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Afterlife in the Cloud: Managing a Digital Estate

Jamie P. Hopkins

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Afterlife in the Cloud: Managing a Digital Estate

by JAMIE P. HOPKINS*

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I. Introduction: Estate Planning for the Digital Life

Astounding technological innovations and widespread access to the internet has ushered in a new lifestyle: the digital life. This new digital lifestyle has resulted in the digitalization of businesses, social lives, and wealth, creating unprecedented legal challenges, and perhaps, more than ever before, reinforcing Benjamin Franklin's eloquently stated notion that "nothing can be said to be certain, except death and taxes."

With the digitalization of assets and property, estate planning for the digital world has become increasingly complex. Traditionally, transferring property, wealth, and assets from one generation to another has been a fundamental property right and a primary focus of estate planning. However, the growth of the internet, development of digital lifestyles, and digitalization of assets are challenging the effectiveness of traditional estate planning mechanisms. For example, by end of 2012, an estimated thirty-million Facebook profiles will have outlived their owners. These digital legacies are left behind long after people die, begging the question: "What happens to my digital life when I die?"

Section II of this paper discusses the development of the digital life and the digitalization of assets. Section III examines challenges presented by planning for the disposition and management of digital assets. Section IV compares existing estate planning techniques for digital assets, highlighting privacy, security, and efficiency concerns with current strategies. Section V proposes a variety of recommendations in order to reinforce the property, privacy, and estate planning rights of digital asset owners. Lastly, Section VI will conclude the article with a discussion regarding the importance of

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3. BENJAMIN FRANKLIN, THE WORKS OF BENJAMIN FRANKLIN: AUTOBIOGRAPHY. PT. 2. CONTINUATION 410 (Jared Sparks, 1882) (delivering the infamous line regarding the certainty of death and taxes in life in Benjamin Franklin's letter to M. Le Roy (Nov. 13, 1789)).

balancing traditional estate planning methods with digital estate concerns without jeopardizing a deceased’s privacy, security, and legacy goals.

II. The Birth of the Digital Life: Digital Assets, the Internet, and Social Media

A. Digital Assets Defined

At the outset, it is important to define the term “digital assets.” As such, “digital assets” is broadly defined as any asset that “exists only as a numeric encoding expressed in binary form.” For example, information stored on the internet, photographs, account information, videos, electronic documents, software, e-mails, and digital applications are all types of possible digital assets. Essentially, digital assets include any electronically stored information. Additionally, metadata can itself be a digital asset. Metadata presents unique challenges for businesses and lawyers as it is often discoverable at trial and provides unique characteristics of the digital asset. Digital assets will not include electronic or digital devices such as phones or computers, but does include the information stored on these electronic devices.


6. Id. at 320 (listing examples of digital assets); see also Matthew Gonnering, DAM, YouTube Is Great for Video, But It Is NOT Digital Asset Management, 6 J. DIGITAL ASSET MGMT. 319, 321-22 (2010) (providing examples of digital assets).

7. Frank Baldino, Social Media and the Law: Estate Planning and Administration for Digital Assets, 45 MD. B.J. 28, 30 (2012) (stating digital assets can include bank statements, business records, photographs, social media, and even licenses to use an online service).

8. Băbeanu, supra note 5, at 319 (stating that metadata is often used to manage digital assets but can itself be a digital asset).

Digital assets can be stored on a variety of mediums, devices, and locations. These digital assets are not only created and stored on digital devices such as phones, computers, televisions, and other electronic devices but also can be stored on websites and through electronic applications. Ultimately, all digital assets must be stored in some physical location be it with the owner, a third party, or on the “cloud.” Additionally, the development of the “cloud” allows for digital asset storage on the internet. Many of these digital assets are saved in the cloud and accessible through an account protected with a password. Each internet user has an average of twenty-six different online accounts and uses roughly ten different passwords or pin numbers in a day. As traditional assets undergo a digital transformation, estate planning and asset management are confronted by unique and unforeseen challenges.

B. The History and Development of the Internet

The digitalization of assets did not occur overnight; instead, it occurred after years of technological advances in computers, electronic networking, and information sharing. The internet, which marks the beginning of the digital age, can trace its humble beginnings to the 1950s when the Eisenhower administration created Advanced Research Projects Agency (“ARPA”) to ensure that the U.S. would outpace the Soviet Union in the Cold War technological

10. Roberto Ceniceros, Companies Advised to Protect Critical Digital Assets, 38 Bus. Ins. 20, 21 (2004) (stating the number of systems where digital assets are stored is rapidly multiplying).


12. See id. at 4 (discussing the cloud).

13. See What Is Cloud Computing?, BBC WEBWISE TEAM (Oct. 10, 2012), http://www.bbc.co.uk/webwise/guides/what-is-cloud-computing (describing what the cloud is and how it is used to store digital assets: “The cloud” refers to various services where information and files are kept on servers connected to the internet. This means that instead of keeping them on a single computer that you have to stay at, any device you use that’s online can access the same files.

14. Warning About Online Fraud as Information Theft Rises, BBC TECH. NEWS (July 17, 2012, 6:29 AM), http://www.bbc.co.uk/news/technology-18866347 (noting the average internet consumer has roughly twenty six separate online logins but only a few different passwords).

race. By the end of 1969, ARPANET was created, which marked the first open communication between computers on a long-distance network. ARPANET connected four computers; one each at The University of California at Los Angeles, the Stanford Research Institute, The University of California at Santa Barbara, and The University of Utah. By 1979, ARPANET had hundreds of computers in different locations connected to the network. In 1983, the ARPANET network was integrated with other networks, creating the first real collection of inter-connected networks, otherwise known as the “internet.”

While many people today visualize the internet as one massive cohesive unit, the internet remains a vast collection of inter-connected networks. However, while the internet was accessible on all seven continents and consisted of over 500,000 networks by the mid-1990s, it was not until the development of the World Wide Web (“Web”) that computer illiterate people could access these networks with ease. After the introduction of the Web, internet use rapidly expanded in the United States.


17. See id. at 47 (detailing the events leading up to the creation of ARPANET): Amy Lynne Bomse, The Dependence of Cyberspace, 50 DUKE L.J. 1717, 1721 (2001) (describing the origin of ARPANET).

18. See Cohen-Almagor, supra note 16, at 48 (naming the four original ARPANET members).


20. See id. at 259 (arguing the first real internet did not start until the 1980s); see also Dan L. Burk, Patents in Cyberspace: Territoriality and Infringement on Global Computer Networks, 68 TUL. L. REV. 1, 8 (1993) (“[T]he Internet is not a single integrated entity; rather, it is a loosely connected web of local, regional, and national computer networks that share certain procedures for addressing and routing computer data.”); see generally Philip J. Weiser, The Internet, Innovation, and Intellectual Property Policy, 103. COLUM. L. REV. 534, 542 (2003) (describing how the internet works).

21. See Loudenslager, supra note 19, at 259 (stating the internet is a collection of different networks).

22. See id., at 260 (noting the internet was not widely used until the development of the Web, enabling the general public to understand and access the interest with more ease).

In 1995, roughly sixteen million people (0.4% of the world’s population) were using the internet. By the end of 2012, that number grew to 2.405 million people (34.3% of the world’s population). Furthermore, the World Bank estimates that 78.2% of the United States’ population uses the internet.

In addition to the widespread use of the internet and Web, the amount of information accessible online is astonishing. There are over 644 million websites and over 7.5 billion webpages. Furthermore, websites are growing at a rate of about 5% per month. This means roughly that every fifteen months the number of websites available online doubles. Additionally, roughly 200 million people gain access to the internet each year. As access to these electronic networks grows, the amount of data and information accessible online will also continue to grow, increasing the importance and impact of the digital world.

C. Melding of Digital Assets and Business

The growth and development of the digital world has changed the manner in which businesses operate, store information, market
their products, and reach consumers.\textsuperscript{31} Many businesses can no longer survive with only a brick and mortar store; consumers expect businesses to have a complementary Web presence.\textsuperscript{32} As such, companies have begun developing fully digital assets and are increasingly digitalizing traditional assets.\textsuperscript{33} A company’s value is no longer just linked to employees, physical goods, and property, but now encompasses a vast array of digital assets.\textsuperscript{34} These digital assets, including: mailing addresses, online stores, photographs, bank accounts, payroll systems, computer software, business plans, music, and videos, are considered the most crucial and valuable company assets.\textsuperscript{35} Furthermore, companies now insist that 20\% of their business information that is stored as digital assets is critical to the operation of the business.\textsuperscript{36} However, as companies increasingly digitalize their crucial assets, this number could increase.

The digitalization of business assets has enabled electronic commerce ("e-commerce") to become a vital business operation and valuable market. For example, in 2011, the internet accounted for 21\% of all GDP growth in developed countries.\textsuperscript{37} Additionally, 75\% of this internet growth occurred in traditional industries.\textsuperscript{38} Estimates show that the internet alone leads to over $1 trillion of economic value in the U.S. each year.\textsuperscript{39} E-commerce itself is a $1.4 trillion

\begin{footnotesize}
\begin{itemize}
\item[32.] See Bernard Boona, \textit{Moving Your Business Online}, 81 STRATEGIC FIN. 28, 30 (2000) (stating that the Internet changes the business standard, requiring companies to have an online presence).
\item[33.] See id. at 38 (noting that companies are increasingly looking to streamline their business models through new ways of converting, developing, and managing their digital assets).
\item[34.] Roberto Ceniceros, \textit{Companies Advised to Protect Critical Digital Assets}, 38 BUS. INS. 20, 21 (2004) (describing how value for companies has changed from only physical assets to digitalized assets).
\item[35.] See id. at 22 (stating the importance of information as a digital business asset).
\item[36.] See id. (noting that the benchmark for critical digital information is roughly 20\%).
\item[37.] See Internet Matters, supra note 30, at ix. (explaining how the study looked at thirteen develop countries to determine the impact of the internet on growth, jobs, and development).
\item[38.] Id. (stating growth attributable to the internet took place in mostly traditional industries and not in newly developed markets).
\end{itemize}
\end{footnotesize}
dollar world-wide industry, with annual compounding growth of nearly 14%. In the U.S., e-commerce accounts for roughly 10% of all discretionary spending. Additionally, nearly 70% of all U.S. internet users purchased an item through e-commerce in 2011.

The economic impact of e-commerce, the internet, and digital assets is not solely limited to big business and their consumers. Small businesses are also embracing e-commerce and increased digital possibilities. For example, in 2011, a survey by CitiBank indicated that 70% of small businesses use the internet for marketing. Additionally, nearly 90% of all U.S. small businesses have some type of networking and online presence.

Additionally, many businesses now only offer their services and products through the internet. As such, a business might manage its accounts receivable and payable electronically, distribute its payroll through direct online deposit, and operate its entire business through an online service provider. Thus, the management and development of digital assets has become an integral part of the business world as companies move to increase their online presence because of the enormous economic value associated with digital business.

42. See id. (stating that 70% of U.S. internet users use e-commerce).
43. See Only 70% of Small Businesses Use the Internet for Marketing Revealed a Survey by Citibank: XSM Introduces Web Development Packages, PRWEB (Dec. 11, 2012), http://www.prweb.com/releases/2012/12/prweb10222540.htm (stating that most small businesses use the internet for marketing).
46. See id. (stating that many business pay their bills, operate their business, and do all of their banking online, increasing the need for proper digital business asset succession planning).
D. The Digital Social Life

Likewise, society is also digitalizing its social life, transforming traditional family heirlooms and social accoutrements into digital assets. In the U.S., internet usage has become a daily activity, as average internet users spend almost sixty-eight hours per month online (two hours each day).\textsuperscript{47} Furthermore, since 2011, the most popular usage of the internet has been social media, with internet users spending almost 20% of their online time on social media websites.\textsuperscript{48} The extensive use of social media highlights the development and importance of the new “digital lifestyle.”\textsuperscript{49}

The digital lifestyle has been widely advanced by prominent technology giants such as Bill Gates and Microsoft,\textsuperscript{50} but it has also received some criticism as a marketing ploy.\textsuperscript{51} The new digital lifestyle is being driven by social media outlets such as Facebook, Twitter, LinkedIn, MySpace, YouTube, Flickr, Google+, and Tumblr.\textsuperscript{52} Roughly 80% of internet users are active users of social networks, blogging, or interactive websites such as YouTube.\textsuperscript{53}


\textsuperscript{48} See Sarah Radwanick, It's a Social World: Social Networking Leads as Top Online Activity Globally, Accounting for 1 in Every 5 Online Minutes, COMSCORE (Dec. 21, 2011), http://www.comscore.com/Press_Events/Press_Releases/2011/12/Social_Networking_Leads_as_Top_Online_Activity_Globally (highlighting social media as the most popular activity on the internet).

\textsuperscript{49} See also Pamela V. Rothenberg & Puentes King Jacqueline, Embrace a Digital Lifestyle, 69 J. PROP. MGMT. 35, 36 (2004) (noting that throughout the world there is a belief by industry leaders that the “digital lifestyle” is emerging).

\textsuperscript{50} See Stephen Cole, Bill Gates Plots a Windows Future, BBC NEWS (Jan. 21, 2005), http://news.bbc.co.uk/2/hi/programmes/wins/4195177.stm (describing society’s move towards a digital lifestyle: “Three years ago we were talking about the idea of the digital lifestyle. That your music, your photos, your TV, your communications would all be very different. And over these last three years I’d say that’s really coming into the mainstream”).

\textsuperscript{51} See Mark Gibbs, The Myth of the Digital Lifestyle, 23 NETWORK WORLD 16 (2006) (arguing the digital lifestyle is a marketing myth, designed to increase consumer spending and needs).


As people move to a more digital social life, many traditional assets are being digitalized. For example, YouTube, founded in 2005, was developed to provide an online medium for social sharing of videos, songs, and other digital assets. Since 2005, YouTube has arguably become the most popular visual social network (“VSN”). YouTube has over twenty-four hours of video content uploaded every minute. Additionally, YouTube is accessed by over 800 million individual users every month, and roughly 400 million of these YouTube users like, share, or comment on a YouTube video. In 2011, YouTube’s 120 million videos were viewed over one trillion times, equating to over 100 videos for every person alive.

In addition to the digitalization of videos, internet users have abandoned traditional photo albums and embraced the internet for photograph storage. For example, websites like MySpace, Tumblr, Instagram, and Flickr allow users to share, store, and edit digital assets such as text messages, pictures, videos, links, contacts, and audio files. These VSNs allow people to transform a traditional family heirloom, photo albums, into a digital asset.

For example, MySpace, which was originally developed as a social networking website, reinvented itself in 2011 to focus primarily on music and video sharing. Tumblr enables its users to share a

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58. Id. (describing YouTube’s members’ account activity, including commenting, liking, and viewing videos).

59. Id. (stating over 120 million videos have been uniquely identified and claimed on YouTube).

60. Id. (noting the frequency at which YouTube videos are watched).


variety of digital assets such as textual messages, photographs, and music. Since 2007, Tumblr users have created over thirty-one billion posts on more than seventy-two million blogs. In 2012, Instagram, a digital photo-sharing application, was valued and purchased by Facebook for roughly one billion dollars. Flickr touts itself as “the best way to store, sort, search and share your photos online.” According to Flickr, they have had over 6 billion digital photographs uploaded.

Facebook, founded in 2004, is the most widely used website in the U.S. Facebook provides its users with an online network to connect, communicate, and share with friends, family members, clients, businesses, customers, and coworkers. Facebook enables its members to develop a personalized webpage (profile page), where the user can upload movies, videos, songs, text messages, applications, games, and more. In 2012, Facebook exceeded 800 million users. Facebook use is widespread in the U.S. as both older and young individuals have contributed to the growth of the social network. Additionally, mobile social networking has also increased the access

63. Tumblr, supra note 61 (stating how Tumblr offers users a variety of media options for its social networking members).
64. id. (describing Tumblr’s rapid expansion and use).
66. Flickr FAQ, FLICKR, http://www.flickr.com/help/general/#1 (last visited Jan. 13, 2013) (noting the goal of Flickr to store and share digital assets such as photographs).
67. Kay Kremerskothen, 6,000,000,000 (Aug. 1, 2011), FLICKR, http://blog.flickr.net/en/2011/08/04/6000000000 (noting that in the past five years there have been over 6 billion photographs uploaded onto Flickr).
68. See Neilson, supra note 47 (stating Facebook, Google, and Yahoo are the most visited websites).
71. See Key Facts, supra note 69 (noting Facebook’s total number of accounts). But see Heather Kelly, 83 Million Facebook Accounts Are Fakes and Dupes, CNN (Aug. 2, 2012), http://articles.cnn.com/2012-08-02/tech/tech_social-media_facebook-fake-accounts_1_facebook-accounts-facebook-profiles-facebook-estimates (concluding eighty three million or about 10% of Facebook accounts are fake).
72. See Neilson, supra note 47 (noting people over the age of thirty five are rapidly adopting social media).
and use of social networks like Facebook as applications designed specifically to provide mobile access to social networking sites are more common.\(^7\)

Furthermore, Facebook has a tremendous amount of digital assets stored and shared on its website. In 2011, Facebook had over 100 billion photographs and roughly six billion photographs were being uploaded each month.\(^7\)\(^4\) Advertisements on Facebook have also become a common trend by businesses trying to reach the 800 million users.\(^7\) Some estimates have roughly 25% of all marketing efforts going towards social media.\(^7\)\(^6\) As such, Facebook value ballooned to $104.2 billion for its initial public offering in 2012, the U.S.'s third largest IPO.\(^7\)

In addition to social media, e-mail stores an incredible amount of digital assets. For example, in 2010, 107 trillion emails were sent, which is roughly 294 billion emails a day.\(^7\)\(^8\) Additionally, each day the average person produces roughly 450 pages of information.\(^7\)\(^9\) All of this information equates to each person storing roughly 600,000 books in some digital form.\(^7\)\(^0\)

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73. See id. (stating 55% of social media users access their accounts through mobile devices).


75. Sarah Needleman, What’s a Facebook Follower Worth?, THE WALL ST. J. (Oct. 11, 2012), http://online.wsj.com/article/SB100008723965390444657804578048750390978708.html (stating that companies are paying for Facebook advertisements to reach more users).

76. Id. (stating that businesses with $5 to 50 million in revenue spend roughly 25% of their marketing efforts on social media).

77. Tomio Geron, Facebook Prices Third-Largest IPO Ever, Valued at $104.2 Billion, FORBES (May 17, 2012), http://www.forbes.com/sites/tomiogeron/2012/05/17/facebook-prices-ipo-at-38-per-share (noting how Facebook is the largest and highest valued online social media network).


80. Id. (stating this information can be stored in computers, microchips, and electronic strips on the back of credit cards).
E. The Value of the Digital Estate

The value of these digital assets is also staggering. According to a McAfee 2011 study, on average, internet users have roughly $37,438 in digital assets across a variety of digital devices and platforms.81 These digital assets are even higher in the U.S., with an average internet user having roughly $55,000 in digital assets.82 Accordingly, the assets were broken down into categories, showing personal memories at around $19,000, personal records at $7,000, career information at $4,000, hobbies at $3,000, personal communications at $3,000, and entertainment files at $2,000.83 On average, this resulted in an average of 2,777 digital files.84

The digitalization of traditional assets has resulted in large amounts of wealth, both personal and business related, being stored online, on digital devices, and in the cloud. As these assets are often spread out across various social networks, email accounts, online service providers, and digital devices,85 they cannot always be easily transferred from one person to another. Ultimately, the digitalization of assets has created potential challenges to managing and transferring digital property.

III. Digital Afterlife: The Transfer Dilemma

However, digital assets still remain property. As such, people will want to manage, transfer, and bequest these assets upon their death. However, in order to determine the status and treatment of a deceased’s digital assets, it is important to understand how traditional assets are transferred upon death and why digital assets might receive variant treatment. Traditionally, upon death, the deceased can transfer property through a variety of legal mechanisms.86 To

81. McAfee Reveals Average Internet User Has More than $37,000 in Unprotected Digital Assets, MCAFEE (Sept. 27, 2011), http://www.mcafee.com/us/about/news/2011/q3/20110927-01.aspx (stating most people have more digital assets than they are aware of and people often do not properly protect these digital assets).
82. Id. (noting U.S. internet users have a significant amount more in digital assets than the average world user).
83. Id. (itemizing the value of digital assets).
84. Id. (stating as a global average respondents had roughly 2,777 digital files stored on at least one digital device).
85. Id. (noting that the average internet user has at least three different digital devices).
86. Diane Amado, Uniform Probate Code Section 6-201: A Proposal to Include Stocks and Mutual Funds, 72 CORNELL L. REV. 397, 400 (1987) (noting that property can be
facilitate the process, estate planning developed, “bring[ing] into existence an arrangement for the disposition of wealth.” While a variety of options exist to transfer assets upon death, testamentary deposition through a valid will is the traditional and most popular mechanism. As such, statutory rules developed formal will requirements to ensure the authenticity of the will and the testator’s intent. Additionally, these formal requirements force the testator to take the creation of the will seriously and put substantial thought into its construction. In order to determine what happens to digital assets upon their owner’s death, it is crucial to understand three pieces of information: (1) where is the digital asset located; (2) who owns the digital asset; and (3) did the deceased prepare for a digital asset transfer upon death.

A. Lost in the Cloud

In order to transfer assets according to a deceased’s instructions, it is crucial to understand what assets he or she owned and where the assets are located. This task can prove to be more difficult with digital assets as compared to traditional physical assets. Digital assets are more complicated to locate because “you can’t do it by rifling through a desk anymore to find the account statements, because they’re online.”

As stated before, digital assets exist in a variety of different locations. Digital assets can be stored on a digital device the owner

88. See id. at 378 (stating that since the 16th century the will has been the preferred method of property disposition upon death).
89. See Gulliver & Tillson, Classification of Gratuitous Transfers, 51 YALE L.J. 1, 5-7 (1941) (setting forth benefits of formal will requirements).
90. See Amado, supra note 86, at 399 (stating formal will requirements serve as a protection against haphazard will formation).
92. See id. (quoting William Schmidt, Esq. from Schmidt & Federico, LLP) (explaining why digital assets are more difficult to find than traditional assets).
93. See Carroll, supra note 45 (describing types of assets and where they are being held).
has in his or her possession or in the possession of a third party.\textsuperscript{94} For example, a person might save digital assets on a flash drive and store the flash drive in his or her bank in a safety deposit box. Digital assets located on a digital device owned by the deceased can be transferred in the same manner as all of his or her other assets.\textsuperscript{95} However, when the digital asset is stored in the cloud on a third party’s digital device, the process of determining where the location of asset becomes much more difficult.\textsuperscript{96} It is important to remember that digital devices can store digital assets but that they represent distinct and separate assets.\textsuperscript{97} For example, a writer might have a physical book she wrote that is worth $50 and a computer worth $1,000 with digital assets on it worth $2,000. Additionally, the writer’s estate might include digital assets stored on the cloud with a service provider worth tens of thousands of dollars.

While many people store their digital assets on their own digital devices, people “are increasingly using online or cloud-based services to store their digital assets.”\textsuperscript{98} When digital assets are stored on the cloud, the assets are organized by a service provider.\textsuperscript{99} In order to take control of a digital asset stored on the cloud, the account name, user name, and password will be needed.\textsuperscript{100} To protect the digital assets and keep each individual’s assets separate, these service providers require the user to create a unique account identifier.\textsuperscript{101} To identify the account the user typically creates a username unique to his or her account and digital assets.\textsuperscript{102} Furthermore, the user will create a password to protect his or her account.\textsuperscript{103} These login

\textsuperscript{94. Id. (stating that digital assets are often held by the owner on a digital device such as a computer or flash drive).}

\textsuperscript{95. Id. (stating that digital devices such as computers, storage devices, phones, and other electronics are tangible property and would be distributed as part of the estate).}

\textsuperscript{96. See id. (stating assets are often stored online in the cloud with third parties).}

\textsuperscript{97. See id. (arguing that it important to advise clients that their digital devices and digital assets are separate things).}

\textsuperscript{98. Id. (noting the general growth of digital assets and the growing trend of storing digital assets on the cloud through online service providers).}

\textsuperscript{99. Michael Roy, Beyond the Digital Asset Dilemma: Will Online Services Revolutionize Estate Planning?, 24 QUINNIPIAC PROB. L.J. 376, 379 (2011) (stating that online service accounts can be created and accessed whenever the user has internet).}

\textsuperscript{100. See id. at 381 (noting that digital assets stored in the web are organized and operated by service providers through individualized accounts).}

\textsuperscript{101. See id. (stating how online service providers manage digital assets and protect their users’ privacy).}

\textsuperscript{102. See id. (articulating how users are able to manage and access their online accounts).}

\textsuperscript{103. See id. (explaining the importance of password protecting an online account).}
credentials will assist the online service provider to protect and manage the user’s account. It will also help protect the account owner’s digital assets from use or theft by other parties.

While unique online account identifiers help organize and protect digital assets, typical internet users have an average of twenty-six accounts and over ten different passwords. In order to know the location of a person’s digital assets, one must know how many accounts and under what usernames they were created. Keeping track of all the passwords, usernames, and accounts becomes a justifiable concern for digital asset tracking.

**B. Possession is 9/10ths of the Law: Ownership Rights in the Cloud**

When digital assets are stored online with a service provider, it is important to identify the asset’s location and how to access them. Additionally, it is crucial to examine the user’s ownership rights of the digital assets held by the online service provider. Ownership and transferability of assets are linked together as “federal courts have, in some cases, adhered to the notion that property must have been possessed by the decedent while alive to be transferable by him on his death. In yet other cases, the courts have embraced a more comprehensive concept of wealth transfer.” The use of the online account and the digital assets contained within are not always inheritable property as “the terms of the contract between online service providers and account holders...govern the ownership and

104. See id. (specifying how user specific login credentials enable the user and the service provider to manage and identify the proper online account information).

105. See Roy, supra note 99, at 381 (articulating how unique account information helps protect the privacy and security of online accounts).

106. Warning About Online Fraud, supra note 14 (noting the average internet consumer has roughly twenty six separate online logins but only a few different passwords); see also Average Person, supra note 15 (discussing problems related to the tremendous amount of passwords people use on the internet on a daily basis); DINEI FLORINCIO & CORMAC HERLEY, A LARGE-SCALE STUDY OF WEB PASSWORD HABITS (2007), available at http://research.microsoft.com/pubs/74164/www2007.pdf (suggesting that the typical internet user could have upwards of twenty five unique online accounts).

107. See Roy, supra note 99, at 382 (articulating the primary stumbling blocks for individual users to keep track of online accounts).

108. See id. (declaring problems with the digital estate planning technique of merely listing the account names, passwords, and usernames to access digital assets).

In general, digital assets held by online service providers will be subject to the terms of the contract binding the account holder and service provider. This contract, often referred to as “terms of service,” is almost never negotiable and will likely control the transferability of the digital assets. For example, Yahoo!’s “Terms of Service” states,

“No Right of Survivorship and Non-Transferability. You agree that your Yahoo! account is non-transferable and any rights to your Yahoo! ID or contents within your account terminate upon your death. Upon receipt of a copy of a death certificate, your account may be terminated and all contents therein permanently deleted.”

Therefore, anyone who creates an account with Yahoo agrees to forfeit any transferability or survivorship rights upon death. However, since the agreement focuses entirely on the survivorship and transferability rights of the user upon death, and does not specifically mention the user’s right to transfer the assets and account while still alive, it may be possible for the Yahoo user to transfer his or her rights into a trust or other legal estate planning vehicle to avoid these transferability restrictions.

110. Id. at 384 (discussing how digital assets might not be owned by those who created or manage the assets).
112. See Roy, supra note 99, at 384 (stating that the contract between the service provider and the account holder control the ownership rights of the digital assets in the account).
113. See id. (stating these service agreement are non-negotiable and will often affect the transferability of the digital assets and account).
115. See id. (noting Yahoo! user accounts are not transferable).
116. See id. (excluding any terms prohibiting the transfer of a Yahoo! user’s account, while the user is still alive).
117. Jesse Dukeminier, Perpetuities: The Measuring Lives, 85 COLUM. L. REV. 1648, 1683 (1985) (stating an irrevocable inter vivos transfer to a trust can be a way to transfer property while alive but maintain control over it until death).
While some “terms of service” contracts restrict transferability upon death, other contracts support the transferability. From a business standpoint, supporting transferability upon death might lead to more continuous and stronger client relationships. However, most “terms of service” contracts do not specifically address ownership rights and transferability upon the user’s death.

In addition to addressing the transferability of online and digital accounts at death, some online service providers’ “terms of service” also address the user’s ownership rights of the digital assets and information contained in the online accounts. However, the ownership rights of digital assets are not always clear even if the “terms of service” address ownership because the type of digital asset in question might impact the outcome.

Since the 1990s, there have been concerns about the property treatment of e-mails. However, while there remains very little statutory or case law to resolve the ownership issues regarding e-mails, the general thought is that e-mails are a literary work created by the user and receive copyright protections, continuing after the e-mail creator’s death. Therefore, the “terms of service” agreements might not bind the transferability


119. See Roy, supra note 99, at 381 (stating the majority of online terms of service agreements do not deal with what happens to a user’s account if the user dies).

120. See Google Terms of Service, GOOGLE (Mar. 1, 2012), http://www.google.com/intl/en/policies/terms (“When you upload or otherwise submit content to our Services, you give Google (and those we work with) a worldwide license to use, host, store, reproduce, modify, create derivative works (such as those resulting from translations, adaptations or other changes we make so that your content works better with our Services), communicate, publish, publicly perform, publicly display and distribute such content. The rights you grant in this license are for the limited purpose of operating, promoting, and improving our Services, and to develop new ones. This license continues even if you stop using our Services (for example, for a business listing you have added to Google Maps).”).


123. See Darrow, supra note 121, at 282 (stating the ownership status of e-mails remains unclear).

124. See Conner, supra note 111, at 310 (applying traditional copyright law to digitally created written documents like e-mails).
of e-mails as they are protected under copyright law.\textsuperscript{125} As such, the copyrights associated with an e-mail will likely transfer upon death, either through a will or other legal mechanism.\textsuperscript{126}

While some digital assets receive statutory copyright transferability protections, there are many digital assets that will likely not receive copyright or statutory transferability protections. For example, social media accounts present a unique challenge because many of the assets are shared openly and with other users.\textsuperscript{127} Additionally, accounts created and owned by an individual for the purpose of a business might also complicate ownership rights upon the individual user’s death.\textsuperscript{128} Many online service providers require an individual to set up and maintain personal accounts in order to access a business account.\textsuperscript{129} When the individual dies, the ownership of the account and copyrighted materials could come into question because the business might not be able to access the account which was technically owned and created by an individual.

Additionally, many “terms of service” agreements state the account user owns all of the material he or she creates, uploads, or receives.\textsuperscript{130} However, the online services typically maintain the ability to cancel the agreement for any reason and reserve the right to use any of the material or assets located on the account.\textsuperscript{131} While many

\begin{footnotesize}
\begin{enumerate}
\item 17 U.S.C. § 201(d)(1) (2012) (“The ownership of a copyright may be transferred in whole or in part by any means of conveyance or by operation of law, and may be bequeathed by will or pass as personal property by the applicable laws of intestate succession.”).
\item See Conner, \textit{supra} note 111, at 309 (“Social-networking websites provide estate planners with a special problem because unlike web-based e-mail accounts, where only the account holder has access to the information contained therein, social-networking websites are much more public in nature.”).
\item See \textit{Is a Google Account Required to Sign In/Sign Up to YouTube?}, GOOGLE (Mar. 7, 2013), http://support.google.com/youtube/bin/answer.py?hl=en&answer=69961 (noting that you need to create a user account for a business).
\item See \textit{id.} (requiring a personal account to set up a business Google account).
\item See, \textit{e.g.}, \textit{Google Terms of Service}, \textit{supra} note 120 (“Some of our Services allow you to submit content. You retain ownership of any intellectual property rights that you hold in that content. In short, what belongs to you stays yours.”).
\item See \textit{id.} (setting forth the ownership rights of any material located on Google accounts).
\end{enumerate}
\end{footnotesize}
service providers claim rights to use the digital assets, there is still confusion as to their ability to claim ownership of the material. 132

While ownership of digital assets remains in flux in many states, three states have enacted statutes illuminating the ownership rights of online accounts. 133 Indiana’s statute requires any service provider in possession of a decedent’s “documents or information” to

provide to the personal representative of the estate of a deceased person, who was domiciled in Indiana at the time of the person’s death, access to or copies of any documents or information of the deceased person stored electronically by the custodian upon receipt by the custodian of:

(1) a written request for access or copies made by the personal representative, accompanied by a copy of the death certificate and a certified copy of the personal representative’s letters testamentary; or

(2) an order of a court having probate jurisdiction of the deceased person’s estate. 134

Ultimately, state statutes like Indiana’s do very little to clear up the ownership rights of the online account; however, it does provide an estate solution to the problem by making the online accounts available to the proper parties.

IV. Digital Estate Planning: Deceased’s Options for the Digital Beyond

After determining the location, accessibility, and ownership of a digital asset, it is important to understand the deceased owner’s estate plan for the digital assets. In most instances, people do not have specific digital estate plans in place. 135 The lack of properly developed digital estate plans can be attributed to two general estate planning problems: (1) most people have no estate plan; 136 and (2) most people

132. See Roy, supra note 99, at 385 (stating confusion exists to the ability of the “terms of services” agreements to bind ownership even after the user’s death).


134. See Ind. Code § 29-1-13-1.1(b).


are ignorant to the importance of having a specific digital estate plan. Additionally, many people mistakenly believe the only benefit of estate planning is protecting assets. Without an estate plan in place, uncertainty about the dissemination and management of assets can arise. As such, digital estate planning is more than just about protecting wealth; it is also about setting forth a plan for the treatment and disbursement of digital assets.

A. The Case for Digital Estate Planning

While digital estate planning is still a developing area of the law, the lack of clear legislative initiatives makes it imperative that estate planning attorneys consider digital estate planning in addition to the general estate planning process. Digital estate planning can be defined as the process of arranging and preparing for the disposal of digital assets. As such, digital estate planning has developed to deal with the unique challenges of digital assets because traditional estate planning is not well equipped for the task.

As stated before, digital estate planning must deal with three main issues: (1) identifying the assets; (2) providing access to the assets; and (3) setting forth the deceased’s wishes. Additionally, the unique challenges presented by digital assets make traditional estate planning impracticable and puts the client’s privacy and estate at risk.


138. See Ebeling, supra note 136 (noting that 19% of people believe they have no need for an estate plan because they do not have sufficient assets).

139. See id. (stating estate planning uncertainty can cause significant problems for families).

140. See Baldino, supra note 7 (arguing that digital estate planning laws and strategies are still developing, requiring attorneys to be mindful of the new challenges that face digital assets).

141. See Roy, supra note 99, at 377-88 (defining digital estate planning as the process of passing on digital assets to heirs).

142. See Baldino, supra note 7 (noting the unique challenges presented by digital assets).


144. Id. at 42 (“Wills are generally unsuitable for repositories for passwords or other information that is critical to accessing on-line assets.”) (noting that traditional estate planning techniques are unable to properly manage digital assets); see also Gerry W.
Traditional estate planning techniques such as using a will to dispose of and provide access to digital assets is improper because of a variety of concerns.\textsuperscript{145} For example, traditional wills become public, therefore placing passwords and other vital digital asset access information into a will can endanger the privacy and security of the digital assets and estate.\textsuperscript{146} Additionally, if all property is just transferred without any digital asset access and accounting, many of these assets will be unattainable and lost forever.\textsuperscript{147} To a lesser degree, a time delay in transferring the digital assets can also result in substantial harm to the estate as many businesses could suffer serious financial harm due to a delay in accessing digital assets.\textsuperscript{148} While preventing financial harm to either the estate or to a business is an important consideration for digital estate planning,\textsuperscript{149} digital estate planning is about more than just protecting the financial value of an estate’s digital assets. Digital estate planning is also crucial to effectuating the deceased’s wishes with regard to his or her digital assets and legacy.\textsuperscript{150} When creating a digital estate plan, the individual must create a list of digital assets, provide access information, determine how to dispose of each asset, plan for how the access information will be transferred, understand their ownership

\textsuperscript{145} See Beyer, supra note 143 (arguing that a will or a trust can pass ownership of digital assets, but that complicated digital asset management questions remain that cannot easily be planned for through traditional estate planning techniques).

\textsuperscript{146} Id. at 42 (noting that wills are not a good digital estate planning tool because the passwords and accounts might change before a new will can be executed and wills become public information, exposing all of the passwords and digital asset locations).

\textsuperscript{147} Id. at 41 (arguing that without proper digital asset planning, access to these digital assets can be lost when the owner dies).

\textsuperscript{148} See Darrow, supra note 121, at 295–96 (2007) (arguing that without proper estate planning, heirs can be locked out of these digital assets because the service provider is in exclusive control).

\textsuperscript{149} See id. at 296 (stating that denying a business access to an online account can have immediate and serious financial consequences).

\textsuperscript{150} See Beyer, supra note 143 (arguing digital estate planning is an important process to ensure a deceased’s wishes are fulfilled with regards to his or her digital assets); see also Dennis Kennedy, Of Sound Mind: Make Plans for Your Digital Estate, 98 A.B.A. J. 33 (2012), available at http://www.abajournal.com/magazine/article/of_sound_mind_make_plans_for_your_digital_estate (stating that digital estate planning is important to ensure a person’s digital assets are handled in accordance with his or her stated intentions).
rights in the digital assets, and determine who will take ownership of the digital assets.151

When determining what to do with one’s digital estate, it is important to understand that not every digital asset has value, and some digital assets might be specifically left out of a digital estate or purposefully destroyed upon the owner’s death.152 For example, dating service accounts or adult content accounts might be purposefully left out of the disbursement of the digital estate or even purposefully destroyed.153 Additionally, some websites, like Facebook, allow for your digital assets to be memorialized.154 A Facebook account can be memorialized in two different ways: (1) friends can contact Facebook with information about the deceased or (2) verified family members or an estate’s executor can make a request.155 Once a Facebook account is memorialized, no one can log-in, edit, or remove materials from the account.156 In addition, Facebook removes sensitive information from the account to protect the privacy interests of the departed.157

After memorializing an account, Facebook becomes the sole holder of any of the deceased’s digital assets.158 As such, any copyrighted or digital assets stored on the memorialized account will likely become worthless for the deceased’s estate, as “the copyright

151. See Kennedy, supra note 150 (setting forth a basic outline for digital estate planning).
152. Tyler Tarney, A Call for Legislation to Permit the Transfer of Digital Assets at Death, 40 CAP. U. L. REV. 773, 782 (2012) (noting that many people create online accounts and digital assets that they never want made public or passed onto their heirs).
153. See id. (stating that some personal accounts might be purposefully excluded from disbursement in a digital estate).
154. See Deactivating, Deleting, and Memorializing Accounts, FACEBOOK, https://www.facebook.com/help/103897939701143 (last visited Mar. 14, 2013) (describing the ability and process needed to memorialize a Facebook account to protect the deceased’s privacy and digital legacy: “When a person passes away, we memorialize their account to protect their privacy. . . . No one can log into a memorialized account and no new friends can be accepted . . . but [c]ontent the deceased person shared (ex: photos, posts) remains on Facebook and is visible to the audience it was shared with”).
156. See id. (describing a memorialized Facebook account).
157. See id. (stating that Facebook’s memorialization of an account may help to protect the digital assets of the deceased).
158. See id. at 1651 (noting that once an account is memorialized, Facebook becomes the sole repository of the deceased’s account information).
owner has no right to compel the return of copies.”

While memorializing an account can be a productive way to help protect a person’s lasting digital legacy without prior digital estate planning, some people would like to make this determination before they die. As such, a determination as to how to memorialize the account and future ownership of particular assets could be determined before the user’s death, reducing the risk of unwanted destruction of digital assets through the memorialization process.

Furthermore, as many digital assets and accounts could have an indefinite lifespan, digital estate planning is crucial to shaping and protecting the individual’s lasting digital legacy. Protecting a digital legacy from post-mortem theft is a serious concern for digital estate planning. For example, in 2010, the Internal Revenue Service (IRS) paid out over $12 million to over 5,000 stolen identities of deceased U.S. citizens, a type of fraud that can be perpetrated using the deceased person’s “Electronic Filing Identification Number.”

Identify theft is the fastest-growing crime in the U.S., plaguing over 27,000 people worldwide each day for an estimated $56 billion dollars annually. In addition, cyber-threats and criminals are expected to increase in the coming years and target new digital assets like blogs and social media accounts. Thieves target digital assets

159. Id. at 1651 (stating that the owner of a physical letter has no duty to return it to the copyright owner’s estate and drawing a parallel distinction between assets on Facebook and traditional copyrighted letters).

160. See id. at 1661 (discussing the memorialization process for Facebook).

161. Jennifer Schafer, Protecting the Story of a Lifetime, 90 MICH. BAR J. 64, 65 (2011) (stating that digital estate planning is an important part of the estate planning process to protect the person’s legacy).


164. See id. (explaining the identity theft IRS scam).


and steal information from unprotected and unmonitored social media accounts. It is unclear how helpful many of these identity theft services are to individuals. However, using these services in conjunction with proper digital estate planning can lessen the likelihood and impact of post-mortem identity theft. Ultimately, digital estate planning entails more than just preserving the financial status of an estate. Digital estate planning helps protect the individual’s legacy, assets, identity, privacy, and security.

B. Digital Estate Planning Strategies

In response to the need for digital estate planning, a variety of estate planning strategies have developed to assist individuals with their digital asset planning needs. Three have been adaptations of traditional estate planning tools, such as wills being modified to specifically address digital assets. While it likely become more common for wills to include language devising digital assets, wills remain limited in their ability to manage digital assets. However, trusts are becoming a popular digital estate planning device.

digitalization of business and social life has lead to an increase in digital crime, increasing the need for digital based data management systems). 167. See Conner, supra note 111, at 321 (describing tactics used by identity thieves to steal information).


169. See id. (noting the growing skepticism towards identity theft services).

170. See Conner, supra note 111, at 321 (noting how proper estate planning can limit the impact of post-mortem identity theft: “However, with proper planning (e.g., providing loved ones with passwords, usernames, and security code answers), clients can avoid post-mortem identity theft, and an already grieving family can avoid more sorrow”).


172. Entrustet Founders Execute North America’s First Wills That Incorporate Digital Assets, PRWEB (May 24, 2010), http://www.prweb.com/releases/2010/05/prweb4029134.htm (stating the company is incorporating clauses dealing with digital assets into traditional wills).

173. See Beyer, supra note 143 (noting the limitations of wills as a digital estate planning device).

174. See id. (arguing trusts might be a better solution than wills for digital estate planning because wills become public information).
addition, online digital estate planning services have developed in order to assist individuals in their digital asset management during life and post-mortem. Ultimately, it is important to understand the benefits and limitations of using a digital estate planning service or a traditional estate planning device to manage and devise a person’s digital assets.

I. Modified Estate Planning Mechanisms

As digital estates continue to grow, traditional estate planning devices such as wills and trusts will have to adapt to these new challenges. Wills, for example, must start to at least define and address how digital assets should be treated by the executor of the estate. Additionally, wills can be used to create a special “digital executor,” as someone who would have the explicit authority and duty to manage the estate’s digital assets. However, wills are not the ideal method for dealing with digital assets because wills eventually become public. As such, passwords, accounts, and usernames should never be placed into a will. Additionally, the rapid changes in digital assets could render a will’s provisions invalid or out of date before an individual has a chance to redraft the will.

Though wills have serious privacy and efficiency concerns for the management of digital assets, trusts are not burdened by as many concerns because they do not become private. As such, trusts are a better substitute for managing digital asset estates. An individual

175. See Marsh, supra note 171 (stating the prevalence of online digital asset planning services).

176. See Carroll, supra note 45 (providing sample language for the creation of a “digital executor” and for the disposition of digital assets through a will: “Digital Assets. My executor shall have the power to access, handle, distribute and dispose of my digital assets”; “I authorize my executor to engage _________ to assist in accessing, handling, distributing and disposing of my digital assets”).


178. See id. (noting language in a will could create a “digital” executor to handle the estate’s digital assets).

179. See Carroll, supra note 45 (articulating the concern about placing private or sensitive information into wills because the document becomes public).

180. See id. (arguing that personal information that could harm the estate’s value should not be placed into a will).

181. See Beyer, supra note 143 (noting a digital asset clause in a will can become out of date very quickly).
could transfer all of his or her digital assets into a trust but maintain control over them for the remainder of his or her life. Additionally, “[m]any digital assets take the form of licenses, which can be transferred to a trust. In the event of the client’s death or disability, the trustee has the authority to manage the assets and transfer them to the beneficiaries according to the client’s instructions.” Additionally, trusts do not always have as strict requirements as compared to wills, allowing for easier creation and modification. Setting up a trust with a trustee and beneficiaries is, however, unlikely in the case of most individuals as their digital assets might be modest.

2. Online Digital Estate Planning Services

As society frees itself from paper documents, online digital estate planning services could provide a valuable and beneficial service to manage digital accounts. However, because online digital estate planning services are so new, there is little cohesion or similarities between the services. While online digital estate planning services have seen rapid growth since 2008, and are primarily designed to provide some type of digital estate management and planning service, very few of the services provide legal estate planning solutions.

182. See Cahn, supra note 177, at 38 (describing how trusts can be used as effective digital estate planning tools).


184. See id. (explaining that trusts are sometimes subject to more relaxed formation requirements than wills).

185. See Beyer, supra note 143 (stating that trusts are a viable option for an individual with a tremendous amount of valuable digital assets).

186. See Beyer, supra note 144, at 866 (noting the move to a paperless and digital society).

187. See Roy, supra note 99, at 377 (questioning whether online digital estate planning services are the solution to digital estate planning problems).

188. See id. at 587 (stating there is no industry standard for online digital estate planning services).

189. See id. (noting that only 40% of digital estate planning services have even consulted an attorney).
Online digital estate planning services allow digital asset owners to manage their digital assets through an online account. The digital estate planning services add value by taking digital asset management out of traditional estate management and enable the user to keep track of all his or her digital accounts in one place. The services enable this simpler form of digital estate management by allowing “users to input their user names, passwords and wishes for each of their digital assets.” The user then identifies individuals who will have access to the digital estate when the user dies and explains how the individuals can gain access to the digital account information. If someone tries to access the account before the user is deceased, the user is typically notified through an e-mail, letter, or phone call.

Online digital estate planning services offer a variety of benefits over traditional estate planning techniques. For example, the online services are not as regulated as wills or trusts, allowing the users to modify their account information and last wishes, timely, easily and efficiently. Additionally, the online services create online accounts “through which individuals can create a list of their digital assets and indicate what should happen, postmortem, to these assets.” In fact, some services allow for features that will delete account and digital information upon the user’s death. Furthermore, the decedent’s


191. See Roy, supra note 99, at 389 (describing the benefits of online digital estate planning services: “The chief advantages of DEP services over traditional methods of resolving the digital asset dilemma are their ease of use, the peace of mind that comes from organizing account login credentials and other information, and the likelihood that survivors will receive the information contained in the DEP service account without difficulty”).

192. See Marsh, supra note 171 (describing how online digital asset planning services work).


194. See id. (stating that if someone tries to access your digital estate planning account before you are dead, you will be notified and can re-lock your account).

195. See Roy, supra note 99, at 389 (stating online digital estate planning services have benefits over traditional estate planning techniques).

196. See id. (noting ease of use as a benefit of online digital estate planning services).

197. See Cahn, supra note 177, at 39 (explaining how online digital estate planning services can help manage digital estates).

198. See id. (describing Entrustet’s “Account Incinerator” feature which deletes digital assets after the user’s death).
representatives will now only have to gain access to one online account in order to obtain all of the decedent’s digital asset information and wishes.\textsuperscript{199}

While online digital estate planning services provide the general service of management and storage of digital asset account information, they can offer a wide range of other services. For example, SecureSafe markets itself as a digital safety deposit box to protect and preserve online assets.\textsuperscript{200} Other online digital estate planning services, like posthumous e-mails and memorializing websites, are also popular.\textsuperscript{201} While some online digital estate planning services offer digital estate management, and even posthumous e-mails and memorializing websites, many services specialize in one of the three product offerings.\textsuperscript{202} For example, LifeEnsured was created to be an online digital estate planning service that would create and manage a trust for the user.\textsuperscript{203} The account would enable the user to create and manage beneficiary designations and make changes to his or her account information and final wishes quickly and efficiently.\textsuperscript{204}

In addition to online services designed for posthumous digital estate management, there are many online service providers designed specifically for digital asset management during life.\textsuperscript{205} These services

\textsuperscript{199} See Roy, supra note 99, at 389 (noting security and privacy concerns with concentrating all of a person’s online account information in one location).


\textsuperscript{201} Digital Death and Afterlife Online Services List, THE DIGITAL BEYOND, http://www.thedigitalbeyond.com/online-services-list (last visited Jan. 10, 2013) (setting forth a list of online digital estate planning services); see also About Us, CHRONICLE OF LIFE, http://www.chronicleoflife.com/aboutus (last visited Jan. 12, 2013) (describing how Chronicle of Life Foundation is an online repository designed to preserve and create a digital legacy: “Chronicle of Life Foundation is a 501(c)(3) non-profit organization that was established in 2008. Our mission is to save personal memories forever, including your memories of people, events and periods in your life, and any photos or other files, thus creating a chronicle of life”); Jeff Stryker, Posthumous E-mail, N.Y. TIMES (Dec. 9, 2007), http://www.nytimes.com/2007/12/09/magazine/09posthumousemial.html (describing how posthumous e-mail service providers operate and the benefits they provide to people in a digital age where so many people are online).

\textsuperscript{202} See id. (noting online service MyWonderfulLife provides a full range of digital estate planning services).

\textsuperscript{203} See Beyer, supra note 143 (articulating how trusts are being incorporated with online digital estate planning services).

\textsuperscript{204} See id. (noting that a trust might provide a more efficient manner of digital estate planning than a will).

\textsuperscript{205} See, e.g., Getting Started With Digital Asset Management, CANTO, http://www.canto.com (last visited Jan 10, 2013) (describing Canto’s services and software for digital
can help manage digital assets, their access information, and location. Ultimately, digital asset management has become a large and important service, expected to exceed $1 billion in 2013.

Ultimately, digital asset management providers offer a level of efficiency and speed unmatched by traditional estate planning techniques. This enables the user to update, manage, and track his or her digital estate in a time frame that resembles the speed and pace of the digital world. While the full costs of poor digital estate planning and asset management remain unknown, the continued emergence and growth of the industry indicate the market need for digital estate and asset management services.

3. Criticism of Existing Digital Estate Planning Techniques and Services

While a variety of digital estate planning services have developed to specifically deal with the new challenges facing digital asset management and disbursement, significant problems still remain unsolved. Privacy, security, digital ownership, and longevity concerns remain unanswered by online digital estate services. Security is a significant concern when dealing with online and digital assets. While many of the online digital estate planning services...
claim exceptional account security, concerns remain. Not unlike a traditional bank vault, these services create a large repository of wealth and property, making them a prime target for digital criminals and thieves. In addition to criminals, virus software could also target these online assets and destroy their accessibility.

In addition to security concerns, many consumers might be concerned about their privacy when putting all of their access information and passwords into a third-party account. Furthermore, it is unclear whether or not this is a violation of some online account provider’s terms of service as many of them restrict users from sharing their log-in and account information with any third parties. Ultimately, a traditional estate planning tool such as a trust might provide a better digital estate planning technique to protect an individual’s privacy.

Additionally, uncertainty with the business continuity of existing online digital estate services is a concern. Online digital estate services are relatively new and turnover in the industry has been significant. Whereas traditional financial institutions are backed by historical legacy, the government, and reputation indicating longevity and security, online digital estate planning services have a less certain future, raising concerns with consumers that the company may go out

213. See Roy, supra note 99, at 391 (noting the threat malicious software presents to online digital estate planning accounts).
214. Justin Atwater, Who Owns E-mail? Do You Have the Right to Decide the Disposition of Your Private Digital Life?, 2006 UTAH. L. REV. 397, 402-08 (2006) (discussing the dilemma for online service providers to protect the privacy of their users and allow for digital asset transfers).
215. Facebook Terms of Service, FACEBOOK, https://www.facebook.com/legal/terms (last visited Jan. 13, 2013) (stating users are not allowed to share their account passwords with other parties because it might jeopardize the security and privacy of the account: “You will not share your password (or in the case of developers, your secret key), let anyone else access your account, or do anything else that might jeopardize the security of your account”).
217. See Tarney, supra note 152, at 790-92 (2012) (stating current online solutions are counterproductive and shortsighted).
218. See, e.g., Roy, supra note 99 (mentioning and discussing LifeEnsured). However, the company is no longer in business as it was acquired by SecureSafe. See LifeEnsured Customers, SAFESECURE, http://www.securesafe.com/en/partners/lifeensured.html (last visited Jan. 13, 2013).
While online digital estate services provide efficiency and management tools not available in traditional estate planning, they do nothing to solve serious ownership, privacy, and security issues raised by collecting access information to digital assets in one source.

V. Recommendations

While the adaptation of traditional estate planning techniques, development of online digital estate services, and the creation of online service provider policies on digital estate ownership offer individuals some digital estate planning options, significant concerns remain unsolved. Furthermore, none of these services or policies provides a comprehensive solution to existing digital estate planning problems. As such, a combination of legislation and business action is needed to provide users with the digital estate protections needed to ensure proper disposition and ownership of digital assets upon an individual’s death.

A. Legislative Changes

While a combination of online digital estate service providers and traditional estate planning techniques can manage and dispose of digital assets after the owner’s death, the uncertainty around ownership of digital assets presents a serious problem for digital estate planning. Currently, digital asset ownership remains a clouded area of the law and is often controlled by the service provider’s terms of service contract with the user. However, states have already begun passing legislation aimed at simplifying digital asset ownership.

219. See Baldino, supra note 7 (stating one problem with digital estate planning services is that they might go out of business and not be available when the person dies).

220. See Atwater, supra note 214, at 410 (noting that the digital age has caused various questions of digital ownership: “One of the most powerful rights granted to citizens of the United States is the right to dictate the disposition of their property at death. Despite the simplicity of this fundamental power, the disposition of the most intimate details of our lives is in question”).

221. See Baldino, supra note 7 (stating digital estate planning is a developing area of the law).

Oklahoma has passed legislation giving control of a deceased’s digital accounts to the estate executor. The Oklahoma statute states “[t]he executor or administrator 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 e-mail service websites.” While this law does not address all digital assets, it does provide the estate executor with clear rights to access many of the deceased online accounts. Additionally, the Oklahoma law provides no expedited manner in obtaining access to the online accounts, as the executor is unlikely to have the passwords and account information.

While states have been proactive, federal legislation, adopting the Oklahoma statute’s language, might provide a better and clearer source of ownership rights because of the global nature of the internet and digital assets. The right to own and pass on property at death has been a vital property right in the U.S. legal system for hundreds of years and should not be destroyed by the digital nature of assets. As such, federal legislation should be passed, clarifying digital asset ownership rights. Users should own their digital assets and have a clearly defined right to transfer these assets upon death. Furthermore, federal legislation should prohibit service providers from attempting to destroy this right of transferability upon death through the use of their terms of service agreements. Additionally, clearly defined rights will benefit the service providers because they will have less inactive and dormant accounts owned by deceased individuals. Ultimately, clearly defined digital asset rights regarding

224. See id. (setting forth the law signed into effect).
225. See id. (describing the digital estate powers of the executor).
226. See Hodel v. Irving, 481 U.S. 704, 716 (1987) (“In one form or another, the right to pass on property—to one’s family in particular—has been part of the Anglo-American legal system since feudal times.” (citing United States v. Perkins, 163 U.S. 625, 627-28 (1896))).
227. See Noam Kutler, Protecting Your Online You, A New Approach to Handling Your Online Persona After Death, 26 BERKELEY TECH. L.J. 1641, 1649 (2011) (arguing there should be a move away from contract determined digital asset treatment and towards a property law treatment of digital assets).
ownership and transferability would enable better and more efficient
digital estate planning.228

B. Online Account Service Provider Optional Transferability

Online account service providers could also make changes to
their terms of service agreements and account management to ensure
more secure digital asset management. As stated before, many online
account service providers do not have policies in place regarding
transferability of digital assets. Developing a policy would enable
users to make more definitive plans regarding their accounts and help
ease the process of digital estate planning. Additionally, online
account service providers should begin to offer an optional service
that would enable the user to designate qualified individuals, who
would be allowed access to the online account in the event of the
user’s death.229 This service could work similar to how the online
digital estate planning services currently operate. After the user
identified the account beneficiary, the service provider would notify
the individual of their status as the account beneficiary through an e-
mail, letter, or phone call. The service provider would inform the
account beneficiary of the steps needed to access the account in the
event the user dies. This optional transferability policy would allow
for more seamless transitions after the user's death, would keep all of
the access information contained to the one service provider, and
would enable the user to dispose of his or her digital accounts without
the need for additional online digital estate management services.

VI. Conclusion

Traditional estate planning has fallen behind the digital age.
However, many of the current online digital estate service providers
raise serious security, privacy, and business continuity questions.230
As such, creative and innovative digital estate planning solutions are
required to ensure the privacy, security, and proper disposition of

228. See Baldino, supra note 7 (noting the lack of state legislation and uncertainty
regarding the treatment of digital assets forces people to do more digital estate planning); see also Kutler, supra note 227, at 1654 (arguing that well-defined digital asset property
rights will ensure more efficient and effective online ownership and behavior); Tarney, supra note 152, at 794–95 (arguing legislative action is needed to protect the privacy and
confidentiality rights, provide a level of increased certainty to digital assets, and protect
the interests of both users and service providers).

229. See Tarney, supra note 152, at 801 (describing the possibility of an opt-in policy).

230. See Baldwin, supra note 216, at 399–400 (discussing the importance of protecting a
person's privacy in the digital age).
digital estates. Therefore, changes are needed to ensure safer, more efficient and effective digital estate planning solutions. However, because the problems facing digital estate planning are complex, a combination of legislative action and improved online service agreements are essential to solving the digital estate dilemma. Until digital asset ownership and transferability questions are resolved, digital estate planning will remain in flux as traditional estate planning appears ill suited for the management and disbursement of digital assets.231 While some states have become proactive making digital estate law changes, most states remain on the sideline. Ultimately, federal legislation action will be needed to ensure the ownership and transferability of digital assets. However, until these changes take place, individuals will need to use a variety of estate planning techniques and digital asset management tools to create an effective digital estate plan.232

231. Gary Altman, Digital Estate Planning from Facebook and E-mail to Bill Pay and iTunes, THE EXAMINER (Dec. 20, 2012), http://www.examiner.com/article/digital-asset-planning-from-facebook-and-e-mail-to-bill-pay-and-itunes (indicating that some people might not want all of their digital assets, such as e-mails, handled by their executor or heirs).

232. Schafer, supra note 161, at 68 (stating that digital estate planning is an important part of the estate planning process to protect the person’s legacy).