup>56</sup> H.B. 345, 147th Gen. Assemb. (Del. 2014), [http://www.legis.delaware.gov/LIS/lis147.nsf/vwLegislation/HB+345/\\$file/legis.html?open](http://www.legis.delaware.gov/LIS/lis147.nsf/vwLegislation/HB+345/$file/legis.html?open) [<http://perma.cc/XGV9-45FT>].

<sup>57</sup> *Id.*

<sup>58</sup> See *Signing Your Applications*, DEVELOPER.ANDROID.COM, <http://developer.android.com/tools/publishing/app-signing.html#> [<http://perma.cc/VFF9-ABSY>].

<sup>59</sup> See *Keystore*, DEVELOPER.ANDROID.COM, <http://developer.android.com/reference/java/security/KeyStore.html> [<http://perma.cc/NZ7C-6G3B>].

<sup>60</sup> See *Android: What is a Keystore File, and What is it Used For?*, STACKOVERFLOW.COM, <http://stackoverflow.com/questions/6849558/android-what-is-a-keystore-file-and-what-is-it-used-for> [<http://perma.cc/SD6R-J33B>].

<sup>61</sup> See *I Lost My .Keystore File?*, STACKOVERFLOW.COM, <http://stackoverflow.com/questions/4322367/i-lost-my-keystore-file> [<http://perma.cc/3UT5-S6MQ>].

<sup>62</sup> See *Untangling the Estate Planning Web of Digital Assets*, CIRRUSLEGACY.COM, [http://www.cricpa.com/Untangling\\_the\\_Estate\\_Planning\\_Web\\_of\\_Digital\\_Assets.aspx?mobile=1](http://www.cricpa.com/Untangling_the_Estate_Planning_Web_of_Digital_Assets.aspx?mobile=1) [<https://perma.cc/VE8A-WDH4>].

example of an undesirable situation is the exposure of emails that express negative opinions about close family members, evidence of extra-marital affairs, or illegal acts.<sup>63</sup> This information could spiral into conflicts based on data that a deceased user made great efforts to keep secret.

¶24 If courts determine that mobile apps and developer distribution platforms, as opposed to just email accounts, come within the ambit of the Delaware statute, there will be undesired results. Making it substantially easier for successors to obtain access to apps seems to be inconsistent with the idea of protecting digital assets with a username and password. Under Delaware's statute, courts have the authority to effectively remove the level of protection afforded by confidential passwords. In this way, the statute contravenes the terms of service that govern online accounts, which expressly require an account owner to maintain the confidentiality of her account.<sup>64</sup> Furthermore, the terms of service specify that the account owner is responsible for *all activities* that occur under the account.<sup>65</sup> If a court ruled that a successor be granted access to a decedent's developer account, questions remain as to whether the successor steps into the shoes of the account owner, or simply acts as a fiduciary. If the latter is true, then the fiduciary solution is inconsistent with terms of service that are tailored to digital assets and that are consented to by the original account holder.<sup>66</sup>

¶25 Moreover, because mobile apps require an active developer with at least a minimal level of technical knowledge, spouses and parents may not be ideal successors for apps. As states opt to follow Delaware's lead and grant broad access to apps that might not have otherwise been accessed, there may be more apps that fall into the wrong hands and for questionable reasons. As of January 2015, fourteen states have introduced a form of legislation based on the UFADAA and Delaware statute.<sup>67</sup> This shift toward a broad definition of digital assets strengthens the argument for a different solution tailored specifically to mobile apps.

¶26 A related statute, the Stored Communications Act ("SCA"), specifically contemplates electronic communications.<sup>68</sup> Under this statute, anyone who accesses, without authorization, a facility through which an electronic communication service is provided is guilty of a crime punishable by either fine or imprisonment.<sup>69</sup> Applied to the context of mobile apps, this statute could potentially impose liability on unauthorized successors who happen to obtain access to the deceased developer's account credentials. Read closely, however, the statute's target seems to be unauthorized users of *communications*, an entirely different set of unauthorized users from those who simply

---

<sup>63</sup> Wendy Moncur & Annalu Waller, *Digital Inheritance* (2010), [http://www.academia.edu/461818/Digital\\_Inheritance](http://www.academia.edu/461818/Digital_Inheritance) [<http://perma.cc/T64V-CLCH>].

<sup>64</sup> *Google Play Developer Distribution Agreement*, *supra* note 19.

<sup>65</sup> *Id.*

<sup>66</sup> The Uniform Law Commission ("ULC") has established a committee to address the issue of fiduciary access through drafting a free-standing act or amending ULC Acts such as the Uniform Probate Code. The intent of the committee seems to be consistent with Delaware's statute in that the goal is to vest fiduciaries with broad authority to manage digital assets, unless otherwise specified by the account holder. *Committees, Fiduciary Access to Digital Assets*, UNIFORM LAW COMMISSION, <http://uniformlaws.org/Committee.aspx?title=Fiduciary%20Access%20to%20Digital%20Assets> [<http://perma.cc/262Z-TM6Y>].

<sup>67</sup> *Fiduciary Access to Digital Assets*, *supra* note 54.

<sup>68</sup> 18 U.S.C. § 2701 (2012).

<sup>69</sup> *Id.*

want to take over management of a mobile app. Thus, the statute may improperly reach successors to mobile apps in that these types of users are not precisely related to electronic communications. Furthermore, if the access is exploited for “private commercial gain”, the penalties are harsher than if no commercial gain were intended.<sup>70</sup> The SCA also prohibits public providers of electronic communications or remote computing services, such as Google, from divulging account information or content.<sup>71</sup>

¶27 While mobile apps probably do not constitute “electronic communications,” the intent of the SCA is revealing.<sup>72</sup> Legislative intent in prohibiting digital service providers from voluntarily disclosing user—or developer—information is consistent with denying digital inheritance. The legislature could have concluded that protecting an electronic account from commercial exploitation outweighed the economic benefit from allowing unauthorized access. Courts faced with issues arising from the SCA have generally upheld the SCA’s effect on social media accounts. In *In re Facebook*, a court held that a subpoena granting surviving family members access to a Facebook account violated the SCA.<sup>73</sup>

¶28 Assuming for a moment that the SCA does apply to mobile apps, it would provide safeguards for developers who wish to pass on rights to apps to their heirs. One exception to the SCA’s disclosure prohibition applies to an “authorized” person with respect to the electronic communication.<sup>74</sup> Authorized users, in the developer account context, are permitted to access a main developer account.<sup>75</sup> This access may grant them privileges equal to that of the account owner, including the rights to publish apps, change account settings, and view the apps’ financial data.<sup>76</sup> An account owner, who is typically the primary developer of an app, has the sole discretion to grant access to and moderate the level of access for authorized users.<sup>77</sup> Thus, the SCA would allow for an app to be accessed by authorized users specified in a developer account after an account owner’s death, but in a way consistent with the developer’s intent. In this way, the SCA would not frustrate the ability of rightful and qualified successors to resume management of apps.

¶29 Even if the SCA is determined to be inapplicable to apps, the legislative intent behind it demonstrates that digital assets deserve protection from unauthorized access. The plain language of the statute indicates that the legislature wanted to protect certain types of digital information from unauthorized access.<sup>78</sup> This intent fits closely with the proposed solution to deny unauthorized access to mobile apps.

---

<sup>70</sup> 18 U.S.C. § 2701(b)(1) (2012).

<sup>71</sup> *Borden*, *supra* note 24, at n. 54; 18 U.S.C. § 2702(a) (2012). Google Play probably falls under the definition of “remote computing services,” which is a “provision to the public of computer storage or processing services by means of an electronic communications system.” 18 U.S.C. § 2711(2) (2012). Google Play acts as the publishing tool for apps, and also stores the files that apps are made of.

<sup>72</sup> “Electronic communications” are defined as “any *transfer* of signs, signals, writing, images, sounds, data, or intelligence of any nature.” 18 U.S.C. § 2510 (2012) (emphasis added). The SCA does, however, cover access to email accounts, which can use the same access mechanism for developers’ apps. *Borden*, *supra* note 24, at 418.

<sup>73</sup> *In re Facebook, Inc.*, 923 F. Supp. 2d 1204, 1206 (N.D. Cal. 2012).

<sup>74</sup> 18 U.S.C. § 2702(b)(4) (2012).

<sup>75</sup> *See Add Developer Account Users & Manage Permissions*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/2528691?hl=en> [http://perma.cc/WJ27-4YGL].

<sup>76</sup> *Id.*

<sup>77</sup> *Id.*

<sup>78</sup> *See* 18 U.S.C. § 2701(a) (2012).

¶30 It is worth noting that the SCA’s goal is to protect *user* data, mainly for email accounts, as opposed to *developer* data.<sup>79</sup> While app developers are themselves users of digital distribution platforms, they also have their own set of users to support. The SCA is aimed at end-users of an electronic communication service, which implicates the latter group. Therefore, if the SCA were deemed to govern mobile apps, its provisions would still not squarely address the unique issues that inheritance of mobile apps present. It is not foreseeable that mobile apps would be held to be within the purview of the SCA, but denying access to desiring successors would be consistent with the legislature’s intent with respect to a close type of digital asset.

#### 4. Digital Estate Planning Services

¶31 Digital Estate Planning (DEP) services allow users to store digital information online, as well as designate recipients of such information after the user’s death.<sup>80</sup> There are currently over 50 of these services available to users of online accounts.<sup>81</sup> Once a triggering event occurs, the DEP service is able to release login credentials to the user’s designee.<sup>82</sup> Because access to the developer platform requires only a username and password, DEP services may actually allow successors to improperly access some aspects of a developer account. While a successor would not be able to update an app itself (assuming the successor does not possess the keystore certificate), he or she would have practically all other privileges belonging to the legitimate account owner. These privileges include the ability to change elements of the app, including the online store listing (the app’s title, description and developer name), the publication status, and the contact information for customers.

¶32 An illegitimate or unqualified successor would have the ability to interfere with the developer’s product, which could result in lost revenue due to consumers not receiving a product that meets their prior expectations. Take, for example, a case where a successor (such as the developer’s spouse) is unfamiliar with the distribution platform’s policies that prohibit keyword spam in an app’s description.<sup>83</sup> The non-developer spouse, probably unaware of what keyword spam even is, updates the description of the app to load it with terms that she believes will make the app come up closer to the top of specific searches. Such a violation may result in an app being removed from the online store.<sup>84</sup> The removal of the app takes future revenues away from a potential legitimate successor and also eliminates utilization by customers who consume the digital content. Thus, DEP services may have harmful effects on apps if login credentials are passed on to unqualified persons.

---

<sup>79</sup> *Id.* The statute’s language is “electronic communications,” which seems to imply the data of users of such communications as opposed to data belonging to developers.

<sup>80</sup> Michael D. Roy, *Beyond the Digital Asset Dilemma: Will Online Services Revolutionize Estate Planning?*, 24 QUINNIPIAC PROB. L.J. 376, 377 (2011).

<sup>81</sup> *Digital Death and Aftermath Online Services List*, THE DIGITAL BEYOND, <http://www.thedigitalbeyond.com/online-services-list/> [<http://perma.cc/VD9Q-6XPM>].

<sup>82</sup> See *The Digital Death Conundrum: How Federal and State Laws Prevent Fiduciaries from Managing Digital Property*, 68 U. MIAMI L. REV. 385, 407-09 (2014).

<sup>83</sup> See, e.g., *Spam and Placement in the Store: Keyword Spam*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/2985717> [<http://perma.cc/2DRA-LRH7>].

<sup>84</sup> See *My App has been Removed from Google Play*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/2477981?hl=en> [<http://perma.cc/FD52-8A9P>].

While plausible for users of email accounts, DEP services do not adequately protect developers' interests in their mobile apps.

### B. *The Active Developer Requirement*

¶33 Mobile apps assume that a developer performs active management by providing regular updates, as well as support for customers. Updates are required because of changing policies and vulnerability concerns. For example, Google Play investigates and responds to allegations of trademark or copyright infringement and malicious and inappropriate apps.<sup>85</sup> Moreover, under the Google Play Developer Distribution Agreement, the developer agrees to refrain from engaging in any conduct that interferes with, damages, or disrupts the digital property of a third party.<sup>86</sup> In the event an app is found to violate policy, a developer is expected to take appropriate steps to correct the violation. Failure to remedy the violation typically results in the app being removed from the online store, causing the developer to forfeit users, statistics, and ratings of the app.<sup>87</sup> If an app is managed by a successor without development knowledge or the proper tools, he or she may not have the ability to remedy a violation. As previously mentioned, a keystore certificate is required to sign any updated app versions.<sup>88</sup> Placing a successor in a position where he or she is unable to correct trademark infringement, and thus exposing him or her to potential liability for such an infringement, is problematic for two reasons. First, it places the successor in a position where he or she is not adequately knowledgeable about the allegedly infringing content. As a consequence, the successor would not know what corrective steps to take. Second, assuming the successor obtained enough knowledge about the alleged infringement, he or she would likely lack the technical skill to remedy the infringement if the app's source code required modification.

¶34 Updates are also required to bring apps within compliance of changing policies and to prevent vulnerability of user information from attacks.<sup>89</sup> An example of a policy change is the recent requirement for Google Play apps that have advertising services to use an advertising identification (advertising ID).<sup>90</sup> This change forced developers to update their apps' advertising mechanism. Failure to update an app could result in removal from the store.<sup>91</sup> Google Play also recently imposed two new requirements for publishing: the Feature Graphic and Short Description.<sup>92</sup> These two requirements were part of a refresh to

---

<sup>85</sup> *Report Content Issues or Violations*, GOOGLE, <http://support.google.com/googleplay/answer/2853570> [<http://perma.cc/HKV2-CT5P>].

<sup>86</sup> *Intellectual Property: Unauthorized Usage of Third-Party Services or Products*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/2985963?hl=en> [<http://perma.cc/U8E4-NX53>].

<sup>87</sup> *My App Has Been Removed From Google Play*, GOOGLE, [http://support.google.com/googleplay/android-developer/answer/2477981?hl=en&ref\\_topic=3453554](http://support.google.com/googleplay/android-developer/answer/2477981?hl=en&ref_topic=3453554) [<http://perma.cc/7W3Y-P2XC>].

<sup>88</sup> *Signing Your Applications*, *supra* note 58. Keystore certificates are usually stored on a developer's machine. These keystore certificates are usually vigorously protected by developers who understand that another person with access to the keystore has the ability to make changes to the app's manifest file.

<sup>89</sup> *See, e.g., Security Tips*, DEVELOPER.ANDROID.COM, <http://developer.android.com/training/articles/security-tips.html> [<http://perma.cc/FR3M-N5F2>].

<sup>90</sup> *Advertising ID*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/6048248?hl=en> [<http://perma.cc/BA6K-GBHK>].

<sup>91</sup> *Id.*

<sup>92</sup> *Upload an App*, GOOGLE, <http://support.google.com/googleplay/android->

the Google Play store's layout. Without making these two changes, a developer would be blocked from publishing any updates to her app. Even the relatively simple task of resizing a JPEG image<sup>93</sup> to upload as a Feature Graphic may fall outside of the technical expertise of a successor with little knowledge about computers. It is possible that such a successor would contact the distribution platform's support team to ask how to resize an image, which may not be the most efficient use of more developer-focused support resources at providers such as Apple and Google.

¶35 Developers are also obligated to provide user support for their apps.<sup>94</sup> Google requires that contact email addresses be published so that users may contact developers regarding bugs, feedback, and even refunds.<sup>95</sup> For some user issues, the Google Play Developer Distribution Agreement mandates a response time of less than three business days.<sup>96</sup> It would not be feasible for a non-developer successor to be forced to provide user support for an app that the successor has little expertise with. If a user contacted a successor to report a bug, a non-technical person who is appointed as the new "developer" would probably lack the expertise to be able to fix the issue.

¶36 A more ideal solution may be to deny access in order to avoid the issues arising from the active developer requirement discussed in this Subpart B. The additional benefits of denying access will be discussed in Part IV of this note.

### C. *The Willingness of Courts to Grant Access*

¶37 Because email content is governed by the SCA, court orders act as an exception to the SCA's restrictions of access.<sup>97</sup> In light of the statutory exception, courts have shown sympathy for family members seeking to acquire the email and social media content of their loved ones.<sup>98</sup> Facebook profiles can serve as a helpful coping mechanism, and courts have been sensitive to this idea.<sup>99</sup>

¶38 It can also be argued that by granting successors access to digital assets, courts are simply respecting traditional state approaches to inheritance that provide for a predetermined line of succession.<sup>100</sup> This respect for traditional approaches, however, seems to be appropriate for only certain types of digital assets. While a desire of family members to access email and social media content is reasonable, a similar desire with

---

developer/answer/6066610?hl=en [http://perma.cc/6XB5-T2TD]. See also Natascha Bock, *Google Play Featured-Image Guidelines*, ANDROID DEVELOPERS BLOG (Oct. 5, 2011), <http://android-developers.blogspot.com/2011/10/android-market-featured-image.html> [http://perma.cc/HB2F-4HQJ].

<sup>93</sup> JPEG stands for Joint Photographic Experts Group, the name of the committee that developed the format. It is one type of image format. *JPEG*, PC.NET, <http://pc.net/glossary/definition/jpeg> [http://perma.cc/P3JJ-2SST].

<sup>94</sup> See *Google Play Developer Distribution Agreement*, *supra* note 19 (Section 3.6 mandates the developer to provide regular support for their users).

<sup>95</sup> *Provide Support for Your App's Users*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/113477?hl=en> [http://perma.cc/7R5L-PNWW].

<sup>96</sup> *Google Play Developer Distribution Agreement*, *supra* note 19. The three-day requirement applies to issues regarding paid apps and in-app products.

<sup>97</sup> 18 U.S.C. § 2703 (2012).

<sup>98</sup> See, e.g., Hu, *supra* note 20; Borden, *supra* note 24, at 408-09. Cf. *In re Facebook, Inc.*, *supra* note 73, at 1206.

<sup>99</sup> See Elizabeth Stone, *Grief in the Age of Facebook*, CHRON. HIGHER EDUC. (Feb. 28, 2010), <http://chronicle.com/article/Grief-in-the-Age-of-Facebook/64345/> [http://perma.cc/8U5A-H2FV].

<sup>100</sup> See Borden, *supra* note 24, at 408.



respect to mobile apps is not as obvious. Indeed, an interest in the profitability of mobile apps may be motivated by drastically different reasons. The costs of a successor infringing on a developer's intellectual property rights and possibly exploiting an app's financial benefit seem to outweigh the benefits of utilizing apps as a coping mechanism.

#### *D. The Increasing Importance for Developers to Plan Ahead*

¶39 As mentioned earlier in this note, the increasing profitability and growth of the mobile app industry will likely bring more issues regarding digital inheritance to courts. Most developers currently are within the age range (under 35 years old) of persons who are likely to not have completed a will.<sup>101</sup> The average age of developers is 33 years old, with 40 percent of developers falling within the range of 25-34 years old.<sup>102</sup> As these developers grow older, the need to plan for the disposition of their mobile apps will become increasingly important.

¶40 Consider an app that generates significant revenue and commands a fiercely loyal user base. Consumers that have become accustomed to, and in some instances even reliant upon, a particular app might not find a suitable substitute for that app. If a developer passes away suddenly and no qualified successor can continue to develop the same type of product, there would be losses on both the producer side and the consumer side. Even if a continuous influx of people enter app development, keeping the majority of developers in the 25-34 year old range, the issue remains: younger people are simply less likely to have wills. When these people are developers and pass away, the tragic feeling associated with losing them might be compounded with a feeling of regret in terms of planning for the unexpected.

### III. COURTS SHOULD DENY ACCESS TO SUCCESSORS

#### *A. Encourages Developers to Plan Ahead*

¶41 By denying access to successors outright, courts can accomplish two main things. First, courts would encourage developers to create wills at an earlier age than they probably otherwise would. For the developer who wants to see his or her app live on and be managed by a trusted and qualified successor, incorporating apps into a will would be wise. These wills would specify whom the apps would be passed onto and would be effectuated by the straightforward app transfer process described in Subpart C of this section. Second, and more importantly with respect to digital inheritance, courts would signal to developers that their intellectual property rights will be respected after their death.

¶42 If an app is not transferred to successors after a developer's death, the worst-case scenario is that the app becomes unpublished. Conversely, if courts follow the lead of the Delaware statute, apps can fall into the wrong hands, resulting in frustration of customers' expectations.<sup>103</sup> The more problematic consequence of allowing frequently unqualified family members to resume management of apps is simply the inability of this type of

---

<sup>101</sup> See DiRusso, *supra* note 5, at 54.

<sup>102</sup> Maryalene LaPonsie, *Mobile App Developer: The Hot Job at Your Fingertips*, THE DEGREE 360 (Dec. 16, 2013), <http://www.onlinedegrees.com/degree360/hot-job-report/december-2013-app-developer.html> [<http://perma.cc/H4DN-YW9D>].

<sup>103</sup> See Woodfin, *supra* note 17.

successor to accomplish what the specialized developer did as an active, technically savvy manager. If developers know that courts will deny access unless they provide for otherwise, they would have a strong incentive to plan ahead.

¶43 One counterargument to leaving an app in a dormant state is that profits of the app do not terminate. As long as users download and purchase an app, profits will continue to be paid out into a developer's bank account, typically monthly.<sup>104</sup> Because bank accounts are usually part of the probate process, the profits of an app could automatically be passed on to a successor. However, the inseparability of a developer account from a merchant account<sup>105</sup> means that profits must be distributed to the same person who manages the apps.

¶44 Allocating responsibility for an app to a qualified person is less harmful than allowing an unqualified person to take over the developer's exclusive rights in his or her app.<sup>106</sup> This solution theoretically gives developers a choice between taking action or doing nothing. But its practical effect would probably be to prompt developers to plan for the disposition of their digital assets, much like they would for any other valuable asset.

### *B. Developer Intent Should Be Respected*

¶45 One basic premise of estate law is to effectuate the intent of the decedent.<sup>107</sup> If that intent is not apparent, courts and executors should try to determine what the decedent would have wanted.<sup>108</sup> An intestate scenario involving apps presents a dilemma for courts: either favor the developer's exclusive rights in the app and exclude all others from it, or favor possibly unqualified successors and the consumers of the app. One could argue that favoring developers is the lesser evil because the worst result is an unpublished app. In this scenario, successors would be in the same position as they were prior to the decedent's death while users would simply have to find a substitute app. Alternatively, one could also argue that favoring successors and users is the lesser evil because it preserves the app's economic benefit and allows users to continue their use.

¶46 The proposed solution resolves this dilemma by placing the determination in the developer's hands. If the developer does nothing, knowing that courts will deny access to those seeking to acquire the app after his or her death, he or she will effectively have decided to let the final version of her app remain untouched. The developer is also free to transfer the app in a will, which would become more likely as developers learn about the courts' tendency to deny successors access to mobile apps. In this sense, the relevant decision is not an executor's choice between two evils, but instead a developer's choice, which is effectuated based on the developer's actual or imputed intent.

---

<sup>104</sup> See *Processing Orders and Receiving Payouts*, GOOGLE, <http://support.google.com/googleplay/android-developer/answer/137997> [<http://perma.cc/JZ8R-TLU5>].

<sup>105</sup> A merchant account is a connected platform that is required for developers who sell paid apps. See *Supported Locations for Developer & Merchant Registration*, GOOGLE, <http://support.google.com/googleplay/android-developer/table/3539140?hl=en> [<http://perma.cc/9PKF-EQSE>].

<sup>106</sup> See 17 U.S.C. § 106 (2012).

<sup>107</sup> Borden, *supra* note 24, at 441.

<sup>108</sup> *Id.*

### C. A Clean Mechanism for Transferring Apps

¶47 Under the proposed solution, developers may either specify a successor to apps in a will or elect to transfer the app before death in order to reduce any potential probate obstacles the intended successor might face. Ideally, developers would have to create wills that specify whom the app would be transferred to, otherwise the app would be left alone. Either way, the mechanism to transfer apps is quite simple. Distribution platforms regularly perform app transfers upon request.<sup>109</sup> Either the developer or the intended recipient may request an app transfer, as long as sufficient identifying information is provided.<sup>110</sup> After verifying both the transferring account and the recipient account for security purposes, distribution platforms can transfer apps instantaneously in a process seamless to end-users.<sup>111</sup> This straightforward transfer process is substantially less costly than a process that requires court orders. Moreover, the clean transfer mechanism is consistent with the proposed solution's encouragement of app transfers that have been specified in a will.

### D. Costs of Proposed Solution

¶48 The main counterargument to the proposed solution is that it would be costly for courts to administer. It is true that the proposed solution requires a court to affirmatively determine that access should not be granted to a successor that has not been specified by a developer.

¶49 While administrative costs would inevitably arise from the initial implementation of the denial of access by courts, the long-term effect would be an increase in wills created by developers that pass down apps to their desired successors. In the long run, therefore, successors who have not been specified in a will would learn that courts are not willing to grant access to them. These successors would be unlikely to approach a court knowing their request for access would be rejected. Courts signaling their stance toward mobile apps would thus reduce the administrative costs over time.

### E. A Workable Rule

¶50 The proposed solution of denying access is simple for parties to interpret as well as for courts to implement. More importantly, the solution is not necessarily inconsistent with Delaware-type statutes.<sup>112</sup> Mobile apps are not explicitly mentioned by Delaware's statute and would only be impacted due to the login credential mechanism that the statute allows

---

<sup>109</sup> See, e.g., *Transfer Apps to a Different Developer Account*, GOOGLE, <http://support.google.com/googleplay/android-developer/checklist/3294213?hl=en> [<http://perma.cc/X8UM-YGUA>].

<sup>110</sup> See *Transfer Apps to a Different Developer Account*, GOOGLE, <http://support.google.com/googleplay/android-developer/contact/appt> [<http://perma.cc/K3VN-RXDE>]. This process is used when developers leave companies and want the company to resume management. It is also used when the app itself—not the copies—is acquired by a new developer who seeks to resume management. See Jonathan Blum, *Want to Get Into the App Business? Try Buying One*, ENTREPRENEUR (May 11, 2012), <http://www.entrepreneur.com/article/223544> [<http://perma.cc/B2DQ-7L2W>].

<sup>111</sup> See *Transfer Your App*, *supra* note 109. All app statistics, ratings, and reviews transfer to the new owner. There is no downtime for the app, so the user experience is uninterrupted.

<sup>112</sup> See Woodfin, *supra* note 17.

fiduciaries to access.<sup>113</sup> The proposed solution would essentially make mobile apps an exception to the statute's broad definition of digital assets.<sup>114</sup> The ease of access to apps, coupled with their unique properties and consequences, justifies this carve-out. This brings up the issue of policing access to mobile apps only. Even if a fiduciary gains access to the credentials that unlock the distribution platform housing the apps, he would be unable to update the app without the crucial tool, the keystore certificate.<sup>115</sup> A statutory provision imposing a penalty for anyone found to have accessed mobile apps in an unauthorized way should deter those with improper access.

#### CONCLUSION

¶51 Because mobile apps essentially require an active developer with at least a minimal level of technical knowledge, spouses, children, and parents of developers may not be ideal successors for apps. Under existing digital inheritance law, these unqualified successors would be the recipients of mobile apps that they would not know what to do with besides take advantage of a short-term revenue stream. Instead, qualified persons with the tools and expertise necessary for continuing app development are much better suited to resume management.

¶52 The administrative costs that come with courts invariably denying access would be limited to the initial period that the proposed solution is implemented. Once successors understand that they would not be granted access to mobile apps unless they are specified as a legitimate successor in a developer's will, these administrative costs would drastically reduce. Courts would encourage developers to create wills, which would be beneficial with respect to all types of digital assets, not just mobile apps.

¶53 With a workable solution in place, the choice is up to developers whether to pass on their apps or not. The solution effectively serves as notice to developers to make plans for their financially viable apps. In the event that an app transfer does not take place, courts should respect a developer's decision not to transfer and should leave the app unaffected. As new types of digital assets continue to be created, digital inheritance will become increasingly important. The precise role of courts is uncertain, but it is apparent that they will be called on, at least initially, to differentiate these unique types of digital assets and protect them accordingly.

---

<sup>113</sup> H.R. 345, 147th Gen. Assemb. (Del. 2014), [http://www.legis.delaware.gov/LIS/lis147.nsf/vwLegislation/HB+345/\\$file/legis.html?open](http://www.legis.delaware.gov/LIS/lis147.nsf/vwLegislation/HB+345/$file/legis.html?open) [<https://perma.cc/Q6AZ-LQT6>].

<sup>114</sup> *Id.*

<sup>115</sup> See *Signing Your Applications*, *supra* note 58. As part of the proposed solution, a developer would have to be aware of the need to provide the keystore to his or her successor. This element is common for the other types of app transfers described in note 86.

