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Thinking Out Cloud: California State Sales and Use Taxability of Cloud Computing Transactions

Matthew Adam Susson*

“I have no idea what anyone is talking about. It’s really just complete gibberish. What is it? When is this idiocy going to stop?”

– Larry Ellison, CEO of Oracle Corporation, on cloud computing¹

INTRODUCTION

Confronted with growing budget deficits and decreasing tax bases, states are necessarily looking for new ways to generate revenue.² In recent years, states have sought to expand sales tax laws to capture revenue from sales of digital products, a complicated and relatively nascent subject of taxation.³ Just as states have begun to impose such taxes, however, the shift from downloaded products to cloud-based data and applications poses new challenges to the states’ abilities to reach such transactions with their taxing powers.

* Chapman University School of Law, JD, 2013. University of California, Los Angeles, BA, Philosophy, 2007. I offer my sincere gratitude to Professor Peter van Zante for his patience in acquainting me with California sales tax law, Professor Jenny Carey for her thoughtful comments during the writing process, Debbie Lipton and the staff of the Rinker Law Library for their invaluable research assistance, and the staff of the *Chapman Law Review* for their excellent editorial work. I am also particularly indebted to Monica Francis, Sarah Susson, and Mark and Dana Susson, for their continual love and support. Finally, I would like to dedicate this Comment to the memory of my wonderful and truly one-of-a-kind grandmother, Hilda Susson.

¹ Larry Ellison, Chief Executive Officer, Oracle Corp., Address at the 2008 Oracle OpenWorld Conference (Sept. 24, 2008).

² Jennifer Medina, *California, With Revenue Shortfalls, Will See More Budget Cuts*, N.Y. TIMES, Dec. 14, 2011, at A20 (“Mr. Brown and his fellow Democrats argue that the problem is not that the state is spending too much, but that the revenues are not enough to pay for services that most citizens want, like schools and programs for the needy.”); see also Matt Richtel, *Starved Budgets Inspire New Look At Web Gambling*, N.Y. TIMES, Aug. 14, 2011, at A1 (explaining that a number of states, including California, are looking to tax Internet gambling to generate revenue and address local budget problems).

³ See KARL FRIEDEN, CYBERTAXATION: THE TAXATION OF E-COMMERCE 47 (2000) (“The growth of E-commerce raises complicated issues regarding the taxation of multijurisdictional transactions and the sourcing of sales or income from services or intangible property transactions that are relevant to transactional (sales and use, VAT), income, gross receipts, and property taxes.”).

Generally speaking, the cloud is a large group of interconnected computers (personal computers or network services), and may be either public or private.⁴ Cloud computing allows users to access their applications and documents from anywhere in the world, which frees them from the confines of desktop computing and permits greater ease of group collaboration among users.⁵ In a broad sense, cloud computing describes the way in which information is stored and processed on computers elsewhere—in the “cloud”—and brought back to your screen.⁶

With the rise of cloud computing, companies looking to mitigate IT infrastructure costs have eschewed the traditional model of purchasing prewritten software and server hardware—both largely taxable—in favor of third-party web-based, hosted computer facilities and applications.⁷ More generally, the increasingly frequent transfer of activity to the cloud poses substantial questions about how (or whether) cloud services fit in the existing framework of state taxation.⁸ Unable to keep pace with developments in technology, and with little guidance, state governments have taken inconsistent and patchwork approaches towards determining taxability, largely through letter rulings, audits, and departmental interpretations.⁹ Furthermore, they have used such approaches to apply *existing* provisions related to tangible personal property, services, or data or information processing.¹⁰ As a result, cloud service providers and their

4 MICHAEL MILLER, CLOUD COMPUTING: WEB-BASED APPLICATIONS THAT CHANGE THE WAY YOU WORK AND COLLABORATE ONLINE 9 (2009); *see also Clash of the Clouds*, ECONOMIST, Oct. 17, 2009, at 80 (“Much of computing will no longer be done on personal computers in homes and offices, but in the ‘cloud’: huge data centres housing vast storage systems and hundreds of thousands of servers, the powerful machines that dish up data over the internet. Web-based e-mail, social networking and online games are all examples of what are increasingly called cloud services, and are accessible through browsers, smart-phones or other ‘client’ devices.”).

5 MILLER, *supra* note 4, at 7–8 (“With cloud computing, the software programs you use aren’t run from your personal computer, but are rather stored on servers accessed via the Internet. If your computer crashes, the software is still available for others to use. Same goes for the documents you create; they’re stored on a collection of servers accessed via the Internet. Anyone with permission can not only access the documents, but can also edit and collaborate on those documents in real time. Unlike traditional computing, this cloud computing model isn’t PC-centric, it’s document-centric. Which PC you use to access a document simply isn’t important.”).

6 Geoffrey A. Fowler & Ben Worthen, *The Internet Industry Is on a Cloud -- Whatever That May Mean*, WALL ST. J., Mar. 26, 2009, at A1.

7 A.J. Nezamabadi, *State Governments Reach for the Cloud*, MICHAEL JAMES SALES TAX SOLUTIONS, LLC, Sept. 21, 2011, <http://mjsalestax.com/?p=3532>.

8 Dolores W. Gregory et al., *Cloud Computing Emerges as a Tax Conundrum as States Seek to Squeeze ‘New Paradigm’ Into Old Ways of Thinking*, BNA, Dec. 9, 2011, at 1, available at <http://www.sutherland.com/files/upload/TM-WSTR.pdf>.

9 *Id.*

10 *Id.*

customers are left without definitive guidance as to their sales and use tax obligations.¹¹ Is a given transaction a sale or lease of tangible personal property, sale of software, sale of taxable services, or sale of nontaxable services? Service providers and their customers face the possibility that each state will define the character of their transactions differently.

Unfortunately, state tax departments lack sufficient resources to address the complicated policy questions raised by the cloud.¹² In light of this, business interests have already pushed for a federal solution.¹³ In the meantime, one looking for timely guidance on the issue is likely to find that a sales tax regime built for a manufacturing economy is more likely to confuse than enlighten.¹⁴

If California wishes to stanch its revenue bleeding and budgetary problems,¹⁵ it must do more than simply repurpose existing state provisions ad hoc and shoehorn new business paradigms into old categories. While budget problems may hinder the state's ability to undertake a substantial policy project like cloud computing, California's ongoing transition to an information services economy¹⁶ requires a coordinated effort to effectively tax crucial revenue.¹⁷ California must also amend its tax code to allow taxation of some services—specifically digital services—if it hopes to maintain a steady stream of sales tax revenue prospectively. It must too provide comprehensible guidelines to service providers and retail customers as to the taxability of cloud services. Established guidelines will provide the certainty and stability necessary to incentivize cloud-based business in the state, and streamline the tax collection and remittance process. Finally, California should work in concert with other states to, among other things, commonly define goods

¹¹ Nezamabadi, *supra* note 7.

¹² Gregory et al., *supra* note 8, at 1.

¹³ *Id.* (noting that businesses would like the federal government to require states that want to tax these transactions to do so through new legislation and not administrative measures).

¹⁴ *Id.*

¹⁵ On November 6, 2012, in an attempt to address cuts in education, police and fire protection, healthcare, and other critical state and local services, the people of California voted to pass Proposition 30, Governor Jerry Brown's measure to temporarily increase the state sales tax by a quarter percent, and state income taxes on high-earners by one to three percent. CAL. SEC'Y OF STATE, DEBRA BOWEN, STATEMENT OF VOTE: NOVEMBER 6, 2012, GENERAL ELECTION 13 (2012), available at <http://www.sos.ca.gov/elections/sov/2012-general/sov-complete.pdf>; see also Editorial, *Californians Say Yes to Taxes*, N.Y. TIMES, Nov. 9, 2012, at A30. For the full text of Proposition 30, see The Schools and Local Public Safety Protection Act of 2012, Proposition 30, at 81–84 (proposed Nov. 6, 2012), available at <http://vig.cdn.sos.ca.gov/2012/general/pdf/text-proposed-laws-v2.pdf>.

¹⁶ See *infra* Part IV.B.2.

¹⁷ See discussion *infra* Part IV.B.2–3.

and services and create a consistent national vocabulary. Such a coordinated effort would greatly simplify the levying and collection of sales taxes on interstate transactions, and pave the way for unifying federal action.

The rise of cloud computing raises a number of complex legal issues.¹⁸ While legal scholars have written at length about the privacy,¹⁹ antitrust,²⁰ e-discovery,²¹ and copyright enforcement²² concerns of cloud computing, even the state sales tax implications are too nuanced to discuss comprehensively here. While California must address crucial nexus²³ and sourcing²⁴ issues as

¹⁸ Horacio E. Gutiérrez, *Peering Through the Cloud: The Future of Intellectual Property and Computing*, 20 FED. CIR. B.J. 589 (2010–11) (“Courts, legislatures, technology providers, consumers, and businesses will collectively seek to address a growing number of complex legal, regulatory, and public policy issues presented by cloud computing.”).

¹⁹ William Jeremy Robison, Note, *Free at What Cost?: Cloud Computing Privacy Under the Stored Communications Act*, 98 GEO. L.J. 1195, 1196 (2010) (“In exchange for ‘free’ cloud computing services, customers are authorizing service providers to access their data to tailor contextual and targeted advertising.”); see also Randal C. Picker, *Competition and Privacy in Web 2.0 and the Cloud*, 103 NW. U. L. REV. COLLOQUY 1, 7 (2008), <http://www.law.northwestern.edu/lawreview/colloquy/2008/25/LRColl2008n25Picker.pdf> (“[A]s we move from products and local storage to services and centralized storage, who owns the data and what establishes rights to the access and use the data?”); *Battle of the Clouds*, ECONOMIST, Oct. 17, 2009, at 16 (“[S]toring so much personal information [in the cloud], and using it to target advertising, has privacy implications.”).

²⁰ David S. Evans, *Antitrust Issues Raised by the Emerging Global Internet Economy*, 102 NW. U. L. REV. COLLOQUY 285, 286–87 (2008), <http://www.law.northwestern.edu/lawreview/colloquy/2008/13/LRColl2008n13Evans.pdf> (“The internet economy is likely to raise antitrust concerns—and possible demands for regulation—for years to come . . . Competition authorities and private parties can challenge the practices of these leading firms under the antitrust laws of most jurisdictions.”).

²¹ *United States v. Weaver*, 636 F. Supp. 2d 769, 772 (C.D. Ill. 2009) (focusing on the unique nature of web (or cloud)-based email services); see also *Flagg v. City of Detroit*, 252 F.R.D. 346, 347 (E.D. Mich. 2008) (rejecting a proposed reading of the federal Stored Communications Act as establishing a sweeping prohibition against civil discovery of electronic communications).

²² Marc Aaron Melzer, Note, *Copyright Enforcement in the Cloud*, 21 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 403, 404 (2011) (“The development of cloud computing, heralded by more-expansive and less-expensive broadband Internet connections, is poised to add a new challenge to copyright enforcement as more users take to the cloud to store, transmit, manipulate, and share content.”).

²³ “Nexus” is a term used to describe the existence of a sufficient connection between the vendor and the taxing state such that the taxing state can impose a use tax collection duty on the out-of-state vendor. MARYANN B. GALL & SALLY ADAMS, SALES AND USE TAX NEXUS: PRACTICAL INSIGHTS AND STRATEGIES, at v (2002); see also Michael A. Jacobs & Kelley C. Miller, *Pennies From Heaven—U.S. State Tax Implications Within Cloud Computing*, in TRANSCENDING THE CLOUD: A LEGAL GUIDE TO THE RISKS AND REWARDS OF CLOUD COMPUTING 10, 11 (Joseph I. Rosenbaum & Adam W. Snukal eds., 2010) (describing nexus as the amount and degree of business activity an entity must have with a state before the state can subject the entity to state tax). The Supreme Court has addressed the issue of substantial nexus numerous times over the past sixty years, each time requiring at least some physical presence to compel taxation. GALL & ADAMS, *supra* note 23, at 1; see, e.g., *Nat’l Bellas Hess, Inc. v. Dep’t of Revenue*, 386 U.S. 753, 759 (1967). Most recently, the Court reaffirmed the physical presence requirement in *Quill Corp. v. North Dakota*, 504 U.S. 298, 317–18 (1992); GALL & ADAMS, *supra* note 23, at 1.

part of any broad policy dealing with state sales and use taxation of the manner discussed in this Comment, the complexity of each invites rigorous examination beyond the scope of this narrower analysis.

This Comment will address only the threshold issue of the taxability of cloud computing transactions, and the California state tax implications thereof. Part I consists of a brief survey of current California sales and use tax law, and provides context for the subsequent sections and discussion.²⁵ Part II provides a history of computing and networking, and discusses the trend towards cloud-based computing models.²⁶ Part III introduces and explains the phenomenon of e-commerce—a jumping off point for the discussion of taxation of cloud computing transactions—as well as federal and state responses to Internet taxation issues in

In *Quill*, the Court ruled that before a state could impose a sales tax collection obligation on an entity, the Commerce Clause of the United States Constitution required the entity to have a “substantial nexus” with the state, as indicated by physical presence. 504 U.S. at 317–18. Thus, out-of-state Internet retailers engaged in business in the State of California are required to collect sales tax. CCH EDITORIAL STAFF, 2011 STATE TAX HANDBOOK 857 (Timothy Bjur et al. eds., 2010) [hereinafter CCH, 2011 HANDBOOK]. State nexus statutes are always subject to federal constitutional restrictions. *Id.* Using a website to make sales to California residents, however, does not create legal nexus with the State of California sufficient to require collection of state sales tax. *Id.* at 860. In the event a vendor has no substantial nexus to the taxing state, the *consumer* is required to remit the use tax to their state government, though compliance is very low. Steven Maguire, *Internet Transactions and the Sales Tax*, in INTERNET TAXATION 1, 4 (Albert Tokin ed., 2003) [hereinafter Maguire, *Internet Transactions*]. A sales tax may be imposed on retail stores in the state if such stores operate as an authorized representative of an out-of-state Internet retailer if the stores can accept returns of the Internet retailer's goods, and provide customers returning merchandise with an exchange, store credit, or a credit card credit. *Borders Online, LLC v. State Bd. of Equalization*, 29 Cal. Rptr. 3d 176, 184 (2005). “Nexus determinations tend to be highly fact-specific, and rely on an application of a complex mix of U.S. constitutional and state statutory law.” Jacobs & Miller, *supra* note 23, at 11. The Court has yet to revisit *Quill* to determine whether the mere presence of electronic data is a physical presence sufficient to establish nexus. *Id.*

²⁴ “Sourcing” requires a determination of which state may tax a particular transaction. Jacobs & Miller, *supra* note 23, at 12. Multiple taxation problems may arise where the location of a sale is ambiguous. Nonna A. Noto, *Extending the Internet Tax Moratorium and Related Issues*, in INTERNET TAXATION 17, 30 (Albert Tokin ed., 2003) (“For example, consider the case of a purchase from a seller in one state, by a person who lives in a second state, over an Internet server in a third state, charged to a credit card account in a fourth state, and delivered as a gift to a person in a fifth state. Multiple taxation could occur if more than one of these states claimed the right to levy a sales or use tax on the sale, without the taxpayer being able to claim a credit for tax paid to another state.”). For purposes of determining which local taxes apply to a given transaction, retail sales are considered to occur at the seller's place of business, regardless of both the physical location of the sold property and the location at which title to the property passes to the buyer. CAL. REV. & TAX. CODE § 7205 (West 2010). Cloud computing, however, allows both vendors and consumers to access and interact with a completely Internet-based scheme, which “obviates the ability to determine where the consumer is located and where it is using the objects of cloud computing.” Jacobs & Miller, *supra* note 23, at 12.

²⁵ See *infra* Part I.

²⁶ See *infra* Part II.

a sales and use tax context.²⁷ Part IV delves into California's taxation of Internet and e-commerce transactions, analyzes cloud computing transactions and current federal law from a California perspective, and suggests a number of options California might pursue in addressing looming sales tax problems.²⁸

I. A BRIEF SURVEY OF CALIFORNIA SALES AND USE TAX LAW

California sales tax is imposed²⁹ on a retailer "[f]or the privilege of selling tangible personal property,"³⁰ while a use tax is imposed on the purchaser "storing, using, or otherwise consuming . . . tangible personal property"—purchased from a retailer without being subjected to the sales tax—in the state of California.³¹ The sales tax is imposed on the *seller*,³² as "[i]t is not a tax on the sale or because of the sale but . . . an excise tax for the privilege of conducting a retail business" ³³ As such, the buyer is under no obligation to the State of California with respect to the sales tax.³⁴

The base against which both the sales and use taxes are applied is "generally the consideration paid for goods sold."³⁵ Sales tax is imposed on California retailers as a percentage of their gross receipts³⁶ from sales of tangible personal property.³⁷

²⁷ See *infra* Part III.

²⁸ See *infra* Part IV.

²⁹ The California Legislature has inherent power to enact sales tax laws, in the absence of constitutional prohibition. *Roth Drugs v. Johnson*, 57 P.2d 1022, 1031 (1936); see also *People v. Coleman*, 4 Cal. 46, 46, 49 (1854) ("The Legislature, in its discretion, may, therefore, discriminate in the imposition of taxes on certain classes of persons, occupations, or species of property, taxing same and exempting others."). The State Board of Equalization, however, administers and enforces the provisions imposing sales and use taxes. CAL. REV. & TAX. CODE § 7051 (West 2010).

³⁰ CAL. REV. & TAX. CODE § 6051 (West 2010); see also *De Aryan v. Akers*, 87 P.2d 695, 698 (1939) ("The taxpayer, the seller, is charged with the mandatory duty to add the amount of the tax to his sales price, and to collect it from the purchaser along with the sales price. He has all the authority to collect this added sum which he has to collect, his sales price. The law intervenes and adds the amount of the sales tax which the seller must pay to the state to the price he must collect from the purchaser. It is collected to reimburse the seller for what he must pay the state. The ultimate burden of the tax is thus passed on to the customer."); *Mkt. St. Ry. Co. v. Cal. State Bd. of Equalization*, 290 P.2d 20, 24 (1955).

³¹ CAL. REV. & TAX. CODE § 6202 (West 2010); see also *Bank of Am. Nat'l Trust & Sav. Ass'n v. State Bd. of Equalization*, 26 Cal. Rptr. 348, 355 (1962).

³² *W. Lithograph Co. v. State Bd. of Equalization*, 78 P.2d 731, 735–36 (1938).

³³ *City of Pomona v. State Bd. of Equalization*, 347 P.2d 904, 906 (1959) (quoting *Livingston Rock & Gravel Co. v. De Salvo*, 288 P.2d 317, 319 (1955)); see also *W. Lithograph Co.*, 78 P.2d at 736; *De Aryan*, 87 P.2d at 699.

³⁴ *Nat'l Ice & Cold Storage Co. of Cal. v. Pac. Fruit Express Co.*, 79 P.2d 380, 384 (Cal. 1938); *Mkt. St. Ry. Co.*, 290 P.2d at 30.

³⁵ *Dell, Inc. v. Superior Court.*, 71 Cal. Rptr. 3d 905, 911 (2008).

³⁶ California defines "gross receipts" as the total amount of the sale, lease, or rental price, as the case may be, of the retail sales of retailers, valued in money whether received in money or otherwise, ordinarily without any deductions for the cost of the property sold,

Use tax is imposed on consumers as a percentage of the sales price of tangible personal property stored, used, or consumed in California.³⁸

California imposes general sales and use taxes,³⁹ as well as a number of selective sales and use taxes applicable to particular commodities or transactions, such as cigarettes and tobacco products,⁴⁰ motor vehicle fuel,⁴¹ and alcoholic beverages.⁴² In addition to the state, counties, and cities⁴³—as well as local transit districts⁴⁴—that may levy general sales and use taxes. The sales or use tax levied on any given transaction is the sum of the basic state sales and use tax, the Bradley-Burns local tax,⁴⁵ and additional local transactions and use taxes, if any. Prior to this writing, California imposed a 7.25% minimum state sales tax, of which 6.25% constituted the state rate and 1.00% the local rate.⁴⁶ Due to California voter approval of Proposition 30,⁴⁷ the

materials, labor or service cost, interest paid, losses, other expenses, transportation costs, or federal or state gasoline taxes imposed. CAL. REV. & TAX. CODE § 6012 (West 2010).

³⁷ CAL. REV. & TAX. CODE § 6051 (West 2010); *see also Dell, Inc.*, 71 Cal. Rptr. 3d at 911. The sales tax is not imposed on individual sales of merchandise. *W. Lithograph Co.*, 78 P.2d at 735. The State presumes that all gross receipts are subject to sales tax unless otherwise established. CAL. REV. & TAX. CODE § 6091 (West 2010).

³⁸ CAL. REV. & TAX. CODE § 6201 (West 2010); *see also Dell, Inc.*, 71 Cal. Rptr. 3d at 911.

³⁹ CAL. REV. & TAX. CODE § 6001 (West 2010).

⁴⁰ CAL. REV. & TAX. CODE §§ 30001–30482 (West 2010).

⁴¹ CAL. CONST. art. XIX, § 2.

⁴² CAL. REV. & TAX. CODE § 32151 (West 2010).

⁴³ CAL. CONST. art. XIII, § 24(a) (authorizing local governments to impose taxes for local purposes). The Bradley-Burns Uniform Local Sales and Use Tax Law, enacted in 1955, permits counties and cities to impose sales and use taxes. CAL. REV. & TAX. CODE § 7201 (West 2010); CALIFORNIA STATE BOARD OF EQUALIZATION, CALIFORNIA CITY AND COUNTY SALES AND USE TAX RATES 20 (Oct. 1, 2012), *available at* www.boe.ca.gov/pdf/pub71.pdf. As noted above, the Internet Tax Freedom Act permits a state, county, and city to concurrently tax the same e-commerce transaction due to the geographical verticality of the taxing bodies. Noto, *supra* note 24, at 30.

⁴⁴ *See* CAL. PUB. UTIL. CODE §§ 29140–29143 (West 2010) (San Francisco Bay Area Metropolitan Rapid Transit District); CAL. PUB. UTIL. CODE §§ 40330–40336 (West 2010) (Orange County Rapid Transit District); CAL. PUB. UTIL. CODE §§ 70223–70223.5 (West 2010) (Marin County Rapid Transit District); CAL. PUB. UTIL. CODE §§ 98290–98296 (West 2010) (Santa Cruz Metropolitan Transit District).

⁴⁵ *See supra* note 43 and accompanying text.

⁴⁶ CALIFORNIA STATE BOARD OF EQUALIZATION, CALIFORNIA CITY AND COUNTY SALES AND USE TAX RATES 20 (Oct. 1, 2012), *available at* www.boe.ca.gov/pdf/pub71.pdf. For current sales and use tax rates in California cities and counties, visit <http://www.boe.ca.gov/cgi-bin/rates.cgi>. Of the 6.25% constituting the State rate, 3.6875% goes to the State's General Fund pursuant to CAL. REV. & TAX. CODE § 6051, 6201 (West 2010); 0.25% goes to the State's General Fund pursuant to CAL. REV. & TAX. CODE § 6051.3, 6201.3 (West 2010); 0.25% goes to the State's Fiscal Recovery Fund to pay off Economic Recovery Bonds pursuant to CAL. REV. & TAX. CODE § 6051.5, 6201.5 (West 2010); 0.50% goes to the Local Public Safety Fund to support local criminal justice activities pursuant to CAL. CONST. art. XIII, § 35; 0.50% goes to the Local Revenue Fund to support health and social services programs pursuant to CAL. REV. & TAX. CODE § 6051.2, 6201.2 (West 2010); and 1.0625% goes to the Local Revenue Fund 2011 pursuant

6.25% statewide base sales and use tax rate increased by 0.25% on January 1, 2013, yielding a 7.5% minimum state sales tax.⁴⁸

The sales and use taxes imposed by California together form a comprehensive tax system applicable to the “sale, use, storage or consumption of tangible personal property within the state.”⁴⁹ Sales and use taxes are mutually exclusive but complementary, designed to exact from consumers of tangible personal property within California an “equal tax based on a percentage of the purchase price of the property in question.”⁵⁰ Generally, “[a] sales tax is a tax on the freedom of purchase . . . [a] use tax is a tax on the enjoyment of that which was purchased.”⁵¹ While complementary, however, the two taxes are separate and not interdependent.⁵²

With a cursory understanding of California’s general sales and use tax law sufficient to frame the discussion, we turn next to the phenomenon of cloud computing.

to CAL. REV. & TAX. CODE § 6051.15, 6201.15 (West 2010). *Detailed Description of the Sales and Use Tax Rate*, CALIFORNIA STATE BOARD OF EQUALIZATION, <http://www.boe.ca.gov/news/sp111500att.htm> (last visited Nov. 25, 2012). As of January 1, 2013, additional state sales tax funds raised as a result of the passage of Proposition 30 will go to additional local funds, the details of which lie beyond the scope of this discussion. See CAL. CONST. art. XIII, § 36; *infra* note 48.

⁴⁷ See *supra* note 15.

⁴⁸ *Sales and Use Tax Rate: Increases January 1, 2013*, CAL. STATE BD. OF EQUALIZATION, <http://www.boe.ca.gov/rateincrease/> (last visited Nov. 25, 2012). Proposition 30 amended the California Constitution, adding a new section to Article XIII. CAL. CONST. art. XIII, § 36. The higher tax rate will apply for four years—January 1, 2013 through December 31, 2016. CAL. CONST. art. XIII, § 36(f)(1)(A) (“In addition to the taxes imposed by Part 1 (commencing with Section 6001) of Division 2 of the Revenue and Taxation Code, for the privilege of selling tangible personal property at retail, a tax is hereby imposed upon all retailers at the rate of 1/4 percent of the gross receipts of any retailer from the sale of all tangible personal property sold at retail in this State on and after January 1, 2013, and before January 1, 2017.”).

⁴⁹ *Wallace Berrie & Co. v. State Bd. of Equalization*, 707 P.2d 204, 208 (Cal. 1985); *Douglas Aircraft Co. v. Johnson*, 90 P.2d 572, 575 (Cal. 1939); *Yamaha Corp. of Am. v. State Bd. of Equalization*, 86 Cal. Rptr. 2d 362, 367 (1999). The United States Supreme Court concisely summarized the interplay of California’s sales and use taxes: “The [sales tax] levies a tax upon the gross receipts of California retailers from sales of tangible personal property; the [use tax] imposes an excise on the consumer at the same rate for the storage, use or other consumption in the state of such property when purchased from any retailer. As property covered by the sales tax is exempt under the use tax, all tangible personalty sold or utilized in California is taxed once for the support of the state government.” *S. Pac. Co. v. Gallagher*, 306 U.S. 167, 171 (1939).

⁵⁰ *Agnew v. State Bd. of Equalization*, 981 P.2d 52, 56 n.3 (Cal. 1999); see also *Wallace Berrie & Co.*, 707 P.2d at 208.

⁵¹ *McLeod v. J. E. Dilworth Co.*, 322 U.S. 327, 330 (1944); see also *Union Oil Co. of Cal. v. State Bd. of Equalization*, 386 P.2d 496, 503 (Cal. 1963); *Auerbach v. Assessment Appeals Bd. No. 2 for Cnty. of L.A.*, 85 Cal. Rptr. 3d 105, 107 n.2 (2008).

⁵² *Bank of Am. Nat’l Trust & Sav. Ass’n v. State Bd. of Equalization*, 26 Cal. Rptr. 348, 356 (1962).

II. THE EMERGENCE OF CLOUD COMPUTING

While cloud computing is a relatively new phenomenon, one must grasp the evolution of computing and networking to fully understand its importance and the rather fundamental shift in computing it may represent.

A. A Brief History of Computing and Networking

Prior to 1980, computing operated on a client/server model in which software, data, and control resided on mainframe computers, known as servers.⁵³ To access data or run a program, the end user connected to the mainframe via a computer terminal, sometimes called a “dumb terminal” due to its lack of memory, storage space, or processing power.⁵⁴ The terminal existed as a mere gateway to the mainframe’s functionality.⁵⁵ Due to the architecture and limited processing power, no two users could access the same data on the mainframe simultaneously.⁵⁶

In 1968, an engineer at the Stanford Research Institute, Douglas Engelbart, introduced the mouse, word processing, collaborative documents and more, in the context of an easy to understand graphical user interface (GUI).⁵⁷ Seven years later, Bill Gates and Paul Allen founded a company called Micro-Soft, and began writing software for the newly invented personal computer (PC).⁵⁸ The PC soon supplanted the mainframe as the center of corporate computing, and allowed individual users to install applications and store data on their own equipment.⁵⁹ By 1984, Apple had released the Macintosh, the first commercially

⁵³ MILLER, *supra* note 4, at 11. The price tag on mainframe computers was cost-prohibitive for most companies—the rent on a typical IBM computer was approximately \$30,000 a month in the mid 1960s. NICHOLAS CARR, *THE BIG SWITCH: REWIRING THE WORLD, FROM EDISON TO GOOGLE* 52 (2008).

⁵⁴ MILLER, *supra* note 4, at 11. Mainframes were secluded in separate rooms, operated by a staff of technicians. CARR, *supra* note 53, at 52; *see also* PAUL E. CERUZZI, *A HISTORY OF MODERN COMPUTING* 77 (2d ed. 2003) (“Customers with the largest needs installed large mainframes in special climate-controlled rooms, presided over by a priesthood of technicians.”).

⁵⁵ Robison, *supra* note 19, at 1197.

⁵⁶ MILLER, *supra* note 4, at 11.

⁵⁷ JOHNNY RYAN, *A HISTORY OF THE INTERNET AND THE DIGITAL FUTURE* 49–50 (2010). *But see* WILBERT O. GALITZ, *THE ESSENTIAL GUIDE TO USER INTERFACE DESIGN: AN INTRODUCTION TO GUI DESIGN PRINCIPLES AND TECHNIQUES* 7 (3d ed. 2007) (crediting Ivan Sutherland from the Massachusetts Institute of Technology with first introducing graphics with his Sketchpad program in 1963, and Xerox with patenting today’s mouse in 1974).

⁵⁸ CARR, *supra* note 53, at 54.

⁵⁹ *Id.* at 55; *see also* Picker, *supra* note 19, at 4 (noting that, prior to the web, Microsoft Office and desktop computing “were the tools that we used to create documents that resided on the hard disks in our desktops or laptops”).

successful PC with a GUI, followed the next year by Microsoft's introduction of Windows.⁶⁰ For the first time, the value of desktop PCs sold in the United States surpassed sales of mainframe machines.⁶¹ Business organizations summarily moved away from a single mainframe model, and embraced a network of many PCs that everyone could use.⁶²

PC users began to interconnect through private, internal networks to communicate with co-workers.⁶³ Subscription services like CompuServe—which initially offered its services only in corporate contexts—America OnLine (AOL), and Prodigy soon offered up their own self-contained networks for home use.⁶⁴ The World Wide Web appeared in 1990, and offered integration of individual networks via the Internet.⁶⁵ In light of the increased popularity and prevalence of the web in the mid-1990s, these services eventually offered their subscribers a connection to the vast array of content on the web.⁶⁶

By 1997, more than fifty-six million Americans could access the Internet at home, work, or school.⁶⁷ The same year, the

⁶⁰ RYAN, *supra* note 57, at 53.

⁶¹ David E. Sanger, *Bailing Out of the Mainframe Industry*, N.Y. TIMES, Feb. 5, 1984, at F1; *see also* DAVID REYNOLDS, ONE WORLD DIVISIBLE: A GLOBAL HISTORY SINCE 1945, at 513 (2000) (stating that personal computer sales eclipsed those of large corporate mainframes by 1984).

⁶² RYAN, *supra* note 57, at 73.

⁶³ *Id.* (“Local Area Network (LAN) allowed organizations and universities to network the new generation of PCs.”); *see also* CERRUZI, *supra* note 54, at 291–95; Robison, *supra* note 19, at 1198.

⁶⁴ RYAN, *supra* note 57, at 71; *see also* Robison, *supra* note 19, at 1198; Jonathan L. Zittrain, *The Generative Internet*, 119 HARV. L. REV. 1974, 1990–91 (2006) [hereinafter Zittrain, *Generative Internet*] (discussing self-contained “walled garden” networks like CompuServe and Prodigy, which connected members to one another and to content managed by the network proprietor).

⁶⁵ Robison, *supra* note 19, at 1198; *see also* Zittrain, *Generative Internet*, *supra* note 64, at 1992–93 (observing that the development of graphical World Wide Web protocols and PC browsers to support them, together with Internet-enabled applications, marked the “beginning of the end of proprietary information services,” and ushered in the era of a broadly accessible Internet); KARL FRIEDEN, CYBERTAXATION: THE TAXATION OF E-COMMERCE 5 (2000) (“The Internet and its graphical subnetwork called the World Wide Web . . . enable millions of computers and other communication equipment using different hardware, operating systems, and software application programs to link to each other by a common protocol.”).

⁶⁶ RYAN, *supra* note 57, at 72; *see also* Zittrain, *Generative Internet*, *supra* note 64, at 1992–93 (“As PC users found themselves increasingly able to access the Internet, proprietary network operators *cum* content providers scrambled to reorient their business models away from corralled content and toward accessibility to the wider Internet. These online service providers quickly became mere [Internet Service Providers], with their users branching out to the thriving Internet for programs and services.”); Peter H. Lewis, *A Boom for On-Line Services*, N.Y. TIMES, July 12, 1994, at D14 (“Some of these consumer services already offer, and others plan to offer, access to the Internet, a worldwide network of some 2.2 million host computers that provide information and services to an estimated 25 million people.”).

⁶⁷ ERIC C. NEWBURGER, U.S. CENSUS BUREAU, COMPUTER USE IN THE UNITED

combination of more powerful PCs and faster Internet speeds coalesced to produce a new widespread phenomenon of music piracy, which inspired a novel file transfer method known as “peer-to-peer” (P2P).⁶⁸ As more Internet users connected using faster broadband speeds, providers such as Hulu,⁶⁹ Apple,⁷⁰ and Skype⁷¹ joined existing P2P models in distributing content and offering Internet-based services.⁷²

The continuing increase in Internet speeds, coupled with the prevalence of mobile Internet access, facilitated new and interactive Web-based behavior, and the rise of so-called “Web 2.0.”⁷³ Users progressed beyond mere document creation in Microsoft Office, for example, and now maintain active online presences.⁷⁴ They search for information on Google,⁷⁵ buy and sell goods on eBay,⁷⁶ consume audio and video content on YouTube,⁷⁷ and socialize on Facebook,⁷⁸ to name several common examples.⁷⁹

B. The “Cloud” Formation

Cloud computing denotes a significant shift in the method by which we store information and run applications.⁸⁰ Users run

STATES 9 (1997), available at <http://www.census.gov/prod/99pubs/p20-522.pdf>; see also Robison, *supra* note 19, at 1198; FRIEDEN, *supra* note 65, at 3 (“In the United States, the number of households that have access to the Internet increased from 0.2 percent in 1993 to 14 percent in 1996 to 37 percent in 1999.”).

⁶⁸ RYAN, *supra* note 57, at 153; see also *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1011 (9th Cir. 2001).

⁶⁹ HULU, <http://www.hulu.com> (last visited Nov. 25, 2012).

⁷⁰ APPLE iTUNES, <http://www.apple.com/itunes/> (last visited Nov. 25, 2012).

⁷¹ SKYPE, <http://www.skype.com> (last visited Nov. 25, 2012).

⁷² RYAN, *supra* note 57, at 153; Robison, *supra* note 19, at 1198. In 2009, sixty-three percent of American adults had a broadband Internet connection in their home. JOHN HARRIGAN, PEW INTERNET & AM. LIFE PROJECT, HOME BROADBAND ADOPTION 2009, at 9 (2009), available at <http://www.pewinternet.org/~media/Files/Reports/2009/Home-Broadband-Adoption-2009.pdf>.

⁷³ Robison, *supra* note 19, at 1199; RYAN, *supra* note 57, at 137–39 (differentiating between early websites—which were “simply another way to broadcast information to an audience”—from the Web 2.0 environment, in which “information and content on the Internet are plastic and mutable, open-ended and infinitely adaptable by users”); see also Picker, *supra* note 19, at 4 (“This is the emergence of a new class of online intermediaries. The emergence of these Web intermediaries is one of the defining aspects of Web 2.0. They typically operate over the Internet through a Web browser.”). See generally Tim O’Reilly, *What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software*, Sept. 30, 2005, <http://oreilly.com/web2/archive/what-is-web-20.html>.

⁷⁴ Picker, *supra* note 19, at 2; see also RYAN, *supra* note 57, at 138 (discussing the dramatic growth of Wikipedia via the contribution of random and anonymous users as evidence that users are exerting ever-greater control over Internet-based mediums).

⁷⁵ GOOGLE, <http://www.google.com> (last visited Nov. 25, 2012).

⁷⁶ EBAY, <http://www.ebay.com> (last visited Nov. 25, 2012).

⁷⁷ YOUTUBE, <http://www.youtube.com> (last visited Nov. 25, 2012).

⁷⁸ FACEBOOK, <http://www.facebook.com> (last visited Nov. 25, 2012).

⁷⁹ Picker, *supra* note 19, at 2.

⁸⁰ MILLER, *supra* note 4, at 7; see also Picker, *supra* note 19, at 5 (observing that we are headed in a new direction regarding computing power, for purposes of both calculation

fewer programs and store less data on individual computing devices, and instead host everything in the cloud, a “nebulous assemblage of computers and servers accessed via the Internet.”⁸¹ Apple’s iCloud⁸² and the web-based file hosting service Dropbox⁸³ are two such examples of widely adopted cloud-based services designed to facilitate the shift to cloud-hosted applications and data. The cloud structure permits division of tasks—such as running applications and storing data—into discrete parts, distributed among the servers’ aggregate resources.⁸⁴ While many have proffered definitions of cloud computing, the concept is as hazy as its name connotes.⁸⁵

On a network computing model, applications and documents are hosted on a single company’s server and accessed only over the company’s network.⁸⁶ By contrast, cloud computing encompasses multiple companies, servers, and networks, and

and storage, and that “[s]ome content may be stored locally on your machine, while other content—content that you in some powerful sense think belongs to you—will be stored remotely. Where actually? You won’t have a clue.”); CARR, *supra* note 54, at 55–56 (noting that the ubiquity of the PC, a single-purpose system, has resulted in low levels of capacity utilization). “One recent study of six corporate data centers revealed that most of their 1,000 servers were using less than a quarter of their available processing power.” *Id.* at 56. The advent of the electrical utilities grid serves as an apropos correlative example. Whereas prior to the advent of electrical utilities, businesses and farms produced their own energy supplies, the emergence of the electrical grid permitted them to purchase more reliable electricity from the utilities at a lower price than they could produce on their own. MILLER, *supra* note 4, at 8.

⁸¹ MILLER, *supra* note 4, at 7; see also RYAN, *supra* note 57, at 7 (“The defining pattern of the emerging digital age is the absence of the central dot.”); Gutiérrez, *supra* note 18, at 589 (“We have entered a new era in computing in which Internet-based data storage and services in ‘the cloud’ offer individuals and business increased control of information, while enabling more engaging, seamless experiences across their computers, cell phones, televisions, and other devices.”).

⁸² ICLOUD, <http://www.apple.com/icloud/> (last visited Nov. 25, 2012); Apple Introduces iCloud: Free Cloud Services Beyond Anything Offered to Date, APPLE (June 6, 2011), <http://www.apple.com/pr/library/2011/06/06Apple-Introduces-iCloud.html>; see also Clash of the Clouds, *supra* note 4, at 81 (reporting in 2009 that Apple was constructing a \$1 billion data center, perhaps the world’s largest, in North Carolina).

⁸³ DROPBOX, <http://www.dropbox.com> (last visited Nov. 25, 2012).

⁸⁴ Robison, *supra* note 19, at 1199.

⁸⁵ PETER MELL & TIMOTHY GRANCE, THE NIST DEFINITION OF CLOUD COMPUTING: RECOMMENDATIONS OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY 1 (Sept. 2011), available at <http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf> (“Cloud computing is an evolving paradigm. The NIST definition characterizes important aspects of cloud computing and is intended to serve as a means for broad comparisons of cloud services and deployment strategies, and to provide a baseline for discussion from what is cloud computing to how to best use cloud computing. The service and deployment models defined form a simple taxonomy that is not intended to prescribe or constrain any particular method of deployment, service delivery, or business operation.”); see also ROBERT GELLMAN, WORLD PRIVACY FORUM, PRIVACY IN THE CLOUDS: RISKS TO PRIVACY AND CONFIDENTIALITY FROM CLOUD COMPUTING 4 (2009), available at http://www.worldprivacyforum.org/pdf/WPF_Cloud_Privacy_Report.pdf (“The definitional borders of cloud computing are much debated today.”).

⁸⁶ MILLER, *supra* note 4, at 8.

enables access to services and storage anywhere on Earth via an Internet connection.⁸⁷ Cloud computing services vary considerably and include data storage sites, health record sites, social networking sites, and many more.⁸⁸ Any information a user may store locally on a computer may also be stored in a cloud.⁸⁹ Perhaps ironically, the emerging cloud structure bears a resemblance to the earlier mainframe computing model, in which the PC serves as a sort of “dumb terminal” to access the cloud’s resources through the Internet.⁹⁰

Among the major players precipitating the shift towards a broad model of cloud computing is Google.⁹¹ The company’s

⁸⁷ *Id.* at 8–9; see also Picker, *supra* note 19, at 5 (noting that most people do not concern themselves with the locale of their computer calculations—whether processing power exists locally is mere detail. The re-centralization of computing power is simply an engineering issue “that turns on the relative costs of central as opposed to local processing power and on inter-computer as opposed to intra-computer communication”). The end user’s agnosticism regarding the location of computing power depends upon an implicit assumption of cloud neutrality, which dictates “where processing or storage is done should be irrelevant, or neutral, for outcomes, legal and otherwise.” Picker, *supra* note 19, at 5; *Battle of the Clouds*, *supra* note 19, at 16 (noting that users of cloud-based email services can access their mail from any web browser).

⁸⁸ GELLMAN, *supra* note 85, at 4; see also *Battle of the Clouds*, *supra* note 19, at 16 (listing Google, Microsoft, Yahoo!, and Apple among the companies currently offering cloud services to consumers, along with specialists like Salesforce and NetSuite—who offer similar services to companies—and Amazon—who rents out cloud-based computing capacity).

⁸⁹ GELLMAN, *supra* note 85, at 4 (listing email, word processing documents, spreadsheets, videos, health records, photographs, tax or other financial information, business plans, PowerPoint presentations, accounting information, advertising campaigns, sales numbers, appointment calendars, and address books as examples of the many types of information that can be stored in a cloud); see also CARR, *supra* note 54, at 17 (“Instead of relying on data and software that reside inside our computers, inscribed on our private hard drives, we increasingly tap into data and software that stream through the public Internet.”).

⁹⁰ Christopher Lawton, ‘Dumb Terminals’ Can Be a Smart Move, WALL ST. J., Jan. 30, 2007, at B3, available at http://online.wsj.com/public/article/SB117011971274291861-oJ6FWrnA8NMPfMXw3vBILth1EiE_20080129.html (discussing a new generation of simplified devices that allow users to perform personal computing tasks by accessing the Internet); see also Robison, *supra* note 19, at 1200; JONATHAN ZITTRAIN, THE FUTURE OF THE INTERNET—AND HOW TO STOP IT 125 (2008) [hereinafter ZITTRAIN, THE FUTURE OF THE INTERNET] (acknowledging computer users have less reason to factor generative capacity—the capacity to produce unprompted, user-driven change—into a PC purchasing decision because of increased Web-based computing); *Battle of the Clouds*, *supra* note 19, at 16 (“If you store more and more things online, and access more and more software through an ordinary web browser, it suddenly matters much less what sort of computer you have, and what kind of software it is running.”); *Clash of the Clouds*, *supra* note 4, at 80 (“Technological developments have hitherto pushed computing power away from central hubs: first from mainframes to minicomputers, and then to PCs. Now a combination of ever cheaper and more powerful processors, and ever faster and more ubiquitous networks, is pushing power back to the centre in some respects, and even further away in others. The cloud’s data centres are, in effect, outsize public mainframes.”).

⁹¹ GOOGLE, <http://www.google.com> (last visited Nov. 25, 2012); see also Steve Lohr & Miguel Helft, *Clash of the Titans: Google Gets Ready to Rumble With Microsoft*, N.Y. TIMES, Dec. 16, 2007, at B1 (recalling Google’s introduction of Google Apps, online

Google Drive⁹² and Google Calendar⁹³ exemplify the cloud computing model's displacement of word processing-like tasks to the cloud, and the industry's move to capitalize on the growing trend.⁹⁴

Another key example of a company seeking to capitalize on the shift is Amazon.⁹⁵ Over the past eight years, Amazon has constructed a vast cloud computing platform that hosts its own web operations, as well as operations for a number of massive Internet companies.⁹⁶ Its own Kindle products utilize a propriety browser to surf the Internet, but harness the power of Amazon's cloud servers to do much of the processing.⁹⁷ As a content provider, Amazon maintains a cloud-centric perspective in which streamed (not downloaded) content is more important than hardware.⁹⁸ Amazon's Elastic Compute Cloud (Amazon EC2) web service, lesser known among its retail customers, provides "resizable compute capacity in the cloud."⁹⁹ Amazon thus provides customers with a virtual computing environment in which they can use web service interfaces in the context of a

software offerings that include e-mail, instant messaging, calendars, word processing, and spreadsheets, and their efforts to deliver computing capability to users over the Internet); MICHAEL MILLER, CLOUD COMPUTING: WEB-BASED APPLICATIONS THAT CHANGE THE WAY YOU WORK AND COLLABORATE ONLINE 9 (2009) ("Google hosts a cloud that consists of both smallish PCs and larger servers. Google's cloud is a private one (that is, Google owns it) that is publicly accessible (by Google's users)."); Richard Rubin & Juliann Francis, *States Pursue Sales Tax Revenue Vanishing Into Computing Cloud*, BLOOMBERG (Nov. 6, 2011, 3:44 PM), <http://www.bloomberg.com/news/2011-08-22/states-pursue-sales-tax-revenue-vanishing-into-computing-cloud.html> (noting that companies like IBM, Amazon, and Google are seeking to capitalize on a global market for cloud computing that is expected to increase to \$241 billion by 2020, citing data by Forrester Research Inc.); *Clash of the Clouds*, *supra* note 4, at 81 (reporting that, according to estimates, Google has built a global network of three dozen data centers with two million servers).

⁹² GOOGLE DRIVE, <https://drive.google.com/start> (last visited Nov. 25, 2012).

⁹³ GOOGLE CALENDAR, <http://www.google.com/calendar/> (last visited Nov. 25, 2012).

⁹⁴ *Battle of the Clouds*, *supra* note 19, at 16; *see also* Robison, *supra* note 19, at 1200.

⁹⁵ AMAZON, <http://www.amazon.com> (last visited Nov. 25, 2012); *see also* Larry Dignan, *Amazon CEO Jeff Bezos: Cloud services can be as big as retail business*, ZDNET (May 27, 2010, 2:14 AM), <http://www.zdnet.com/blog/btl/amazon-ceo-jeff-bezos-cloud-services-can-be-as-big-as-retail-business/35111> (quoting Jeff Bezos, CEO of Amazon, as stating that Amazon Web Services has the potential to be as big as its retail business).

⁹⁶ Steven Levy, *Jeff Bezos Owns the Web in More Ways Than You Think*, WIRED (Nov. 13, 2011, 9:00 PM), http://www.wired.com/magazine/2011/11/ff_bezos/. Among Amazon's Web Services clients are Foursquare, Harvard Medical School, NASA Jet Propulsion Lab, Newsweek/The Daily Beast, PBS, SmugMug, United States Department of Agriculture, Virgin Atlantic, and Yelp. *Id.* Arguably its most important—and impressive—client, however, is Netflix, who uses Amazon Web Services to power its video streaming service, which accounted for twenty-five percent of United States Internet traffic at the time of this writing. *Id.*

⁹⁷ *Id.* (quoting Jeff Bezos as classifying its mobile browser Silk as a split browser, because it exists half in the cloud and half on its Kindle Fire device).

⁹⁸ *Id.*

⁹⁹ AMAZON ELASTIC COMPUTE CLOUD (AMAZON EC2), <http://aws.amazon.com/ec2/> (last visited Nov. 25, 2012).

variety of operating systems, and load onto them a custom application environment.¹⁰⁰ In essence, a customer may purchase a scalable virtual environment in which to operate its business or maintain its web presence, and may increase or decrease computing and server capacity depending on needs.¹⁰¹

Additional examples are numerous, and suggest that the transition in computing is more than a mere fad. Based on historical trends and the growing ubiquity of the Internet, cloud-based services and data clearly represent the next step in the evolution of computing. The rather complex nature of the goods and services that cloud companies provide, however, poses some rather thorny sales taxation problems.

III. TAXATION OF THE INTERNET AND “E-COMMERCE” IN THE UNITED STATES

The Internet’s increasing ubiquity poses a number of challenges to the global tax system, particularly in the context of e-commerce,¹⁰² “a seamless, borderless, and timeless marketplace.”¹⁰³ Internet retailing has “vastly expanded the proportion of ‘remote’ commerce that can be conducted almost instantaneously between vendors based in one location and consumers in another.”¹⁰⁴ The trend towards remote commerce undermines traditional taxation models largely tailored to sales of tangible property and local or regional commerce.¹⁰⁵

A. The Transition to a Service-Based Economy

As the world has shifted from a manufacturing-based economy towards a more service-based economy facilitated by Internet transactions, governments have struggled to keep regulatory pace.¹⁰⁶ Emerging in the late 1990s, e-commerce

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² FRIEDEN, *supra* note 65, at 8 (“E-commerce is generally defined as transactions that involve the exchange of goods and services by electronic means. *Direct* E-commerce involves goods and services that are both purchased and delivered by electronic or digital means. *Indirect* E-commerce involves goods and services that are purchased by electronic means but delivered in tangible form by common carriers or some other traditional form of delivery.”).

¹⁰³ *Id.* at 1 (noting that production and consumption in the new global economy are more mobile, dynamic, intangible, and multinational).

¹⁰⁴ *Id.* at 1–2 (noting that the digital age permits commerce between anyone, anytime, and anywhere).

¹⁰⁵ *Id.* at 1.

¹⁰⁶ *Id.* at 1–2; *see also* JEFF BAXENDALE ET AL., SALES AND USE TAXATION OF E-COMMERCE: STATE TAX ADMINISTRATORS’ CURRENT THINKING WITH CCH COMMENTARY iii (2000) (“Tax laws that were passed with an eye toward twentieth century industry and agriculture are ill-suited to deal with an age of telecommunications and digital products.”); Rubin & Francis, *supra* note 91 (“State sales tax systems created to generate

cemented its place as a viable economy of its own, generating \$507 billion in 1999 in the United States alone—more than the energy, automobile, and airline sectors.¹⁰⁷ From 2007 to 2008, e-commerce increased 12.1% to \$3.7 billion.¹⁰⁸ In 2009, e-commerce accounted for 42% of manufacturers' total shipments to the tune of \$1.8 *trillion*, while retailers' e-commerce sales alone totaled \$145 billion, and constituted 4% of all retail sales.¹⁰⁹ While services and goods will continue to be distributed via traditional models, many business and consumer items—such as movies, books, software, music, and news—are and will become more easily deliverable over the Internet.¹¹⁰

Cross-border transactions, both domestic and international, are a troublesome area of taxation, and pose an increasing number of problems as “dot-coms and click-and-mortar companies” continue to avail themselves of additional jurisdictions with different tax rules.¹¹¹ Digital commerce, in which goods and services are both purchased and delivered by electronic or digital means, compels states to grapple with “issues such as the characterization of income, the bundling of services and products, sourcing rules, transfer pricing, and the valuation of intangibles.”¹¹² Furthermore, as corporations engaging in e-commerce narrow their core competencies, they provide themselves greater flexibility to relocate in jurisdictions with more favorable tax rules and rates.¹¹³

revenue from face-to-face exchanges of tangible goods are struggling to keep up with the rapid shift of business transactions into the so-called cloud of the Internet.”); Steven Maguire, *Internet Transactions and the Sales Tax*, in *INTERNET TAXATION* 1, 6 (Albert Tokin ed., 2003) [hereinafter Maguire, *Internet Transactions*] (noting the “apparent shift in the United States from an economy based on transactions of tangible personal property to intangible products and services”).

¹⁰⁷ FRIEDEN, *supra* note 65, at 21.

¹⁰⁸ U.S. CENSUS BUREAU, “E-STATS” (May 27, 2010), *available at* <http://www.census.gov/econ/estats/2008/2008reportfinal.pdf>; STEVEN MAGUIRE, *STATE TAXATION OF INTERNET TRANSACTIONS* 1 (June 7, 2011), *available at* <http://www.fas.org/sgp/crs/misc/R41853.pdf> [hereinafter MAGUIRE, *STATE TAXATION*].

¹⁰⁹ U.S. CENSUS BUREAU, *supra* note 108.

¹¹⁰ FRIEDEN, *supra* note 65, at 21–22 (listing financial transactions, video conferencing, educational and training materials, e-mail, information services, bulletin boards and chat rooms, telecommunications, internet access services, magazines, electronic bill payments, stock trading, newspapers, games, business databases, remote medical diagnosis, remote repairs, and home banking as additional constituents of the digital economy). A virtual “mall,” open twenty-four hours a day, seven days a week, and fifty-two weeks a year, may ultimately supplant more traditional brick-and-mortar retailers. *Id.* at 36.

¹¹¹ *Id.* at 47.

¹¹² *Id.* at 48.

¹¹³ *Id.* at 49 (predicting that tax laws will need to develop new rules for apportioning the income of more mobile and dynamic businesses).

B. The Internet Tax Freedom Act and Sales Tax Law in the United States

In 1996, Congress—in an attempt to address Internet taxation—formed a bipartisan Congressional Internet Caucus.¹¹⁴ Two years later, Congress enacted the Internet Tax Freedom Act, which prohibited the imposition of new state or local sales¹¹⁵ or use¹¹⁶ taxes on Internet access or online services during a determinable period, as well as the imposition of any multiple or discriminatory taxes on e-commerce.¹¹⁷ Most recently, Congress extended the tax moratorium until November 1, 2014.¹¹⁸

Though the federal government has made efforts to address the issue, state governments have devoted the most significant amount of political attention to the taxation of e-commerce, for

¹¹⁴ *Id.* at 55; see also CONGRESSIONAL INTERNET CAUCUS ADVISORY COMMITTEE, <http://www.netcaucus.org> (last visited Nov. 25, 2012).

¹¹⁵ See MAGUIRE, STATE TAXATION, *supra* note 108, at 2 (characterizing the sales tax generally as “a transaction tax on the transfer of tangible personal property, as expenditures on most services are typically excluded from the state sales tax base.”); Maguire, *Internet Transactions*, *supra* note 106, at 6.

¹¹⁶ See *id.* at 2 (“For remote transactions where the vendor and consumer are in different states, the consumer is responsible for remitting the use tax. The use tax is levied on the *use* of a product or service.”). The use tax is only levied if the vendor has no physical presence, or substantial nexus, in the consumer’s state of residence. *Id.* at 2 n.1. The use tax appeared in 1938 as a companion to the sales tax and a means of capturing revenue from sales made out-of-state. *Id.* at 4 n.7.

¹¹⁷ FRIEDEN, *supra* note 65, at 55. Discriminatory taxes consist in taxes applied only to e-commerce, but not to similar goods or services ordered and/or delivered non-electronically. *Id.* The Internet Tax Freedom Act defines electronic commerce as “any transaction conducted over the Internet or through Internet access, comprising the sale, lease, license, offer, or delivery of property, goods, services, or information, whether or not for consideration, and includes the provision of Internet access.” Noto, *supra* note 24, at 29; see also U.S. GOVERNMENT WORKING GROUP ON ELECTRONIC COMMERCE, FIRST ANNUAL REPORT 13 (Nov. 1998), available at <http://www.kentlaw.edu/faculty/rstaudt/classes/oldclasses/internetlaw/casebook/U.S.%20Government%20Working%20Group%20on%20Electronic%20Commerce.pdf> [hereinafter GOVERNMENT WORKING GROUP ON ELECTRONIC COMMERCE]

I [President Clinton] direct the Secretary of the Treasury to work with State and local governments and with foreign governments to achieve agreements that will ensure that no new taxes are imposed that discriminate against Internet commerce; that existing taxes should be applied in ways that avoid inconsistent national tax jurisdictions and double taxation; and that tax systems treat economically similar transactions equally, regardless of whether such transactions occur through electronic means or through more conventional channels of commerce.

¹¹⁸ Internet Tax Freedom Act Amendments Act of 2007, Pub. L. No. 110-108, 121 Stat. 1024 (2007). The extension clarifies that services such as instant messaging, email, and personal online storage are included in the definition of “Internet access” and are not taxable by states. JONATHAN D. HART, INTERNET LAW: A FIELD GUIDE 763 (6th ed. 2008). On January 25, 2011, Senator John Ensign introduced S. 135, the “Permanent Internet Tax Freedom Act of 2011,” with the intent to “make the moratorium on Internet access taxes and multiple and discriminatory taxes on electronic commerce permanent.” S. 135, 112th Cong. (2011).

good reason.¹¹⁹ State and local taxes in the United States account for over \$700 billion in revenues, or about 45% of all tax dollars raised in the country.¹²⁰ State governments rely on sales and use taxes for approximately one-third of their total tax revenue.¹²¹ Currently, forty-five states and the District of Columbia impose such sales taxes.¹²²

Sales tax in the United States, generally, is “any tax which includes within its scope all business sales of tangible personal property at either the retailing, wholesaling, or manufacturing stage, with the exceptions noted in the taxing law.”¹²³ Vendors typically collect state and local sales taxes at the point of transaction, calculated as a percentage of the product’s retail price.¹²⁴ Similarly imposed use taxes are not collected by the

¹¹⁹ FRIEDEN, *supra* note 65, at 56.

¹²⁰ *Id.* at 57.

¹²¹ MAGUIRE, STATE TAXATION, *supra* note 108, at 1 (noting that state general sales and use taxes amounted to approximately \$241 billion in 2008). State governments generated just over \$228 billion in general sales and use taxes during the 2009 fiscal year, whereas local governments generated approximately \$62 billion in similar general sales and use taxes during the same period. U.S. CENSUS BUREAU, STATE AND LOCAL GOVERNMENT FINANCES BY LEVEL OF GOVERNMENT AND BY STATE: 2008–09, *available at* <http://www.census.gov/govs/estimate>; *see also* JOHN R. LUCKEY, STATE SALES TAXATION OF INTERNET TRANSACTIONS 2 (2004); JOHN F. DUE & JOHN L. MIKESELL, SALES TAXATION: STATE AND LOCAL STRUCTURE AND ADMINISTRATION 1 (2d ed. 1994) (“The sales tax is the most important tax, revenue wise, in the states today, and has been so for several decades.”). Local governments derive a lesser percentage of their tax revenue—11.6%—from such taxes, though still managed to collect the substantial sum of approximately \$64 billion in 2008. MAGUIRE, STATE TAXATION, *supra* note 108, at 1.

¹²² MAGUIRE, STATE TAXATION, *supra* note 108, at 1; DUE & MIKESELL, *supra* note 121, at 1; Maguire, *Internet Transactions*, *supra* note 106, at 2 (stating that forty-five states and the District of Columbia require retail outlets to add a fixed percentage to the sales price of taxable items, and that the sales tax is applied to transactions occurring in store, where it is collected and remitted by the vendor); *see also* FRIEDEN, *supra* note 65, at 57 (“Along with the 45 states and the District of Columbia that currently impose sales or use taxes at the state level, there are approximately 7,500 counties, cities, towns, and special districts that also impose sales or use taxes on transactions occurring within their borders.”); CCH, 2011 HANDBOOK, *supra* note 23, at 783 (noting that Alaska, Delaware, Montana, New Hampshire, and Oregon do not impose a general, statewide sales and use tax). While the Internet Tax Freedom Act prohibits double taxation by two or more jurisdictions at the same level of government, it permits multiple sales and use taxes that are geographically vertical. Noto, *supra* note 24, at 29–30. Thus, states and their subdivisions—counties and cities—may impose their sale or use tax on the same e-commerce transaction. *Id.* at 30.

¹²³ ROBERT MURRAY HAIG & CARL SHOUP, THE SALES TAX IN THE AMERICAN STATES 3 (1934); JEROME R. HELLERSTEIN & WALTER HELLERSTEIN, STATE TAXATION: II SALES AND USE, PERSONAL INCOME, AND DEATH AND GIFT TAXES AND INTERGOVERNMENTAL IMMUNITIES 12-3 (3d ed. 2010). Another writer defined sales tax as a tax for which “the amount of tax payable is produced by a constant rate applied to the volume or value of commodities or services transferred or exchanged.” NEIL H. JACOBY, RETAIL SALES TAXATION 8 (1938).

¹²⁴ MAGUIRE, STATE TAXATION, *supra* note 108, at 1; *see also* HART, *supra* note 118, at 761 (6th ed. 2008) (“In states that impose a sales tax, buyers are obligated to pay sales tax and sellers that operate within the state are obligated to collect sales tax and remit it to the government.”).

vendor unless the vendor has substantial nexus¹²⁵ in the consumer's state.¹²⁶ Rather, consumers must remit use taxes to the appropriate taxing jurisdiction for the use of the purchased product, though compliance with the requirement is low.¹²⁷ Sales and use taxes, as discussed earlier, are mutually exclusive but complementary.¹²⁸

States—even after the passage of the Internet Tax Freedom Act—retain the power to impose a sales tax on in-state sales accomplished via the Internet,¹²⁹ and to tax transactions between residents and out-of-state sellers with no connections to the state.¹³⁰ Whether state governments can tax Internet sales impacts not only government tax revenue, but also the business operations of brick-and-mortar retailers who may be forced to collect sales taxes their online competitors do not.¹³¹

The revenue that state sales and use taxes generate depends upon the base of the tax and the tax rate.¹³² States' tax bases are non-uniform, and tax rates vary considerably, depending on the

¹²⁵ See *supra* note 23.

¹²⁶ MAGUIRE, STATE TAXATION, *supra* note 108, at 1.

¹²⁷ *Id.* at 1; see also Maguire, *Internet Transactions*, *supra* note 106, at 6 (noting that Internet shoppers' failure to judiciously remit use taxes as prescribed by state law amounts to an evasion of the traditional sales and use tax that services to exacerbate the regressiveness of the sales tax in the short run).

¹²⁸ Wallace Berrie & Co. v. State Bd. of Equalization, 707 P.2d 204, 208 (1985); see also Agnew v. State Bd. of Equalization, 981 P.2d 52, 55 (1999).

¹²⁹ The Internet Tax Freedom Act defines "Internet" as "collectively the myriad of computer and telecommunications facilities, including equipment and operating software, which comprise the interconnected world-wide network of networks that employ the Transmission Control Protocol/Internet Protocol, or any predecessor or successor protocols to such protocol, to communicate information of all kinds by wire or radio." Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1999, Pub. L. No. 105-277, § 1101(e)(3)(C), 112 Stat. 2681-719, 720 (1998); see also GOVERNMENT WORKING GROUP ON ELECTRONIC COMMERCE, *supra* note 117, at iii ("The *Internet Tax Freedom Act* places a three-year moratorium on new and discriminatory taxes on Internet commerce and creates a commission to develop a uniform system for the application of existing taxation of remote sales.").

¹³⁰ LUCKEY, *supra* note 121, at 2; see also HART, *supra* note 118, at 762 ("The Internet Tax Moratorium . . . did not prohibit states from taxing Internet sales, though many believed that it did. The moratorium merely prohibited taxation of Internet access fees and imposition of taxes that discriminated against Internet transactions, for example, by taxing them more heavily than other transactions.").

¹³¹ HART, *supra* note 118, at 762; Maguire, *Internet Transactions*, *supra* note 106, at 4 ("Because interstate Internet transactions do not have the sales and use tax added to their price by out-of-state vendors, it is argued that Internet retailers and catalogue retailers have a competitive advantage over traditional 'bricks and mortar' vendors who are required to collect the tax.").

¹³² MAGUIRE, STATE TAXATION, *supra* note 108, at 2; Maguire, *Internet Transactions*, *supra* note 106, at 5 ("The revenue a sales and use tax generates depends upon the chosen rate and the base to which the rate applies."). The narrower the base, the higher the tax rate must be in order to generate equivalent revenue. *Id.* Some transactions, including business-to-business transactions in a number of states, are not subject to the retail sales tax. *Id.* at 3.

state's tax-related revenue structure.¹³³ In sum, state and local governments around the country generated approximately \$291 billion during the 2009 fiscal year.¹³⁴ Of that total, California generated just under \$29 billion in general sales and use taxes at the state level, and another \$8 billion or so at the local government level.¹³⁵

In addition to sales tax, most states levy income taxes to generate revenue.¹³⁶ Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming, however, do not impose such an individual income tax.¹³⁷ Unsurprisingly, of all the fifty states, Washington, Tennessee, and South Dakota rely most upon the sales tax in generating revenue.¹³⁸ Washington has recently expanded its sales tax laws by enacting provisions that tax digital products with service-like characteristics.¹³⁹ California ranks square in the middle of all states, relying on sales tax revenue for 22.1% of its total tax revenue.¹⁴⁰ States without an individual income tax—Washington in particular—will likely lead the push for Internet taxation reform out of sheer necessity.

IV. CALIFORNIA STATE SALES AND USE TAX TREATMENT OF CLOUD COMPUTING TRANSACTIONS

While e-commerce, generally, engenders numerous tax questions,¹⁴¹ a number of components of cloud computing transactions raise specific state tax implications.¹⁴² It is often difficult to determine whether cloud computing transactions are products or services of a type that are subject to state sales tax.

¹³³ MAGUIRE, STATE TAXATION, *supra* note 108, at 2; Maguire, *Internet Transactions*, *supra* note 106, at 5.

¹³⁴ U.S. CENSUS BUREAU, *State and Local Government Finances Summary: 2009*, 6 (2011), available at <http://www.census.gov/govs/estimate>.

¹³⁵ *Id.*

¹³⁶ MAGUIRE, STATE TAXATION, *supra* note 108, at 7.

¹³⁷ CCH, 2011 HANDBOOK, *supra* note 23, at 293. "New Hampshire and Tennessee levy a tax on income from dividends and interest." MAGUIRE, STATE TAXATION, *supra* note 108, at 7.

¹³⁸ MAGUIRE, STATE TAXATION, *supra* note 108, at 7–8. In 2008, Washington relied upon sales tax revenue for 48.0% of its total tax revenue, while Tennessee and South Dakota relied upon sales tax revenue for 46.3% and 40.1%, respectively, of their total tax revenue. *Id.*

¹³⁹ See WASH. REV. CODE § 82.04.050(8) (West 2011) (taxing access to data and data processing); see also Jacobs & Miller, *supra* note 23, at 10.

¹⁴⁰ MAGUIRE, STATE TAXATION, *supra* note 108, at 7.

¹⁴¹ BAXENDALE, *supra* note 106, at iii.

¹⁴² Rubin & Francis, *supra* note 91

The tussles over taxation of cloud computing extend beyond the familiar e-commerce dispute about whether states can require out-of-state companies to collect taxes on sales to in-state consumers. Tax authorities and companies are debating whether companies that sell software and data accessed through the cloud are peddling a taxable good or a nontaxable service.

Furthermore, such transactions often include a lease element—typically a lease of server space—which would normally be treated as a sale for the purposes of the statutory provisions governing sales and use taxes, so long as the leased property is tangible personal property.¹⁴³

Cloud computing allows a consumer to engage servers, storage, and bandwidth on an as-needed basis, such that “the customer may . . . consum[e] services (computer and data services) and space, while simultaneously purchasing applications and the right to access data (lease of server space).”¹⁴⁴ Cloud vendors may offer augmented computing power or storage space, a platform for providers to develop and access specific applications, and customized software development and hosting.¹⁴⁵ As to the latter, a cloud vendor may offer a customized application that can interface with a vendor’s database.¹⁴⁶ An application program interface (API) would then permit the customized application to “interact with the API, often across multiple servers.”¹⁴⁷ As such, cloud computing transactions consist in a “web of interactions between vendor and consumer, involving multiple, simultaneous exchanges of services and products occurring in numerous locations.”¹⁴⁸ The nuance and complexity of such transactions, in which a server lease may be bundled with a variable service and a number of software components, poses a substantial problem to a sales tax system that best copes with easily classifiable transactions.

A. Taxability of Cloud Computing Transactions Under Current California Law

California directs its sales and use taxes primarily at tangible personal property. California defines “tangible personal property” as “personal property which may be seen, weighed, measured, felt, or touched, or which is in any other manner perceptible to the senses.”¹⁴⁹ Thus, California law does not impose a tax on the sale of intangible personal property¹⁵⁰ or on

¹⁴³ CAL. REV. & TAX. CODE § 6006(g) (West 2010).

¹⁴⁴ Jacobs & Miller, *supra* note 23, at 11.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ CAL. REV. & TAX. CODE § 6016 (West 2010); *see also infra* note 150.

¹⁵⁰ There seems to be no comprehensive definition of intangible property. Robert L. Cowdrey, *Software and Sales Taxes: The Illusory Intangible*, 63 B.U. L. REV. 181, 200–03 (1983); *Navistar Int’l Transp. Corp. v. State Bd. of Equalization*, 884 P.2d 108, 110 (1994). “Such property is generally defined, however, as a ‘right’ rather than a physical object.” *Navistar*, 884 P.2d at 110; *Roth Drugs v. Johnson*, 57 P.2d 1022, 1028 (1936) (“Tangible property is that which is visible and corporeal, having substance and body as contrasted

the performance of services,¹⁵¹ though neither concept is defined by statute. As the court in *Roth Drugs v. Johnson*¹⁵² stated:

The taxing of tangible personal property as distinguished from intangible property is perfectly natural and reasonable. . . . The reason for distinguishing between tangible and intangible property for the purpose of taxation is very evident. The first is visible, accessible, and easy to identify and levy upon, while the other is not so readily located or its value ascertained. There is no room for logical controversy over the right to distinguish between tangible and intangible property for the purpose of taxation.¹⁵³

While a top-level distinction between tangible and intangible property is logically defensible, a recurrent problem of taxation—as with software, for example—lies in distinguishing tangible and intangible in the first place.

1. Software

Canned¹⁵⁴ software delivered on tangible personal property is generally taxable in all fifty states, plus the District of Columbia.¹⁵⁵ Sales or licenses of prewritten computer software delivered electronically, however, evoke mixed responses from states.¹⁵⁶ In California, sales of canned software delivered

with incorporeal property rights such as franchises, choses in action, copyrights, the circulation of a newspaper, annuities and the like.”). For taxation purposes, “intangible property is defined as including personal property that is not itself intrinsically valuable, but that derives its value from what it represents or evidences.” *Navistar*, 884 P.2d at 110; see also *Dilley v. Ketchikan Gateway Borough*, 855 P.2d 1335, 1336–37 (Alaska 1993) (relying on Black’s Law Dictionary’s definition of intangible property as such property as has no intrinsic and marketable value, but is merely the representative or evidence of value, such as certificates of stocks, bonds, promissory notes, copyrights, and franchises).

¹⁵¹ While there exists no statutory definition, the Supreme Court of California has defined “service” as “the performance of labor for the benefit of another.” *Navistar*, 884 P.2d at 110–11; *Culligan Water Conditioning v. State Bd. of Equalization*, 550 P.2d 593, 599 (1976).

¹⁵² 57 P.2d 1022 (1936).

¹⁵³ *Id.* at 1028.

¹⁵⁴ “Canned” and “prewritten” will be used interchangeably to indicate “non-custom.”

¹⁵⁵ CCH, 2011 HANDBOOK, *supra* note 23, at 816–17. In Florida, “[s]oftware used predominantly for research and development may qualify for exemption.” *Id.* at 816. In Tennessee, “[e]xemptions may apply for the use of software developed and fabricated by an affiliated company or for fabrication of software by a person for that person’s own use or consumption.” *Id.* at 817. In Virginia, “[s]oftware used directly and exclusively in exempt research and development activities may qualify for exemption.” *Id.*

¹⁵⁶ *Id.* at 818–19. Sales of canned software delivered electronically are taxable—with certain exceptions—in Alabama, Arizona, Colorado, Connecticut, the District of Columbia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, Wisconsin, and Wyoming. *Id.* at 818–19. Sales of canned software delivered electronically are exempt from state sales taxation—with certain exceptions—in Arkansas, California, Florida, Georgia, Iowa, Maryland, Missouri, Nevada, Oklahoma, Rhode Island, South Carolina, and Virginia. *Id.*

electronically are exempt from state taxation.¹⁵⁷ Custom software delivered on tangible personal property is similarly exempt from taxation in California,¹⁵⁸ as are sales or licenses of custom computer software delivered electronically.¹⁵⁹ Customization of canned software is, however, taxable in California, although “[s]eparately stated charges for modifications to canned software prepared exclusively for a particular customer [are] exempt only to the extent of modification.”¹⁶⁰ Additionally, sales of digital products transferred electronically—including downloaded music, videos, and books—are exempt from taxation in California.¹⁶¹

Adding to the confusion, a recent California appellate court decision cast some doubt on California’s ability to tax certain software.¹⁶² In *Nortel Networks Inc. v. State Board of Equalization*, the California Court of Appeal held that a license of prewritten software falls within California’s sales and use tax exemption for transfers of intangible property pursuant to a

¹⁵⁷ *Id.* at 818 (“Prewritten programs transferred by remote telecommunications [are] exempt, provided that [the] purchaser does not obtain possession of any tangible personal property (such as storage media) in the transaction.”).

¹⁵⁸ *Id.* at 820. Sales of custom software delivered on tangible personal property are taxable—with certain exceptions—in Arkansas, Connecticut, the District of Columbia, Florida, Hawaii, Mississippi, Nebraska, New Mexico, Ohio, South Carolina, South Dakota, Tennessee, Texas, Virginia, and West Virginia. *Id.* at 820–22. Sales of custom software delivered on tangible personal property are exempt from taxation—with certain exceptions—in Alabama, Arizona, California, Colorado, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nevada, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, Rhode Island, Utah, Vermont, Washington, Wisconsin, and Wyoming. *Id.*

¹⁵⁹ *Id.* at 823. Sales or licenses of custom computer software delivered electronically are taxable—with certain exceptions—in Connecticut, the District of Columbia, Hawaii, Mississippi, Nebraska, New Mexico, South Dakota, Tennessee, Texas, and West Virginia. *Id.* at 823–24. Sales or licenses of custom computer software delivered electronically are exempt from taxation—with certain exceptions—in Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nevada, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming. *Id.*

¹⁶⁰ *Id.* at 825.

¹⁶¹ *Id.* at 833. Sales of digital products transferred electronically are subject to tax—with certain exceptions—in Alabama, Arizona, Colorado, Connecticut, the District of Columbia, Hawaii, Idaho, Indiana, Kentucky, Louisiana, Maine, Mississippi, Nebraska, New Jersey, New Mexico, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, and Wyoming. *Id.* at 833–34. Sales of digital products transferred electronically are exempt from taxation—with certain exceptions—in Arkansas, California, Florida, Georgia, Illinois, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nevada, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Virginia, West Virginia, and Wisconsin. *Id.*

¹⁶² *Nortel Networks Inc. v. State Bd. of Equalization*, 119 Cal. Rptr. 3d 905, 913–15 (2011).

technology transfer agreement (TTA).¹⁶³ While the California State Board of Equalization (SBOE) will likely seek to construe the *Nortel* holding narrowly, transferors of software and intangibles in California would be well served to act cautiously, pending further guidance. In May of 2011, however, the SBOE clearly indicated that the *Nortel* ruling will not affect the application of sales tax to typical off-the-shelf retail sales of canned software, as the typical retailer does not hold any copyrights or patent interests in the software.¹⁶⁴

Software in a cloud computing context further complicates matters by incorporating strong service elements. Software as a service (SaaS), a category of cloud computing, provides a means of access to software and applications centrally hosted on the provider's computers, which are often located in out-of-state data centers.¹⁶⁵ Some states—Indiana, Michigan, Utah, and Vermont—have found that remotely accessed software meets the definition of tangible personal property.¹⁶⁶ A second category, infrastructure as a service (IaaS), provides access to physical or virtual machines located on servers in the provider's data centers, which allows the user to take advantage of the machines' storage and computing resources.¹⁶⁷ Finally, platform as a service (PaaS) delivers a cloud-based platform that allows application developers to design, develop, deploy, and manage the customer's software solutions, without purchasing the underlying hardware.¹⁶⁸

For the most part, however, state tax laws crafted on the distinction between canned and custom software are unable to cope with categories like SaaS, IaaS, and PaaS, and instead clumsily employ the old paradigm to determine tax treatment.¹⁶⁹

¹⁶³ *Id.* at 919. A "technology transfer agreement" is "any agreement under which a person who holds a patent or copyright interest assigns or licenses to another person the right to make and sell a product or to use a process that is subject to the patent or copyright interest." CAL. REV. & TAX. CODE §§ 6011(c)(10)(D) (West 2010), 6012(c)(10)(D) (West 2010). Under California tax law, any amount charged for intangible property pursuant to a TTA is exempt from sales tax.

¹⁶⁴ Press Release, Chairman Jerome E. Horton of the State Board of Equalization, *Nortel Case Does Not Affect Sales Tax On Off-The-Shelf Software* (May 27, 2011), available at <http://www.boe.ca.gov/news/2011/66-11-H.pdf>.

¹⁶⁵ Martin I. Eisenstein & Barbara J. Slot, *Let the Sunshine In: The Age of Cloud Computing*, TAX ANALYSTS, <http://www.tax.org/www/features.nsf/Articles/2128DFA5C8217C9D852579580051F965> (last visited Nov. 25, 2012).

¹⁶⁶ Gregory et al., *supra* note 8, at 3.

¹⁶⁷ Eisenstein & Slot, *supra* note 165, at 575.

¹⁶⁸ *Id.*

¹⁶⁹ See generally *id.* The distinction between canned and custom software dates from the 1980s when prewritten software, delivered on a disk, was easily classified as tangible personal property. See Gregory et al., *supra* note 8, at 3. Custom software, by contrast, was designed for a unique user and delivered on a "load and leave" basis, and taxed (or

States take a predictably variable number of tacks. Connecticut, for example, has a computer sales and data processing services tax at 1%.¹⁷⁰ In Arizona, the imposition of a tax depends upon whether the vendor issues a license.¹⁷¹ In Nebraska, software delivered by any means—including delivery and load and leave¹⁷²—is subject to tax, though when an application service provider (ASP) charges for services allowing remote access of software applications via the Internet, such transactions are *not* taxable if the ASP retains title to the software and does not grant the customer a license with ownership rights.¹⁷³ North Carolina likewise distinguishes between prewritten software and digital property, yet subjects both to tax.¹⁷⁴

New York has issued a series of advisory opinions in which it held that ASP sales, even if delivered electronically, are licenses to use prewritten software, and therefore, taxable as tangible personal property.¹⁷⁵ The state does not, however, tax digital property—which it regards as an intangible asset not subject to tax—unless it is transferred as part of a taxable service.¹⁷⁶

These impractical distinctions that separate taxable from nontaxable software, in California and elsewhere, substantially impede the characterization of a cloud transaction. Rather than contort the existing distinction between canned and custom software to encompass a cloud service in which the taxpayer does not take physical possession of software, California should look to amend the manner in which it taxes *services*.

2. Services, Leases, and Application Interfacing

As mentioned above, cloud computing transactions often bundle together the sale of services with access to server or disk space—frequently structured through a lease—and the ability to interface with vendor applications.¹⁷⁷ Sold separately, state

not taxed) as a service. *Id.*

¹⁷⁰ CONN. GEN. STAT. §§ 12-407(a)(37), 12-408(1) (West 2012); *see also* Eisenstein & Slote, *supra* note 165, at 575.

¹⁷¹ Gregory et al., *supra* note 8, at 3.

¹⁷² The “load and leave” method refers to a situation in which the software vendor brings the software to the customer’s location on some medium (a flash drive, for example) belonging to the vendor. Carolynn Iafrate Kranz & Iris Kitamura, *Taxing Software and Cloud Computing: Yesterday’s Law, Today’s Technology*, TAX ANALYSTS, Dec. 12, 2011, at 739. After installing the software for the customer, the vendor removes the medium by which she transported the software. *Id.* The vendor never transfers any tangible media to the customer. *Id.*

¹⁷³ Gregory et al., *supra* note 8, at 3.

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *See* Jacobs & Miller, *supra* note 23, at 11.

taxing authorities would treat each of these services or products in quite disparate manners.¹⁷⁸

“Drawing the line between a taxable sale of tangible personal property and the nontaxable sale of services is [also] a major source of controversy in sales taxation.”¹⁷⁹ Data processing, graphic arts, and customized computer software, for example, occupy a grey area between tangible personal property and the rendition of services, and have given rise to numerous sales tax controversies.¹⁸⁰ In California, the basic distinction in a bundled transaction¹⁸¹ is whether “the real object sought by the buyer is the service per se or the property produced by the service.”¹⁸² If the true object or dominant purpose of the contract is the *service* per se, the transaction is *not* subject to tax, despite some transfer of tangible personal property.¹⁸³

If, however, a service contract is a separate object of a transaction—in a mixed sale involving tangible personal property—at a readily ascertainable value, it may be treated as a distinct nontaxable transaction.¹⁸⁴ In other words, a tax may be allocated between taxable and nontaxable items bundled together if the value of the nontaxable item is separately stated.¹⁸⁵ Unlike bundled transactions, “the goods and services in

¹⁷⁸ *Id.*

¹⁷⁹ HELLERSTEIN & HELLERSTEIN, *supra* note 123, at 12-92; *see also* *Dell, Inc. v. Superior Court*, 159 Cal. App. 4th 911, 923 (2008).

¹⁸⁰ HELLERSTEIN & HELLERSTEIN, *supra* note 123, at 12-92.

¹⁸¹ A “bundled transaction” involves goods and services that are “inextricably intertwined” in a single sale. *Dell, Inc.*, 159 Cal. App. 4th at 924. In a bundled transaction, “the true object test applies and the entire transaction is generally taxed or not taxed *as a whole*.” *Id.*; *see also* CAL. CODE REGS. tit. 18, § 1501 (2010).

¹⁸² CAL. CODE REGS. tit. 18, § 1501 (2010); *see also* *Navistar Int’l. Transp. Corp. v. State Bd. of Equalization*, 884 P.2d 108 (1994) (construing the regulation).

¹⁸³ CAL. CODE REGS. tit. 18, § 1501 (2010) (noting that “the transfer to a publisher of an original manuscript by the author thereof for the purpose of publication is not subject to taxation. The author is the consumer of the paper on which he has recorded the text of his creation. However, the tax would apply to the sale of mere copies of an author’s works or the sale of manuscripts written by other authors where the manuscript itself is of particular value as an item of tangible personal property and the purchaser’s primary interest is in the physical property. Tax would also apply to the sale of artistic expressions in the form of paintings and sculptures even though the work of art may express an original idea since the purchaser desires the tangible object itself; that is, since the true object of the contract is the work of art in its physical form.”). The true object test applies only to transactions involving the performance of a service, and the California Supreme Court has rejected the position that a “a transfer of tangible property is not taxable if the transfer is incidental to the transfer of intangible property.” *Preston v. State Bd. of Equalization*, 19 P.3d 1148, 1157 (2001), *disapproved of by* *City of Boulder v. Leanin’ Tree, Inc.*, 72 P.3d 361, 364 (Colo. 2003).

¹⁸⁴ *Dell, Inc.*, 159 Cal. App. 4th at 925.

¹⁸⁵ HELLERSTEIN & HELLERSTEIN, *supra* note 123, at 17-15. In California, for example, if specified transportation costs of goods are separately stated, they are statutorily exempted from sales and use tax. CAL. REV. & TAX. CODE §§ 6011(c)(7), 6012(c)(7) (West 2010).

a mixed transaction are distinct (not intertwined) and each is a significant object of the transaction (not one incidental to the other).¹⁸⁶ As such, for tax purposes, the individual elements of the transaction are analyzed as distinct transactions: the tangible property element is taxed, while the service aspect is not.¹⁸⁷

State sales taxes exclude most services from sales taxation for largely historical and political—as opposed to fiscal—reasons.¹⁸⁸ States have gradually expanded the sales tax base to reach a number of services.¹⁸⁹ In addition to public utility, entertainment and amusement, and hotel and motel services,¹⁹⁰ examples of taxable services include repair of tangible personal property, repair of real property, data processing services, information services, and cleaning services.¹⁹¹

California taxes comparatively few services in relation to other states.¹⁹² If California were to include the retail sale of services—along with the retail sale of tangible property—in the sales tax base, many of the complex legal controversies borne by the retail sales tax would cease to be.¹⁹³ It would no longer face the difficult task of determining whether the “true object” or “dominant purpose” of a transaction was the purchase of tangible personal property or services, particularly when both the property and services constitute inseparable elements of a single transaction (as is often the case in cloud computing transactions).¹⁹⁴ Such an approach makes a great deal of sense, as there exists no sound principle of tax policy on which rests the distinction between tangible personal property or services, and thus there is no rational analytical basis for drawing a line that

¹⁸⁶ *Dell, Inc.*, 159 Cal. App. 4th at 925.

¹⁸⁷ *Id.*

¹⁸⁸ HELLERSTEIN & HELLERSTEIN, *supra* note 123, at 12-96.

¹⁸⁹ *Id.* at 12-97.

¹⁹⁰ DUE & MIKESELL, *supra* note 121, at 93–94 (noting that hotel and motel services are universally taxed, though some states tax these services at the local rather than the state level, and some states tax them under levies formally distinct from the general sales tax); HELLERSTEIN & HELLERSTEIN, *supra* note 123, at 12-97.

¹⁹¹ HELLERSTEIN & HELLERSTEIN, *supra* note 123, at 12-97; *see also* DUE & MIKESELL, *supra* note 121, at 92–97. States have yet to extend the sales tax base to services that would generate the greatest revenues, such as construction, professional services, and health care. William F. Fox, *Importance of the Sales Tax in the 21st Century*, in *THE SALES TAX IN THE 21ST CENTURY* 1, 3 (Matthew N. Murray & William F. Fox eds., 1997).

¹⁹² HELLERSTEIN & HELLERSTEIN, *supra* note 123, at 12-98 (noting that Hawaii, New Mexico, and South Dakota, as well as other states, have embraced taxation of the broadest range of services, while California, Illinois, and Virginia, among other states, tax relatively few services).

¹⁹³ *Id.* at 12-100.

¹⁹⁴ *Id.*

should never have been drawn in the first place.¹⁹⁵ As a matter of retail sales tax policy, there is no sense in separating two inextricably intertwined aspects of a transaction, each of which amounts to personal consumption.¹⁹⁶ Though state legislatures have yet to conform the sales tax to the ideal of a single-stage imposition on the final sale of goods and services to the consumer,¹⁹⁷ efforts to remove the hazy distinction would substantially simplify future determinations of the proper tax treatment of cloud computing transactions.

A number of states currently tax services that bear upon cloud transactions. The District of Columbia,¹⁹⁸ Ohio,¹⁹⁹ and Texas²⁰⁰ each tax data processing services. Florida handles charges for access to a provider's computer as a computer rental subject to sales tax, though the tax is levied upon the lease of personal property, and thus only due if the provider's computer is located in Florida.²⁰¹ In a private letter ruling, the Utah Tax Commission addressed the taxability of remote data and information hosting services provided by a company with servers in Utah.²⁰² The commission found that the service consisted in a "lease of disk space and server equipment and hardware," which was "therefore . . . taxable as a lease of tangible personal property."²⁰³

Though California's tax code includes no provisions dealing specifically with computer access, leases and rentals of tangible personal property are generally taxable.²⁰⁴ California currently exempts from taxation, however, sales and leases of canned software transferred remotely "to or through the purchaser's computer" if "the purchaser does not obtain possession of any tangible personal property."²⁰⁵ This exemption likely applies (at least) to SaaS because software is not transferred to the purchaser via tangible medium, but instead, is transferred

¹⁹⁵ *Id.* at 12-99.

¹⁹⁶ *Id.* at 12-100.

¹⁹⁷ *Id.* at 12-101.

¹⁹⁸ D.C. CODE §§ 47-2001(n)(1)(N), 47-2201(a)(1)(K) (2010).

¹⁹⁹ OHIO REV. CODE ANN. §§ 5739.01(B)(3)(e), 5739.01(Y)(1) (West 2010).

²⁰⁰ TEX. TAX CODE ANN. §§ 151.0101(a)(12), 151.351, 151.0035 (West 2011).

²⁰¹ FLA. ADMIN. CODE ANN. r. 12A-1.032(3) (1980).

²⁰² Utah Priv. Ltr. Rul. 06-004 (July 27, 2006), available at <http://tax.utah.gov/commission/ruling/06-004.pdf>.

²⁰³ *Id.*

²⁰⁴ CCH, 2011 HANDBOOK, *supra* note 23, at 875-76. Leases and rentals of tangible personal property are taxable in forty-nine states plus the District of Columbia. *Id.* In Illinois, lessors pay use tax upon acquisition, though a purported lease to a nominal lessee may be subject to the retailers' occupation tax. *Id.*

²⁰⁵ CAL. CODE REGS. tit. 18, § 1502(f)(1)(D) (West 2010).

“through” the purchaser’s computer.²⁰⁶ Any efforts to reform California’s taxation of services must address the exemption of leased canned software described above and devise a way to tax digital services in a manner that includes every breed of cloud computing.

B. Streamlining the Taxation of Cloud Computing Transactions Under California Law

A number of states have recognized that their statutes and regulations are ill-equipped to deal with changing technology and have begun to address cloud computing. Louisiana, for example, recently organized a working group to address—or attempt to address—the issue.²⁰⁷ Illinois, instead of issuing a letter ruling on a cloud computing issue, called for new regulations on the matter.²⁰⁸ In California, a number of committees and government officials have recently proposed legislation and initiatives to address some of the issues as well, several of which are discussed below.²⁰⁹

Perhaps no state, however, has led the field in taxing both digital goods and services so much as Washington.

1. Washington’s Example

Under Washington’s tax law, “any service transferred electronically that uses one or more software applications” is a digital automated service.²¹⁰ It adopted the definition of a “digital automated service” in an effort to address shifting technology as part of a law designed to look at the ways that digital products are delivered, accessed, and transferred.²¹¹ Rather than define each cloud computing or digital automated service subject to taxation, the state “enact[ed] a broad definition . . . and then adopt[ed] exclusions for activities it did not want to tax.”²¹² According to a member of the group whose two-year study led to the law, the digital automated services definition was the

²⁰⁶ Eisenstein & Slot, *supra* note 165.

²⁰⁷ Gregory et al., *supra* note 8, at 5.

²⁰⁸ *Id.*

²⁰⁹ Brevity concerns dictate that a number of these efforts, such as Senator Durbin’s Main Street Fairness Act (S.1452), be excluded from the discussion. *See generally* S. 1452, 112th Cong. § 3 (2011), available at <http://www.gpo.gov/fdsys/pkg/BILLS-112s1452is/pdf/BILLS-112s1452is.pdf>.

²¹⁰ WASH. REV. CODE § 82.04.192(3)(a) (West 2011).

²¹¹ Gregory et al., *supra* note 8, at 5. According to Dylan Waits, managing senior policy counsel with the Washington Department of Revenue, the state has “specific statutes that say nexus is not established by using a third-party server in Washington. So if you have information or software on a server in Washington that does not belong to you, that alone will not establish physical presence in the state of Washington.” *Id.*

²¹² *Id.*

legislature's attempt to "throw a blanket over everything and say 'we don't know what else might be out there—but we'd like to tax it.'"²¹³ Washington also imposes sales tax on remote access software—prewritten software provided remotely—which suggests it would also tax SaaS.²¹⁴

By including a substantial array of digital services, including those that use "one or more software applications," Washington's tax represents an attempt to reconcile the various elements of cloud computing into a single, umbrella transaction.²¹⁵ While the category may be too broad to function effectively long-term, Washington's efforts to date place it well ahead of virtually all others in attempting a workable solution.

California should closely observe the results of Washington's efforts to tax digital services. While California, unlike Washington, may continue to rely on revenue generated by its state income tax, the ongoing transition to a service-based economy demands action sooner than later. When California ultimately decides on the manner in which to reach cloud transactions with its taxing powers, it ought to heed Washington's example and *legislate* the change rather than issue a letter ruling or rely on a regulatory solution.

2. The Streamlined Sales Tax Project

California opted to join—as only an observer state—the Streamlined Sales Tax Project (SSTP),²¹⁶ "an accord among individual cooperating sovereigns . . . [that] provides a mechanism among the member states to establish and maintain a cooperative, simplified system for the application and administration of sales and use taxes under the duly adopted law of each member state."²¹⁷ As of this writing, twenty-four of the forty-four member states have passed legislation conforming to the Project's goals—California is not among those states.²¹⁸ According to the Board of Equalization, California "is not

²¹³ *Id.*

²¹⁴ *Digital Products Bills (ESHB 2075 & SHB 2620)*, DEPARTMENT OF REVENUE WASHINGTON STATE, <http://dor.wa.gov/Content/GetAFormOrPublication/PublicationBySubject/TaxTopics/DigitalProducts.aspx> (last visited Nov. 25, 2012).

²¹⁵ Jacobs & Miller, *supra* note 23, at 12.

²¹⁶ CAL. REV. & TAX. CODE § 6028 (West 2010).

²¹⁷ CAL. REV. & TAX. CODE § 6030 (West 2010); *see also* Noto, *supra* note 24, at 36.

²¹⁸ *Frequently Asked Questions*, STREAMLINED SALES TAX GOVERNING BOARD, INC., <http://www.streamlinedsalestax.org/index.php?page=faqs> (last visited Nov. 25, 2012) ("The following states that have passed legislation to conform to the Streamlined Sale and Use Tax Agreement: Arkansas, Georgia, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, Nevada, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, Rhode Island, South Dakota, Tennessee, Utah, Vermont, Washington, West Virginia, Wisconsin and Wyoming.").

currently actively participating in the SSTP but does receive updates on the actions of the project from the Multistate Tax Commission (MTC).²¹⁹

In essence, the member states seek to simplify and better synchronize individual state sales and use tax laws, particularly when it comes to business conducted over the Internet.²²⁰ The Streamlined Sales and Use Tax Agreement (SSUTA) identifies ten points of focus, which “can be condensed into four general requirements for simplification: (1) state level administration, (2) uniform tax base, (3) simplified tax rates, and (4) uniform sales sourcing rules.”²²¹ “The SSUTA would establish a system in which states would use common definitions for goods and services,” after which “states would then indicate whether the good or service is taxable.”²²² It also provides for the unbundling of bundled transactions into their separate parts in an effort to help states apply their taxing power to the relevant portion of the transaction and bypass a “real object” inquiry in a number of scenarios.²²³

An interstate accord under the SSUTA need not successfully resolve all the characterization problems of cloud computing transactions. It would, however, contribute immensely to the tenor of national sales and use tax reform efforts. If every state, including California, were to actively participate, open the channels of dialogue, and foster such a collaborative undertaking, Congress would be better situated to take unifying action—with consent from the states—at the federal level.²²⁴

²¹⁹ Streamlined Sales Tax Project, CAL. STATE BD. OF EQUALIZATION, <http://www.boe.ca.gov/sstp/> (last visited Nov. 25, 2012).

²²⁰ See *Streamlined Sales and Use Tax Agreement*, STREAMLINED SALES TAX GOVERNING BOARD, INC. 7 (Dec. 19, 2011), <http://www.streamlinedsalestax.org/uploads/downloads/Archive/SSUTA/SSUTA%20As%20Amended%2012-19-11.pdf>; see also Noto, *supra* note 24, at 36.

²²¹ MAGUIRE, STATE TAXATION, *supra* note 108, at 9.

²²² *Id.* at 13. Another focal point of the SSTP is reducing compliance costs for sellers, such that “Congress might be willing to authorize states to require use tax collection by remote sellers without nexus, or the Supreme Court might revise” its “requirement of physical presence for nexus” under *Quill*. Noto, *supra* note 24, at 36.

²²³ STREAMLINED SALES TAX GOVERNING BOARD, INC., *supra* note 220, at 68–70. The provision applies only to telecommunication services, ancillary services, Internet access service, audio or video programming service, and prewritten computer software when combined with an optional maintenance agreement. *Id.*

²²⁴ This is particularly crucial in relation to issues of nexus. The interstate agreement would represent “an effort on behalf of the participating states to demonstrate to Congress that the simplified sales tax system does not impose unfair costs on out-of-state business and thus would not interfere with interstate commerce.” Staff of the Board of Equalization, *Background Paper on the Streamlined Sales and Use Tax Agreement Prepared for the Assembly Revenue and Taxation Committee’s Informational Hearing on “The Streamlined Sales and Use Tax: How it Works and Why it Should be Considered”* 3 (July 6, 2009), available at http://www.boe.ca.gov/legdiv/pdf/Streamlined_Sales_and_

If California *were* to join the SSTP as a member state, it would still retain the power to decide what is taxable and what is exempt, though the California State Legislature would have to conform to the definitions set forth in the SSUTA.²²⁵ Like all member states, California would also have to submit a taxability matrix upon which sellers and service providers could rely, which would promote greater certainty and stability in California's sales and use tax system, and precipitate greater reliance on the system by more informed tax remitters.²²⁶

Finally, while the SSUTA represents a promising vehicle for national sales and use tax reform, it must itself address cloud computing more explicitly.²²⁷ Scott Peterson, Executive Director of the Streamlined Sales Tax Governing Board, expects that the Governing Board will take up cloud computing at some point.²²⁸ If the SSTP is able to promptly initiate an informed debate about cloud computing amongst SSUTA states, there is some hope the SSUTA has an opportunity to keep pace with the technological curve.

3. The Think Long Committee For California

California's tax system, designed for an agricultural and manufacturing economy, has become outdated, and its state legislature is often impeded by the state's initiative process—the main feature of California's "direct democracy."²²⁹ In 1950, California received sixty percent of its revenues from sales

Use_Tax_Agreement.pdf [hereinafter BOE, *Background Paper on the SSUTA*]. Congress would still have to pass federal legislation to allow states to require out-of-state sellers without a physical presence in the state to collect the relevant use taxes. *Id.*

²²⁵ See BOE, *Background Paper on the SSUTA*, *supra* note 224, at 3 ("If the Agreement defines a product, then a member state Legislature may exempt all items within that definition, but cannot exempt only part of the items included within that definition, unless the Agreement expressly permits the Legislature to do so, or unless the exemption is based on the use of the property (determined by the buyer's use of the product), or the entity making the purchase (i.e., an exemption based on who the purchaser is). As an example, the Agreement currently includes diapers within its definition of 'clothing' and does not permit the Legislature to deviate from that definition. California law does not currently exempt sales of clothing or diapers from the imposition of sales or use tax. Pursuant to the SSUTA, California's Legislature would not be able to provide a general exemption for diapers. Instead, the Legislature would have to create an 'entity-based exemption' for diapers, such as an exemption for diapers purchased by day care facilities.").

²²⁶ *Id.* at 5; see also State Taxability Matrix, STREAMLINED SALES TAX GOVERNING BOARD, INC., <http://www.streamlinedsalestax.org/index.php?page=state-taxability-matrices> (last visited Nov. 25, 2012).

²²⁷ Gregory et al., *supra* note 8, at 6.

²²⁸ *Id.*

²²⁹ *California's dysfunctional politics, Help on the way: Out west, a different supercommittee might yet do rather well*, ECONOMIST, Nov. 26, 2011, at 44 [hereinafter ECONOMIST, *Help on the way*].

taxes.²³⁰ In the years since, untaxed services have dominated California's economy.²³¹ Over the same period, California has relied increasingly on highly volatile income taxes.²³²

A bipartisan committee known as the Think Long Committee for California—assembled by investor Nicolas Berggruen—has taken steps to utilize the initiative process to address California's tax system.²³³ In essence, it seeks to extend sales taxes to services while simplifying and cutting income tax rates.²³⁴

Roughly half of California's \$2 trillion economic output goes untaxed precisely because its once manufacturing- and agriculture-based economy is now dominated by services and information activities.²³⁵ To address the problem, the committee proposes that California tax all business and consumer services at a rate of 5–5.5%, excluding health care and educational services.²³⁶ Among its other proposals, it would also lower the sales tax on goods to 4.5%, and provide a sales tax rebate to low-income households to offset the impact of the new sales tax on services on the average household with similar income.²³⁷ In concert with its other proposed adjustments, the committee expects \$10 billion in new revenues once the proposals are fully phased in.²³⁸

Embracing the committee's suggestion to extend California's sales tax to services would, as discussed above,²³⁹ ease the

²³⁰ *Id.* California's 1950 sales tax similarly applied only to tangible goods. *See, e.g.,* Maganini v. Quinn, 221 P.2d 241, 243 (1950).

²³¹ ECONOMIST, *Help on the way*, *supra* note 229, at 44.

²³² *Id.* ("Income taxes, mainly on the richest Californians, have during that time grown from 10% of total revenues to more than half, making state revenues highly volatile."); *see also* Revenue Estimates, GOVERNOR'S BUDGET SUMMARY—2012–13, at 45, available at <http://2012-13.archives.ebudget.ca.gov/pdf/BudgetSummary/RevenueEstimates.pdf>; Nicolas Berggruen Institute, *A Blueprint to Renew California: Report and Recommendations Presented by the Think Long Committee for California*, at 10 [hereinafter *A Blueprint to Renew California*], available at http://berggruen.org/files/thinklong/2011/blueprint_to_renew_ca.pdf (noting that California policy makers used a temporary twenty-three percent surge in revenues during the 1999–2000 fiscal year—"when the dot-com boom resulted in massive, but temporary, increases in capital gains and stock options"—to permanently expand spending commitments and further narrow the tax base).

²³³ ECONOMIST, *Help on the way*, *supra* note 229, at 44; *see also* Torey Van Oot & Kevin Yamamura, *'Think Long' coalition will propose overhauling California's tax system*, THE SACRAMENTO BEE, Nov. 20, 2011, at 3A.

²³⁴ *A Blueprint to Renew California*, *supra* note 232, at 11–13. As of the time of this writing, the Think Long Committee was positioning its tax reform for the 2014 general election. *Id.*

²³⁵ *Id.* at 10.

²³⁶ *Id.* at 11.

²³⁷ *Id.*

²³⁸ *Id.* at 12.

²³⁹ *See supra* note 196, at 12–99.

regulatory burden of differentiating nontaxable services from taxable goods. Specifically, in a cloud computing context, softening the distinction between goods and services would alleviate the state's reliance on increasingly complex positions on software taxation.²⁴⁰ Furthermore, it would allow California to impose a more realistic consumption tax commensurate with the modern complexion of California's economy.

4. The Digital Goods and Services Tax Fairness Act of 2011

Rep. Lamar Smith of Texas recently sponsored H.R. 1860,²⁴¹ the Digital Goods and Services Tax Fairness Act of 2011, which intends to promote neutrality, simplicity, and fairness in the taxation of digital goods and digital services and create a national framework for the taxation of cloud computing.²⁴² Essentially, it would require that cloud computing be taxed as a service.²⁴³ If states chose to tax the service, they would first need to enact legislation deeming it taxable and propound a clear definition for taxability purposes.²⁴⁴ While the proposed legislation sets out a potentially problematic sourcing regime beyond the scope of this discussion, it nonetheless represents a proactive effort to address some policy issues around cloud computing and a progressive stance on the taxation of services.

CONCLUSION

Clearly, the law is unable to keep pace with technological innovation.²⁴⁵ Though California is home to Silicon Valley²⁴⁶ and companies like Apple, Google, and Facebook, its ability to tax cloud computing transactions relies squarely on state administrators applying an anachronistic tax code ill-equipped for such purposes. Over time, fewer transactions will resemble the simpler exchanges of tangible goods for which California

²⁴⁰ See *supra* Part IV.A.1.

²⁴¹ Digital Goods and Services Tax Fairness Act of 2011, H.R. 1860, 113th Cong. (2011) (listing Rep. Lamar Smith as the sponsor for the bill).

²⁴² Gregory et al., *supra* note 8, at 5.

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ Robison, *supra* note 19, at 1197

The law cannot keep up with the pace of change in computer networking. By the time legislatures or courts figure out how to deal with a new product or service, the technology has already progressed. It is, therefore, useful to learn the state of technology at the time Congress enacted a law or the Judiciary issued a legal opinion to clarify the logic and principles that girded its decision.

The notion that law lags behind technology, in virtually every context, is far from novel.

²⁴⁶ See Yukari Iwatani Kane, *Tech Rebound Gives Silicon Valley Housing Market a Lift*, WALL ST. J. (June 30, 2011), <http://online.wsj.com/article/SB10001424052702304314404576411712493024274.html> (discussing the current boom in technology and a resurgence in the Silicon Valley tech industry).

designed its tax code, while increasingly more will involve bundled services and intangible goods of the kind discussed above.

California must address the taxability issue²⁴⁷ through formal legislation, and it cannot afford to proceed on an audit-by-audit basis or via piecemeal administrative rulings. Rather, the state should tax digital goods and services pursuant to state *legislation*.²⁴⁸ It can ill afford to ascribe to a long-term policy of reliance on interpretive decisions by revenue agencies as to what constitutes a taxable cloud transaction.

Furthermore, California ought to focus its energies on amending the manner in which it taxes services. The state's current preference to leave services untaxed is untenable in light of California's changing economic realities. California must develop clear policies regarding SaaS and digital services, for example, and think more progressively in generating its tax policy on such novel issues. It must also propound guidelines to service providers and their customers—on whom the state cannot rely to characterize their own transactions—as the fact-specific inquiries of case-by-case determinations will amount to a drain on precious state resources.

Finally, California should look to open lines of communication with revenue departments in other states, virtually all of which are facing the same difficulties. Without some nominal consensus among the several states, Congress is unlikely to interpose itself substantially. Federal guidance and policymaking assistance, however, would prove invaluable, particularly as states face dire budget crunches.

The explosive growth of the Internet and the increasing number of Internet users around the world suggest that the current trend toward cloud-based services and data in a global marketplace will persist.²⁴⁹ If America wishes to keep pace as a breeding ground for technology and innovation, it absolutely must provide its businesses—both large and small—with clear guidance on issues of taxation. Though California undoubtedly faces serious structural and institutional problems in addressing

²⁴⁷ The issue of taxability of certain transactions and services is wholly distinct from the budgetary issues addressed by Proposition 30. While the author believes a mere sales tax increase will not, *ipso facto*, sufficiently address the problems addressed by this Comment, the author does not intend to opine on the virtue of increasing the statewide base sales and use tax rate, or the limited purposes to which Governor Jerry Brown addressed the ballot measure.

²⁴⁸ See *supra* Part IV.B.1.

²⁴⁹ See HERRIGAN, *supra* note 72, at 3–4.

its budgetary woes,²⁵⁰ the world's eighth largest economy²⁵¹ should seize the opportunity to flex some political muscle and generate some much-needed revenue for The Golden State.²⁵²

²⁵⁰ *The trouble with California*, ECONOMIST (Jun. 10, 2009, 7:08 PM), http://www.economist.com/blogs/freeexchange/2009/06/the_trouble_with_california.

²⁵¹ The Associated Press, *Sorry Arnold, California isn't sixth any more*, MSNBC.COM (Jan. 12, 2007 7:21 PM), http://www.msnbc.msn.com/id/16600877/ns/businessus_business/t/sorry-arnold-california-isnt-sixth-any-more/; see also *Comparing US states with countries: Stateside substitutes*, ECONOMIST (Jan. 13, 2011, 10:05 AM), http://www.economist.com/blogs/dailychart/2011/01/comparing_us_states_countries (noting that California's closest equivalent economy belongs to Italy).

²⁵² CAL. GOV'T CODE § 420.75 (West 2011).