

Taxing Software and Cloud Computing: Yesterday's Law, Today's Technology

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I. Introduction

Everyone is talking about cloud computing, but no one knows how to tax it. Given today's tumultuous business climate, it is no surprise that legislatures have been reluctant to enact legislation addressing the taxability of cloud computing services. As a result, tax administrators are stuck trying to fit a square peg in a round hole by applying yesterday's laws to today's technology. Meanwhile, technology continues to evolve, forcing tax administrators to determine how these new products and services should be taxed.

Only a few states have directly addressed the application of sales and use taxes to different types of Internet-based computing services. Many state tax authorities are increasingly relying on letter rulings, administrative notices, and audits to shape policy regarding the tax treatment of cloud computing services. However, the policy adopted by the state may not be supported by existing law, posing more challenges to businesses attempting to comply. Either they follow the policy decisions and risk overpayment of tax, or they follow the law and risk an audit assessment.

As we continue moving from a manufacturing-based economy to a service-based economy, the challenge of complying with antiquated statutes has increased — a problem that is illustrated by the vastly different approaches states have taken in taxing computer software. The tax treatment of software provides a logical starting point for understanding how states may approach the taxation of

cloud computing services in the future. Indeed, many states are attempting to tax those new services under their existing computer software provisions based on the rationale that software is used to provide cloud-based services.

This article looks at the evolution of the application of sales and use taxes to software transactions and how these policies are being applied to cloud computing models. Only one thing is certain: Technology evolves faster than the law, leaving businesses with serious compliance challenges when states attempt to apply yesterday's law to today's technology.

II. Taxation of Computer Software

More than 30 years have passed since state courts first struggled with whether computer software constituted tangible personal property subject to sales tax, nontaxable intangible property, or a service.¹ Since then, most states have enacted legislation specifically addressing the taxability of computer software. Now every state that imposes a sales tax² taxes the retail sale of prewritten or "canned" software sold off the shelf.³

In contrast, most states exempt custom software, which has been generally defined as "software created, written, and designed for the exclusive use of a specific customer and sold to the customer for whom

¹See *Dist. of Columbia v. Universal Computer Assoc., Inc.*, 151 U.S. App. D.C. 30, 465 F.2d 615 (D.C. Cir. 1972); *Commerce Union Bank v. Tidwell*, 538 S.W.2d 405 (Tenn. 1976); *First Nat'l Bank of Fort Worth v. Bullock*, 584 S.W.2d 548 (Texas Civ. App. 1979), overruled in *Wal-Mart Stores, Inc. v. City of Mobile*, 696 So.2d 290 (Ala. 1996); *First Nat'l Bank of Springfield v. Dept. of Rev.*, 85 Ill.2d 84, 421 N.E.2d 175 (Ill. 1981).

²Forty-five states, the District of Columbia, and Puerto Rico impose a state sales tax. The five states that do not are Alaska (local sales taxes only), Delaware, Montana, New Hampshire, and Oregon.

³Industry Sales Tax Solutions, available at <http://www.industrysalestax.com/> (last visited Nov. 17, 2011).

it was designed.”⁴ Those states often treat the sale of custom software as a nontaxable service. For example, in New Jersey the customer’s purchase of custom-made software is treated as a “nontaxable professional service transaction” and is not subject to sales tax.⁵

Other states do not draw that distinction and tax software regardless of whether it is canned or customized. For example, a District of Columbia regulation provides that “gross receipts from the sale, lease or rental, or maintenance of any computer software shall be subject to the tax regardless of whether the software is canned, prepackaged or customized.”⁶ Similarly, a Tennessee regulation provides that “the retail sale, lease, licensing, or use of computer software in this state, including prewritten and custom computer software, shall be subject to the tax.”⁷

A number of states also distinguish between canned software delivered via a tangible medium (for example, compact disk, magnetic tape, and so on) and software delivered electronically. The states that do not tax canned software delivered electronically have concluded that the sale does not involve the transfer of tangible personal property.⁸ They include California,⁹ Florida,¹⁰ Missouri,¹¹ South Carolina,¹² and Virginia.¹³ Colorado recently enacted legislation effective July 1, 2012, that provides that software is not delivered to the customer in a tangible medium if it is delivered electronically, and

as such, it is not subject to Colorado sales and use tax.¹⁴ Although New Jersey is among the states that impose a sales or use tax on the sale of canned software delivered electronically, it provides an exemption for software that is “used directly and exclusively in the conduct of the purchaser’s business, trade, or occupation.”¹⁵

Pennsylvania courts have also addressed the distinction made between software delivered via a tangible medium and software delivered electronically. Before the Pennsylvania Commonwealth Court’s decision in *Graham Packaging Co., LP v. Commonwealth*,¹⁶ the Pennsylvania Department of Revenue had a long-standing policy of exempting the sale of canned computer software delivered electronically. That policy was supported only in the form of private letter rulings,¹⁷ which proved to be problematic when the matter was later litigated in *Graham Packaging*.

In *Graham Packaging*, the Pennsylvania Commonwealth Court held that canned software is taxable regardless of the delivery medium.¹⁸ In that case, the taxpayer sought a refund of sales tax paid on the purchase of software renewal licenses. Essentially, the taxpayer argued that the renewals did not involve the transfer of tangible personal property because some statutory amendments constituted a comprehensive repeal of the tax on computer programming services, including canned software. The taxpayer also contended that an earlier DOR ruling had distinguished between the taxability of canned software delivered electronically and canned software delivered via tangible storage media.

The DOR disagreed and argued that the tax on canned software had not been repealed. Although it conceded that electronically delivered canned software was not subject to tax, it noted that the renewals at issue were for software that had originally been delivered via tangible storage media, and thus whether electronic delivery rules applied was irrelevant. Saying that the parties’ focus on the delivery method was misplaced, the court adopted the “essence of the transaction” test and concluded that canned software was tangible personal property because “the purchaser is acquiring an electronic copy of a computer program that is stored on

⁴N.J. Admin. Code section 18:24-25.1; *see also* Cal. Rev. & Tax Code section 6010.9(d) (“Custom computer program means a computer program prepared to the special order of the customer and includes those services represented by separately stated charges for modifications to an existing prewritten program which are prepared to the special order of the customer”); Pennsylvania Policy Statement, 61 Pa. Code section 60.19 (“Custom software is computer software designed, created and developed for and to the specifications of an original purchaser”).

⁵N.J. Tech. Bul. TB-51R (July 5, 2011); *see also* Ala. Admin. Code section 810-6-1-.37(5). (“Custom software programming is not subject to tax regardless of the manner or medium of transfer to the customer since the charge for the custom software programming is a charge for professional services.”)

⁶D.C. Mun. Reg. section 474.4.

⁷Tenn. Code Ann. 67-6-231(a).

⁸Fla. Admin. Code Ann. section 12A-1.062(5) (“The charge for furnishing information by way of electronic images which appear on the subscriber’s video display screen does not constitute a sale of tangible personal property”); Mo. PLR No. LR 1452 (Apr. 3, 2003) (when software is delivered via the Internet, there is no transfer of tangible personal property).

⁹Cal. Code Reg. section 1502(f)(1)(D).

¹⁰Fla. Admin. Code Ann. section 12A-1.062(5).

¹¹Mo. PLR No. LR 1452 (Apr. 3, 2003).

¹²S.C. Rev. Rul. No. 05-13 (Aug. 21, 2005).

¹³Va. Public Doc. Ruling No. 05-44 (4/4/2005).

¹⁴*See* Colorado Department of Revenue, “FYI Tax Publication Sales” 89 (July 1, 2011).

¹⁵N.J.S.A. section 54:32B-8.56.

¹⁶*Graham Packaging Co., LP v. Commonwealth*, 882 A.2d 1076 (Pa. Cmwlth. Ct. 2005).

¹⁷*See* Pa. SUT Ruling 03-001 (Jan. 16, 2003).

¹⁸*Graham Packaging Co., LP v. Commonwealth*, 882 A.2d 1076 (Pa. Cmwlth. Ct. 2005).

the computer's hardware, takes up space on the hard drive and can be physically perceived by checking the computer's files."¹⁹ Thus, the court concluded that the canned software was subject to sales tax, regardless of the delivery method.

Similarly, in *Dechert LLP v. Pennsylvania*, the Pennsylvania Supreme Court held that purchases of canned computer software licenses were subject to Pennsylvania sales and use tax because canned software constitutes tangible personal property and the definition of "sale at retail" specifically includes a grant of a license to use tangible personal property.²⁰ However, the court declined to adopt the essence of the transaction test as the commonwealth court in *Graham Packaging* adopted it. Rather, the supreme court found that legislative and administrative interpretations of the statute supported the conclusion that the General Assembly intended to tax canned software as tangible personal property.²¹

Taxpayers may also take delivery of software by the load and leave method, whereby the software vendor travels to the customer's place of business to install software using tangible storage media. Once the installation is complete, the tangible storage medium is not physically transferred to the customer but taken away by the vendor. The states that don't tax the sale of canned computer software delivered by the load and leave method include Arkansas,²² California,²³ Georgia,²⁴ Nevada,²⁵ and Virginia.²⁶ Also, Colorado enacted legislation effective July 1, 2012, that provides that software delivered by the load and leave method is not subject to tax.²⁷

The transfer of computer software via the load and leave method has declined as newer technologies have emerged for delivering computer software. As a result, the taxability of load and leave transactions is not frequently raised as a point of controversy. However, the Missouri Administrative Hearing Commission ruled in *FileNet Corp. v. Director of*

*Revenue*²⁸ that a database storage company was not liable for use tax on the load and leave transfer of canned software to a Missouri purchaser because the transfer did not constitute a sale of tangible personal property.²⁹ The commission determined that the rules taxing canned software did not apply to load and leave transactions because only "canned programs delivered in a tangible medium that are transferred to and retained by the purchaser" are subject to tax.³⁰ The commission held that the USB drive that the taxpayer used to transfer the software to its customer was not a tangible medium contemplated by the regulation.³¹ Interestingly, Missouri didn't tax canned software delivered by the load and leave method until November 19, 2003, when it changed its position and issued a letter ruling stating that software delivered via that method was subject to sales and use tax.³²

It is likely, however, that the list of states that do not tax the sale of canned software via electronic delivery or the load and leave method will continue to shrink as state budget deficits continue. For example, Rhode Island recently enacted legislation, effective October 1, 2011, that provides that the sale, storage, use, or other consumption of prewritten computer software delivered electronically or by load and leave is taxable.³³ Similarly, last year North Carolina repealed its statute that provided an exemption for canned software delivered electronically, although some exceptions still apply.³⁴

²⁸*FileNet Corp. v. Director of Revenue*, No. 07-0146, Mo. Admin. Hearing Comm. (Aug. 20, 2010).

²⁹*FileNet Corp. v. Director of Revenue*, No. 07-0146, Mo. Admin. Hearing Comm., (Aug. 20, 2010), at p. 21.

³⁰*FileNet Corp. vs. Director of Revenue*, No. 07-0146, Mo. Admin. Hearing Comm., (Aug. 20, 2010), at p. 17.

³¹*FileNet Corp. vs. Director of Revenue*, No. 07-0146, Mo. Admin. Hearing Comm., (Aug. 20, 2010).

³²See Mo. TPN 16 (Jan. 9, 2004) and L.R. 1724 (Nov. 21, 2003).

³³R.I. Gen. Laws section 44-18-7(15); Taxability Matrix, R.I. Division of Taxation (July 29, 2011).

³⁴N.C. Gen. Stat. section 105-164.13(43a), repealed effective Jan. 1, 2010, by L. 2009, c. 451. Effective Jan. 1, 2010, the sale of prewritten computer software is taxable regardless of delivery method, unless it meets any of the following criteria: (1) it is designed to run an enterprise server operating system; (2) it is sold to a person who operates a data center and is used within the data center; (3) it is sold to a person who provides cable services, telecommunications services, or video programming and is used to provide ancillary service, cable service, Internet access service, telecommunications service, or video programming. N.C. Gen. Stat. section 105-164.13(43a); "Important Notice — Computer Software," N.C. Dept. of Rev., Feb. 18, 2010.

¹⁹*Graham Packaging Co., LP v. Commonwealth*, 882 A.2d 1076 (Pa. Cmwlth. Ct. 2005), at p. 1086.

²⁰*Dechert LLP v. Pennsylvania*, 922 A.2d 87 (Pa. Cmwlth. Ct. 2007).

²¹*Dechert LLP v. Pennsylvania*, 922 A.2d 87 (Pa. Cmwlth. Ct. 2007).

²²Ark. Reg. GR-25B; Ark. SST Tax Matrix (Sept. 2011).

²³Cal. Reg. 1502(f)(1)(D).

²⁴Ga. Reg. 560-12-2-.111(6)(a).

²⁵Nev. Admin. Code 372.880.

²⁶Va. Rul. of Tax Comm., P.D. 96-143 (June 20, 1996).

²⁷See Colorado Department of Revenue, "FYI Tax Publication Sales" 89 (July 1, 2011).

III. Internet-Based Computing Services — An Overview

During the 1990s, as Internet technologies continued to develop with the integration of individual networks and the advent of Web browsers, businesses identified an opportunity to significantly change how computer software technology was delivered and accessed by consumers and began providing what is often referred to as cloud computing services. Cloud computing is not a new way of doing business — it has simply gained increased visibility, particularly as individuals and small businesses have begun to use services that were traditionally used only by large companies. Indeed, large companies have long been using third-party offsite servers to maintain their software applications and data.

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The term “cloud” in “cloud computing” is a metaphor for the amorphous nature of the collection of servers, applications, and data that exist at any number of locations that can be accessed by consumers via the Internet. That the computing power resides in the cloud simply means the end user likely won’t know the physical location or configuration of the system that delivers the services.

The National Institute of Standards and Technology provides the following definition of cloud computing:

Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.³⁵

There are three models of cloud computing services: Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).³⁶

The SaaS model allows a consumer to access a vendor’s software application that is running on a cloud infrastructure.³⁷ The application is accessible from various client devices through a client interface such as a Web browser.³⁸ Under the SaaS model, the

software resides exclusively on the vendor’s server and is accessed by the consumer via the Internet. Generally, consumers cannot install, download, or transfer the application software to their own computers. The SaaS provider owns and operates the software applications. The SaaS provider also owns (or leases) and maintains the servers that support the application software. Typically the SaaS vendor charges consumers for accessing the application software based on either usage or a monthly or annual access fee. The consumer does not manage or control the underlying cloud infrastructure. Thus, the consumer has no control over the network, servers, operating systems, storage, or application capabilities.³⁹ The SaaS model is familiar to most Internet users and includes offerings like Web-based e-mail, calendars, word processing, and digital photo applications.

The PaaS model allows the consumer to run consumer-created or acquired applications on the cloud vendor’s platform.⁴⁰ Like the SaaS model, the consumer does not manage or control the underlying cloud infrastructure, including the network, servers, operating systems, or storage, but has control over the deployed applications, and possibly the application hosting environment configurations.⁴¹ The PaaS model is a platform for application development that gives customers tools and a computing environment to develop and run their own applications.⁴²

The IaaS model provides the consumer with processing, storage, network capabilities, and other fundamental computing resources whereby the consumer is able to deploy and run software, which can include operating systems and applications.⁴³ The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, deployed applications, and, possibly, limited control of select networking components (for example, host firewall).⁴⁴ The IaaS model is more common to businesses that have outsourced their infrastructure needs through the use of managed services.

Cloud computing services provide users with tremendous benefits in terms of cost savings and efficiency. Businesses no longer need to expend their limited resources on purchasing and maintaining costly computer hardware and software or on the IT costs associated with managing those resources. All those services — including remote access to software, the platform to run one’s own applications,

³⁵See Peter Mell and Tim Grance, “The NIST Definition of Cloud Computing,” National Institute of Standards and Technology, NIST Special Publication 800-145 (Sept. 2011), available at <http://csrc.nist.gov/groups/SNS/cloud-computing>.

³⁶*Id.*

³⁷*Id.*

³⁸*Id.*

³⁹*Id.*

⁴⁰*Id.*

⁴¹*Id.*

⁴²*Id.*

⁴³*Id.*

⁴⁴*Id.*

and the hardware to store data or run applications (for example, servers and storage) — can now be provided more effectively by third parties operating in the cloud. It therefore comes as no surprise that the cloud services market generated \$68.3 billion in revenue in 2010, a 16.6 percent increase from 2009.⁴⁵ The research firm Gartner predicts that by 2014, cloud services revenue will balloon to \$148.8 billion worldwide.⁴⁶

A. Taxability of SaaS

The SaaS model, also sometimes referred to as application service providers (ASP),⁴⁷ has experienced tremendous growth over the last several years. Businesses have recognized the constraints of traditional software delivery methods and have reshaped the industry by providing consumers with a cost-effective and efficient method for accessing software applications via the Internet.

Generally, the SaaS model is represented by a seller that retains custody over (or hosts) software for use by its customers. Users of the hosted software typically access the software via the Internet. The seller generally owns and maintains the hardware and networking equipment required for the user to access the software. The customer does not exercise any control, custody, or possession over the software or the hardware on which it is located. The customer may, however, have the ability to input its own data and create custom reports for its own use. The models are generally supported by a services agreement rather than a software license agreement.

Over the last several years, state tax authorities have begun addressing whether the services provided under the SaaS model are subject to sales and use taxes. At least one state has enacted legislation specifically taxing “remotely accessed software,” as well as some other cloud computing services.⁴⁸ However, most states have chosen to address the matter

by issuing letter rulings or other administrative guidance. Because the SaaS model involves remotely accessed software, some states have attempted to characterize the services provided as the sale of prewritten computer software. Other states view the SaaS model as a service transaction.

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For example, the Pennsylvania DOR has ruled that access to software solely through the Internet is not a taxable transfer of software as long as the customer executes a services agreement.⁴⁹ Under the facts of that decision, the taxpayer provided Web-based services that enabled subscribers to access their software remotely, conduct online meetings and seminars, and provide technical computer support to their customers. Customers accessed the services via the taxpayer’s website by downloading an applet that allowed them to connect to the taxpayer’s system. No software other than the applet was transferred to customers, and the customers could not access the taxpayer’s software code or manipulate the software in any way. The department said that the software was not subject to tax because access was provided solely over the Internet, the software was not hosted on a server located in Pennsylvania, and the only tangible media transferred to the purchaser was the applet, for which there was no charge. However, the DOR said that if a customer’s access is evidenced by a license to use the software, the charges would be taxable if the software is hosted on a server in Pennsylvania.

Similarly, Texas does not treat the SaaS model as the transfer of prewritten computer software but as a taxable data processing service. It imposes sales and use tax on data processing services.⁵⁰ However, 20 percent of the value of the data processing

⁴⁵Gartner, “Gartner Says Worldwide Cloud Service Market to Surpass \$68 Billion in 2010,” press release (June 22, 2010).

⁴⁶*Id.*

⁴⁷Many businesses use the terms “ASP” and “SaaS” interchangeably. The term “ASP” was commonly used by companies that offered software delivery via traditional methods (for example, disk, CD, load and leave, and so on) and then added this alternative model, which permitted the customer to access the software hosted on the vendor’s server. The SaaS model was introduced after the ASP model and offered the user the ability to add more customizable features. Although SaaS models are almost always supported by a services agreement, it is not uncommon for an ASP model to be supported by a software license agreement.

⁴⁸Washington state has enacted broad legislation imposing a sales tax on “remotely accessed software” and “digital automated services.” See Wash. Rev. Code sections 82.04.050(6)(b) and 82.04.050(8). Rhode Island H. 5894A

(Footnote continued in next column.)

originally included proposals to tax digital automated services, and the Minnesota governor’s biennial budget for fiscal 2012-2013 included a recommendation to expand the state tax base to include remotely accessed software, saying that “remote access models may also be known as software as a service (SaaS), application service provider (ASP), or cloud computing.” Minnesota biennial budget, fiscal 2012-2013 (Feb. 15, 2011), at p. 29.

⁴⁹Pa. LTR SUT 10-005 (Nov. 8, 2010).

⁵⁰Texas Tax Code Ann. section 151.0101(a)(12).

services is exempt from tax.⁵¹ Texas defines data processing services as “the processing of information for the purpose of compiling and producing records of transactions, maintaining information, and entering and retrieving information.”⁵² The term is broadly defined to include “word processing, data entry, data retrieval, data search, information compilation, payroll and business accounting data production, the performance of a totalisator service with the use of computational equipment required by the Texas Racing Act, and other computerized data and information storage or manipulation.”⁵³ Based on that, the Texas comptroller has ruled that the services provided through the SaaS model constitute taxable data processing services.

For example, the Texas comptroller ruled that an information exchange and work flow software solution that a company provided for oil industry operations constituted a taxable data processing service.⁵⁴ In that case, customers accessed the company’s software via the Internet and were able to connect their back-office accounting systems to the company’s information exchange, which included data regarding the financial work flows connecting oil companies and their vendors, customers, and joint venture partners.⁵⁵ The software allowed customers to analyze critical operational expense data and produce reports, process accounting data received from business partners, and outsource some routine reporting tasks.⁵⁶

The Tax Division contended that the services provided by the company constituted taxable data processing services.⁵⁷ The company argued, however, that because it did not change any data provided by its customers, its services could not be characterized as data processing services.⁵⁸ Noting that the “Legislature’s intent clearly demonstrates that the data processing service tax statute is broad,” the comptroller said the facts supported a finding that the company’s activities involved computerized data and information storage, computerized data and information manipulation, and data search and information compilation.⁵⁹ Therefore, the comptroller concluded that the company’s services constituted a taxable data processing service.⁶⁰

⁵¹Texas Tax Code Ann. section 151.351; Texas Admin. Code section 3.330(b).

⁵²Texas Admin. Code section 3.330(a)(1).

⁵³Texas Tax Code Ann. section 151.0035.

⁵⁴Texas Comptroller’s Decision No. 47,246 (Nov. 2, 2007).

⁵⁵*Id.*

⁵⁶*Id.*

⁵⁷*Id.*

⁵⁸*Id.*

⁵⁹*Id.*

⁶⁰*Id.*

Like Texas, South Carolina does not treat the SaaS model as the transfer of prewritten computer software, but as a taxable service. South Carolina imposes a sales and use tax on communications services and has ruled that services provided by an ASP that “include charges for access to, or use of, a communication system (the manner, method or instruments for sending or receiving a signal of the voice or of messages) is subject to sales and use tax as a communication service.”⁶¹ Some database access transmissions fell within the definition of taxable communications for sales and use tax purposes.⁶² The DOR defined database access transmissions as the “transmission of computer database information and programs by and through a modem and telephone lines, whether automatically transmitted or transmitted as a result of a subscriber accessing a computer.”⁶³ Later the department reasoned that because the charges for an ASP were analogous to the charges for database access services, the charges by an ASP were likewise subject to sales and use tax as a communication service.⁶⁴

In contrast, some states have ruled that charges for access to software via the Internet are subject to state sales and use taxes as the license of prewritten computer software.⁶⁵ The New York Department of Taxation and Finance has ruled that the fees charged by a company to access its transportation logistics software over the Internet were subject to sales tax.⁶⁶ It ruled that the customers’ accessing of the company’s software constituted a transfer of possession of the software because the customers gained constructive possession of the software, and

⁶¹S.C. Rev. Rul. 05-13 (Aug. 21, 2005). Sales and use tax is imposed on the “gross proceeds accruing or proceeding from the charges for the ways or means for the transmission of the voice or messages, including the charges for use of equipment furnished by the seller or supplier of the ways or means for the transmission of the voice or messages.” S.C. Code Ann. section 12-36-910(B)(3); 12-36-1310(B)(3).

⁶²S.C. PLR No. 10-2 (July 29, 2010); *see also* S.C. Rev. Rul. 05-13 (Aug. 21, 2005).

⁶³S.C. Rev. Rul. 05-13 (Aug. 21, 2005).

⁶⁴*Id.*

⁶⁵*See* Ind. LTR No. 2009-03 ST (Mar. 30, 2009) (A Web-based program that allowed a customer to record, save, process, and access data constituted the sale of canned software and was subject to tax. That the program was accessed via the Internet was irrelevant to the taxability of the program); Vt. Tech. Bulletin TB-54 (Apr. 11, 2011) (Prewritten software that is licensed for use and available from a remote server is subject to tax); Mass. Regs. Code 64H.1.3(3)(a) (Taxable transfers of prewritten software include the transfer of rights to use software installed on a remote server).

⁶⁶New York Advisory Opinion TSB-A-09(33)S (Aug. 13, 2009); *see also* New York Advisory Opinion TSB-A-09(44)S (Sept. 24, 2009).

the “right to use, or control or direct the use” of the software.⁶⁷ The department noted that the customers obtained the right to access the software and input data in order to manage their transportation functions. Although the petitioner characterized its product as a service and contended that it did not sell software to its customers, the department said that characterization was not controlling. Accordingly, it ruled that the sale of a license to use the software to a subscriber in New York was subject to state and local sales tax.⁶⁸

Recognizing the potential pitfalls of formulating policy for taxing ASPs without clear statutory or regulatory guidance, at least one state has declined to rule on the matter. The Illinois DOR has reiterated its position in several rulings as follows:

The proper forum for providing guidance regarding transactions involving computer software Application Service Providers (ASPs), software hosting and web-based software is through a formal administrative rulemaking process rather than through individual inquiries such as letter ruling requests. The Department at present is in the process of researching the nature and type of services and products provided in such transactions, including discussions with industry participants. The Department has found, based on the discussions to date and previous letters received by the Department, that there is no universal agreement regarding the nature of services or products that such sellers provide to their customers. Until the Department has adopted a rule on such transactions, retailers will have to determine, based on the definition contained in

⁶⁷*But see In re Voicemate.com, Inc.*, Docket No. 819864, N.Y. Div. of Tax App. (June 2, 2005). In *Voicemate.com*, the New York Division of Tax Appeals held that remotely accessed software was not taxable and noted that the contract provided that “no license is granted herein, either by implication, estoppel or otherwise to any Voicemate product or service Because there is no license to use the software, it cannot be found that petitioner’s customer was leasing said software. Without a transfer of title or possession, lease or a license to use or consume, there can be no sale of the software within the definition of ‘sale’ as contained in Tax Law section 1105(b)(5).” The court specifically noted that “the software is loaded onto a server that is owned and controlled solely by petitioner and thus there is clearly no transfer of title or possession of the software.”

⁶⁸*See also* Ind. Dept. of State Rev. Letter of Finding No. 09-0418 (Jan. 1, 2010) (the department ruled that a taxpayer was liable for Indiana sales tax on software it accessed through the Internet because Web-based programs qualify as taxable prewritten software); Vt. Technical Bulletin No. TB-54 (Nov. 19, 2010), *revised* (Apr. 11, 2011) (prewritten software that is licensed for use and available from a remote server is taxable).

Section 2-25 of the Retailers’ Occupation Tax Act, whether the products they provide are “computer software.”⁶⁹

The inconsistencies in the tax treatment of remotely accessed software across the states have created a variety of sales and use tax problems for taxpayers. That one state characterizes the sale as prewritten computer software while another state deems it a service not only affects the taxability of the transaction, but also creates problems regarding the application of exemptions and sourcing determinations.

B. Taxability of PaaS

Like the SaaS model, the PaaS model has experienced tremendous growth because of the increased use of technology and the cost-saving benefits for businesses to outsource some of these technology needs.

The PaaS model has gained popularity among software developers because it provides them with a computing environment in which they can develop and use their own applications (and in some models, the applications of the vendor), and use the tools, computing power, and infrastructure of the PaaS provider.⁷⁰ The customers are generally billed based on actual usage, thus avoiding the costs of independently purchasing these applications and tools along with the infrastructure needed to develop new applications.

There have been few tax developments affecting the PaaS cloud model, but given that many service providers of a PaaS model provide both applications and tools, we suspect the states will try to tax those transactions in much the same way they have tried to tax SaaS transactions — by attempting to characterize them as the sale of software.

C. Taxability of IaaS

IaaS has also experienced significant growth because of technological advances. Likewise, the infrastructure needs of businesses continue to grow because of increased technology. Most businesses electronically archive their business records, and many have migrated to paperless financial and accounting systems. This data must not only be stored on a server, but also must be secure in the

⁶⁹Ill. Dept. of Rev. General Information Letter No. ST 10-0113 GIL (Dec. 14, 2010); *see also* Ill. Dept. of Rev. General Information Letter No. ST10-0103 GIL (Oct. 29, 2010) and Ill. Dept. of Rev. General Information Letter No. ST10-0089 GIL (Oct. 5, 2010).

⁷⁰*See* Peter Mell and Tim Grance, “The NIST Definition of Cloud Computing,” National Institute of Standards and Technology, NIST Special Publication 800-145 (Sept. 2011), *available at* <http://csrc.nist.gov/groups/SNS/cloud-computing>.

event of a disaster. Both remote storage and Web-hosting services are commonly used services that would fall under the IaaS business model.

Although state tax authorities have focused on the SaaS model, there has been some recent activity regarding the IaaS business model as well. Vermont recently issued Technical Bulletin 54,⁷¹ which addresses the taxability of Web-hosting services and computer software and services. Before issuing Technical Bulletin 54, Vermont had long held that Web-hosting services were not subject to tax. When the bulletin was initially issued, Vermont changed its long-held position and stated that Web-hosting services were now taxable as the “lease of tangible personal property.” However, coming full circle, Vermont has since reversed that position and now maintains that Web-hosting services are not subject to sales and use tax.

Texas has ruled that Web-hosting and remote storage services are subject to tax as data processing.⁷² In Texas Policy Letter Ruling No. 200209314L, the Texas comptroller addressed the taxability of private data suites, co-location services, dedicated servers, and managed services, saying that the taxability of those services “is based on who retains the right to control the server.”⁷³ The comptroller noted the following:

When Company retains the right to control the servers, Company is performing taxable data processing services. For instance Company retains the right to control a server if Company provides routine maintenance and repair of the server. An exemption from tax for 20 percent of the total amount charged for data processing services applies to contracts for data processing services entered into on and after October 1, 1999.

Thus, the comptroller concluded that virtual hosting packages (which include disk storage, data transfer, and redundant T3 backbone) are Web-hosting services and are therefore taxable data processing services.⁷⁴

Also, in Texas Policy Letter Ruling No. 200908438L, the Texas comptroller ruled that data backup services that included “server imaging” and “daily, weekly and monthly cumulative backup to tape and complete backups” constituted taxable data

⁷¹Vt. Tech. Bulletin No. TB-54 (Nov. 19, 2010), revised (Apr. 11, 2011).

⁷²Texas exempts 20 percent of the charge for data processing services. Texas Tax Code Ann. section 151.351; 34 Texas Admin. Code section 3.330(b).

⁷³Texas Policy Letter Ruling No. 200209314L (Sept. 4, 2002).

⁷⁴*Id.*

processing services.⁷⁵ The comptroller has also said that “storage area network (SAN) fiber channel storage is data storage and backup, and is taxable as data processing.”⁷⁶

In regard to remote storage, consideration should be given to whether the Internet Tax Freedom Act precludes a state from taxing remote storage, at least when the storage is purchased by individual consumers for personal use. In 2007 the definition of Internet access under the Internet Tax Freedom Act was expanded to include “a homepage, electronic mail and instant messaging (including voice and video-capable electronic mail and instant messaging), video clips, and personal electronic storage capacity, that are provided independently or not packaged with Internet access.”⁷⁷ There is no other guidance regarding what personal electronic storage capacity is, but given that remote storage provides a set amount of capacity and is provided electronically, it would be logical to conclude that it fits within the personal electronic storage capacity exception — a position that will undoubtedly be controversial as states attempt to tax those services.

IV. Problems Regarding Lack of Guidance And Inconsistency in State Tax Treatment

The significant inconsistency in the state sales and use tax treatment of cloud transactions creates myriad problems for businesses attempting to remain compliant regarding those transactions and can also increase the tax burden for intercompany transactions affecting an organization’s software spending.

The states’ inconsistency in characterizing the transactions affects not only how the transactions will be taxed and situated, but also the applicability of exemptions. The following example illustrates this problem:

Parent Co. purchases prewritten computer software to install on its servers in Tennessee. Parent Co. is in the restaurant business and has affiliates and franchisees operating throughout the country. It permits affiliates and franchisees to access that software (and is expressly authorized to do so based on the software license agreement executed with the third-party vendor). Parent Co. invoices its affiliates and franchisees for the use of this software based on usage. A services agreement is executed between Parent Co. and the affiliates and franchisees. The affiliates and franchisees are using this software throughout the

⁷⁵Texas Policy Letter Ruling No. 200908438L (Aug. 3, 2009).

⁷⁶Texas Tax Policy News, Vol. XIX, No. 11 (Nov. 1, 2009).

⁷⁷Internet Tax Freedom Act, 47 U.S.C. section 1105(5)(E).

country, including in New York, Pennsylvania, and Tennessee. Parent Co. has nexus in all three of those states.

The sales and use tax ramifications of the transaction are as follows:

- The purchase of the software by Parent Co. from the third-party vendor is subject to Tennessee sales and use tax. Tennessee taxes pre-written computer software, regardless of delivery method.
- Parent Co. would be ineligible to issue a Tennessee resale certificate on its purchase of the prewritten computer software because it is not reselling prewritten computer software in Tennessee. Tennessee treats remotely accessed software as a service when supported by a service agreement. Parent Co. is therefore deemed the user or consumer of the software in rendering its services to the Tennessee-based affiliates and franchisees, who will be invoiced for access to the software.
- Parent Co. would be required to charge New York sales and use tax, based on usage in New York, to any affiliates or franchisees it invoices for access to the remote access software.
- New York would not permit a credit for taxes paid to Tennessee because tax was paid not by the affiliates or franchisees but by the Parent Co.
- Parent Company would not be required to charge Pennsylvania or Tennessee sales or use tax on its invoices to the affiliates and franchisees because neither of those states tax remotely accessed software when supported by a service agreement.

This example focuses on the tax treatment in only three states, but it illustrates how a taxpayer would have to analyze the applicable sales and use tax provisions of every jurisdiction — both states and localities — that has nexus over the transaction. That is a huge burden on a business that is attempting to comply — not only from a resource standpoint, but also from a systems standpoint. The example also illustrates the increased tax cost to this organization, because the parent company paid Tennessee sales and use tax on 100 percent of the original purchase price of the software, yet its affiliates in New York are also paying New York sales and use tax for use of the software.

Sellers will not only be responsible for understanding subtle nuances in the state policy regarding these transactions, but for programming a system to comply with those ever-changing nuances. That would require programming exceptions in al-

most every state to address the applicability of exemptions and situsing provisions.

The states are slowly beginning to recognize the problems caused by these inconsistencies. Most recently, the National Conference of State Legislatures and the Streamlined Sales Tax Governing Board have considered as agenda items the sales and use tax implications of cloud computing. We anticipate that there will soon be a concerted attempt to address the sales and use tax implications of those transactions through the efforts of a working group of the NCSL Task Force on State and Local Taxation of Communications and Electronic Commerce. Legislation has also been introduced in Congress to establish a national framework for the state and local taxation of digital goods and services (for example, digital content, downloaded apps, and cloud computing services).⁷⁸

V. Conclusion

Given the wide-ranging benefits associated with cloud computing services (for example, reduced corporate expenditures on costly purchases and maintenance of computer hardware and software, servers, and data centers), we will continue to see those services proliferate. State taxing authorities will undoubtedly continue to develop policy through the issuance of administrative rulings and guidance, promulgate rules, and propose legislation to capture this important growing revenue source.

State tax authorities cannot continue to rely only on letter rulings and informal administrative guidance to set forth their policy on cloud computing services.

Nevertheless, state tax authorities cannot continue to rely only on letter rulings and informal administrative guidance to set forth their policy on cloud computing services. Although those rulings and notices may provide some guidance to the business community, they can also result in uncertainty and increased compliance costs as businesses re-examine their tax obligations. Inevitably, the lack of clear guidance also compromises the ability of tax administrators to collect taxes effectively.

⁷⁸Digital Goods and Services Tax Fairness Act of 2011, S. 971/H.R. 1860, 112th Cong. (2011).

Until a state enacts legislation or promulgates rules providing clear guidance regarding the taxability of the various cloud computing models, taxpayers must continue to navigate the state's uncertain tax landscape in defending an audit or planning for future purchases. Taxpayers should ensure they do the following:

- **Determine jurisdiction:** Determine which states may have jurisdiction over the transaction. Even if the server location is known, consider the location of the users benefiting from the purchase.
- **Determine possible characterization:** Is the purchase of tangible personal property a service, a digital good, or something else? Understand what is being purchased, closely examine the invoices and agreement supporting the sale, and be aware of how it is being characterized in the agreement or on the invoice.
- **Research guidance:** Research current guidance in the identified states and determine each state's characterization of the transaction. The characterization will affect taxability and determine the applicability of exemptions and situsing of the transaction, which can be different in each state.
- **Compute tax base:** Carefully research the sourcing provisions in each state involved in

the transaction — how does the state situs the transaction based on its characterization (that is, if the state characterizes it as the sale of software, does it situs the sale based on server location or user location)? Does the state permit or require an apportioned tax base? If it does, determine the most appropriate method for computing the base.

- **Document findings:** Record the rationale for your tax decision and your computations of the tax base (including support). Auditors are still learning how to audit these transactions. Taxpayers are less likely to face an audit adjustment if they have workpapers that can be provided to an auditor documenting the method behind sourcing the transaction. As long as the auditor sees that a consistent method was used, the risk of assessment is minimized.

Like a cloud itself, the taxation of cloud computing services is continuously evolving as states grapple with the next generation of Internet-based products and services. In this area, only one thing is certain: Technology evolves faster than the law, making it extremely difficult for businesses to remain compliant when states attempt to apply yesterday's law to address today's technology. ☆