A BREAK IN THE CLOUDS: A PROPOSED FRAMEWORK FOR ANALYZING CLOUD COMPUTING TRANSACTIONS

I. Introduction

In recent years, cloud computing has emerged as an effective way to provide users with access to shared computing resources – i.e., networks, servers, storage, applications, and services – that are not physically located on the user’s computer, in the user’s workspace or domicile, or even in the user’s city or country. Under the cloud computing model, service providers, users, and equipment are rarely, if ever, located in the same physical space, software and other digital products are not transferred to the user’s possession, and yet users are able to access the resources they require for both personal and business objectives.

This article will address the application of income characterization, source of income and federal tax nexus rules to typical remote access transactions, in light of the policies underlying these rules.

II. Overview of Cloud Transactions

Cloud computing is a term that has been used (and often misused) to describe a wide variety of activities involving the Internet and other forms of network computing. At its core, the “cloud” is a set of technologies that facilitate remote access to hardware, software, and other computing resources over a network. The National Institute of Standards and Technology (“NIST”) formulated the following definition of cloud computing that is frequently cited in the industry:

Cloud computing is a model for enabling ubiquitous, 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.¹

The essential characteristics of the cloud model are: (1) on-demand self-service (the consumer can unilaterally provision computing capabilities without human interaction with the service provider), (2) broad network access (standard networks allow use by a wide variety of client devices), (3) resource pooling (computing resources are pooled to serve multiple consumers using a multi-tenant model, while the customer generally has no control or knowledge over the exact location of the provided resources), (4) rapid elasticity (resources are dynamically assigned, released, and reassigned in response to consumer demand), and (5) measured service (resource use is metered and paid for on an appropriate basis, such as storage, processing, or bandwidth). According to the NIST Report:

A cloud infrastructure is the collection of hardware and software that enables the five essential characteristics of cloud computing. The cloud infrastructure can be viewed as containing both a physical layer and an abstraction layer. The physical layer consists of the hardware resources that are necessary to support the cloud services being provided, and typically includes server, storage and network components. The abstraction layer consists of the software deployed across the physical layer, which manifests the essential cloud characteristics.²

¹ National Institute of Standards and Technology, Special Publication 800-145, p. 2 (September 2011) (hereinafter the “NIST Report”).
² NIST Report at 2.
Because cloud computing resources can be provided at different levels of abstraction, the industry generally recognizes three broad service models for cloud computing: (1) Infrastructure as a Service (“IaaS”); (2) Platform as a Service (“PaaS”); and (3) Software as a Service (“SaaS”).

IaaS is the most basic form of cloud computing. The consumer is provided with access to processing, storage, networks, and other fundamental computing resources, but must deploy its own software, which typically includes both operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure, but does control its own operating systems and application software. Examples of IaaS include data hosting and storage, time-share computing, virtual server instances, network bandwidth, and satellite capacity.

PaaS adds to the basic cloud infrastructure a development platform, potentially including programming languages, libraries, services, and other development tools, to allow the consumer to develop and deploy applications in the cloud. The consumer does not manage or control the cloud infrastructure or the development platform, but does control the development and deployment of its own applications. A typical PaaS transaction for web development might include an operating system, programming languages and libraries, development tools and templates, a database system, and web servers.

With SaaS, the consumer is provided with access to application software running on the cloud infrastructure. The consumer does not manage or control the underlying cloud infrastructure or the software applications, with the possible exception of limited user-specific application configuration settings. Typical SaaS offerings include large enterprise applications, such as CRM, sales automation, and accounting systems, as well as cloud-based desktop application suites, such as Google Apps and Microsoft Office 365.

Closely related to SaaS are services that provide streaming access to digital content other than software, such as video, music, books and other online information services.

III. Character

A. Overview

One of the most fundamental determinants of the tax treatment of the transaction is the character of the income derived from such transaction. Many tax rules depend on a preliminary determination of the character of the income. The fundamental tax policy purpose driving the tax characterization of the income is the identification of the income-producing activity. Once that income-producing activity has been properly identified, the rules germane to the tax treatment of income of that character can be applied, such as timing of recognition, source of income, special regimes (e.g. section 199, subpart F), and the like.

There is a certain taxonomy to the determination of taxable income. One basic distinction is between income from the performance of services and income derived from property of one sort or another.

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3 NIST Report at 2. A report issued in 2012 by the International Telecommunications Union identified two additional service models that are essentially variants on the three models described in the NIST Report: Communications as a Service (e.g., voice over IP, instant messaging, and video conferencing) and Network as a Service (e.g., VPN and bandwidth on demand). Focus Group on Cloud Computing Technical Report, Part 1, pp. 2-3 (Feb. 2012). CaaS could also be described as a form of SaaS, and NaaS typically represents a subset of IaaS.

4 NIST Report at 3. In some cases, such as Amazon’s EC2 service, the operating system software may be provided as part of the cloud infrastructure.

5 NIST Report at 2.

6 NIST Report at 2.
Property transactions are further divided between various types of property, such as real property, tangible personal property, intangible property, investments in the form of either equity or debt, foreign currency, and a variety of different financial instruments. The character of income derived from property may also depend on whether consideration is paid in exchange for rights of ownership in such property (e.g., gain from the sale of property) or the mere right to use such property for less than its entire useful life (e.g., rents or royalties). Finally, the tax law recognizes various specialized categories of income, such as insurance income and communications income.

In many cases, the character of the income is self-evident. For example, daily payments for the use of an automobile, with no option to buy, should be treated as rental income. Likewise, hourly wages paid to an individual for waiting tables at a restaurant should be treated as services income. In each case, the income-producing factors in the transaction are readily apparent. In the first case, the payments are for the right to use an item of property for a term substantially less than the useful life of the asset. In the second case, the payment is for the performance of personal services. In other cases, however, a transaction may exhibit multiple elements that make the determination of the character of the income challenging. For example, a monthly fee for the use of a private aircraft, including a pilot to fly the aircraft, is paid both for the use of property and for the services of an individual. As we shall see, the character of the income from this transaction depends on whether the income-producing activity is considered to be leasing, services, or some combination of the two.

B. Character of Cloud Transactions

1. Transfer of a Computer Program

Treasury Regulation §1.861-18 (hereinafter the “Software Regulations”) provides rules for classifying transactions relating to computer programs for purposes of various international provisions of the Internal Revenue Code.\(^7\) These regulations are limited in scope to transactions “involving the transfer of a computer program”.\(^8\) Cloud computing transactions do not typically involve the transfer of a computer program to the customer. For example, the customer in an IaaS transaction pays for access to data storage or virtual server instances, but does not receive copies of any software. Similarly, a customer in a PaaS or SaaS transaction has the right to access and use software, but receives no software other than the limited scripting code needed to provide access to the software running in the data center. Therefore, the Software Regulations will not ordinarily apply to these transactions.

2. Transfer of Intangible Property

Cloud transactions should not involve the transfer of intangible property rights. IaaS, Paas and SaaS customers are provided with remote access to certain hardware and software resources on a pooled basis. The customer does not generally receive software or digital content, with the possible exception of certain client-side software provided for the limited purpose of allowing the customer to access the cloud resources. To the extent of any software that the customer does receive, it has no right to reproduce such software for distribution to the public, no right to create any derivative works, and no right to publicly display or perform the software. An exercise of display and performance rights requires that copyrightable content is made visible to a human audience.\(^9\) The execution of code internally within a computer does not cause or allow perception of the code by a human audience, and thus does not

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\(^7\) Treas. Reg. §1.861-18(a)(1).
\(^8\) Treas. Reg. §1.861-18(b)(1).
\(^9\) U.S. v. American Soc. of Composers, Authors, Publishers, 627 F.3d 64, 17 et seq. (2nd Cir. 2010).
constitute display or performance. Only the output of the software is displayed, and the provider does not own a copyright in such output.

In some transactions, copyrighted audio and/or visual content may be streamed to the customer. Generally speaking, however, such content only exists long enough for the customer to perceive it, making it practically impossible for the customer to receive or exploit any intangible property rights other than those necessary for it to consume the digital content. The customer cannot make copies and distribute those copies to the public, nor can the customer create derivative works, publicly display, or publicly perform the media content that it receives. While the customer may have the right to perform or display the content for its own consumption, such performance or display ordinarily would not be at a place open to the public.

3. Leasing Versus Services

The principal issue for cloud computing transactions is the distinction between leasing and services transactions. If there is no transfer of property to the customer in a cloud computing transaction, then a services characterization would be most appropriate. While customers generally will not receive ownership of property in a cloud computing transaction, various sorts of property will be used in cloud transactions. For example, computer hardware is used to provide data hosting and processing services to IaaS customers. Similarly, PaaS and SaaS customers pay for the use of software as hosted on hardware. On a superficial level, the customers in each case could be viewed as paying for the use of the computer hardware and/or software. Whether these transactions are considered services or leases, however, requires an analysis of the substance of the rights that the customer has in the property.

U.S. tax law contains a substantial body of authority distinguishing between service contracts and leases. A large portion of this authority addresses the distinction between service contracts and leases as applied under the investment credit regime as it existed prior January 1, 1991. Under the law at that time, property used by a governmental or tax-exempt entity was not generally eligible for the investment credit. For purposes of this rule, property leased to an entity was considered to be used by that entity, while property made available in connection with the provision of services to an entity was not considered to be used by that entity. Therefore, a taxpayer could only claim investment credits on property made available to a governmental or tax-exempt entity if the property was provided under a services contract rather than a lease.

10 U.S. v. American Soc. of Composers, Authors, Publishers, 627 F.3d 64, 17 et seq. (2nd Cir. 2010); Nimmer §8.14[B][1].


12 Even if the customer receives property, the transaction still should be characterized as a services transaction if the property is created for the customer on a work-for-hire basis (see Boulez v. Commissioner, 83 T.C. 584 (1984)), or if the predominant nature of the transaction is the provision of services; e.g., the property itself has little intrinsic value and the vendor creates value through the exercise of its particular talents and skills to create a unique result for this customer (See Guy F. Atkinson Co. of California and Subsidiaries v. Commissioner, 82 T.C. 275 (1984) (discussing whether income from constructing a dam should be income from services or from the sale of goods for purposes of the former Western Hemisphere Trade Corporation deduction); see also Rev. Rul. 86-155, 1986-2 C.B. 134 (discussing whether income from constructing an oil drilling platform should be income from sale of goods or income from services for purposes of subpart F of the Internal Revenue Code)).

13 See section 7701(e); see also Smith v. Commissioner, 57 T.C.M. 826 (1989); PLR 9814021 (Dec. 23, 1997); PLR 9814018 (Dec. 23, 1997); PLR 9142002 (Jul. 19, 1991); PLR 8918012 (Jan. 24, 1988); PLR 8718016 (Jan. 23, 1987); PLR 8604066 (Oct. 30, 1985).

Over the years, both the courts and the Internal Revenue Service (the “Service”) in public and private rulings sought to provide a standard for distinguishing service contracts from leases. In 1984, Congress enacted section 7701(e) in order to provide a more definite standard. Despite the fact that this authority arose in the context of the investment tax credit, it is generally applicable for federal income tax purposes and has been applied in other contexts.

a) Section 7701(e)

Section 7701(e) provides that “for purposes of chapter 1” of the Internal Revenue Code “a contract which purports to be a service contract shall be treated as a lease of property if such contract is properly treated as a lease of property, taking into account all relevant factors.” By its terms, therefore, section 7701(e) is a provision of general application. The legislative history to the section reveals that this statutory language was not accidental. Congress consciously intended to make this provision applicable “for all Federal income tax purposes, even if no tax-exempt entity is involved.”

Section 7701(e) lists the following factors that would indicate the existence of a lease rather than a service contract:

- the service recipient is in physical possession of the property;
- the service recipient controls the property;
- the service recipient has a significant economic or possessory interest in the property;
- the service provider does not bear any risk of substantially diminished receipts or substantially increased expenditures if there is nonperformance under the contract;
- the service provider does not use the property concurrently to provide significant services to entities unrelated to the service recipient;

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17 Chapter 1 encompasses all of the Income Tax provisions other than those relating to self-employment taxes, withholding taxes on nonresident aliens and foreign corporations, and consolidated returns.


20 § 7701(e)(1)(A). See also PLR 8217040 (Jan. 27, 1982).

21 § 7701(e)(1)(B). See also Vest v. Commissioner, T.C. Memo. 1993-243 (vendor’s ownership, possession and control indicative of a lease), aff’d, 89 F.3d 839 (7th Cir. 1996); Smith v. Commissioner, 57 T.C. M. 826 (1989) (vendor’s possession and control indicative of a lease).

22 § 7701(e)(1)(C).

23 § 7701(e)(1)(D). See also PLR 9142022 (citing H. Rep. No. 432, at 1153).
• the total contract price does not substantially exceed the rental value of the property for the contract period.\textsuperscript{25}

This is a non-exclusive list of factors, and some of these factors may not be relevant in particular cases. All relevant facts bearing on the substance of the transaction should be taken into account when determining whether the agreement is a service contract or a lease. Congress provided a fair amount of interpretive guidance on these factors in the legislative history to the statute. In addition, there are cases and rulings that have applied these factors.\textsuperscript{26}

(1) Physical Possession

In the legislative history to section 7701(e), Congress explained that property is in the physical possession of the service recipient if it “is located on the premises of a service recipient, or located off the premises but operated by employees of such recipient. … However, property is not in the physical possession of the service recipient merely because the property is located on land leased to the service provider” by the service recipient.\textsuperscript{27}

In Smith v. Commissioner, a partnership acquired photocopying equipment, which it placed in service on the premises of a tax-exempt hospital after the effective date of section 7701(e). The Court held that the partnership had leased the photocopying equipment to the hospital. In analyzing the first factor under section 7701(e), the Court found that the hospital had possession of the equipment, because it was located on the hospital’s premises.

(2) Control

According to the legislative history to section 7701(e), “a service recipient is viewed as controlling the property to the extent such recipient dictates or has a right to dictate the manner in which the property is operated, maintained, or improved.”\textsuperscript{28} Also, the customer may be treated as controlling equipment if the customer uses the equipment on a day-to-day basis, using its own personnel.\textsuperscript{29} Some authorities treat the fact that a customer uses equipment to provide services for itself as indicative of a lease.\textsuperscript{30} However, contractual provisions that enable the service recipient to monitor the service provider’s compliance with

\textsuperscript{24}§ 7701(e)(1)(E). See also PLR 8104001. Conversely, equipment that is “part of an integrated network of property used by [the vendor] to provide services to customers” is indicative of a service contract. PLR 8310010 (Nov. 21, 1983).

\textsuperscript{25}I.R.C. § 7701(e)(1)(F).

\textsuperscript{26}Smith v. Commissioner, 57 T.C.M. 826 (1989); PLR 9814021 (Dec. 23, 1997); PLR 9814018 (Dec. 23, 1997); PLR 9142002 (Jul. 19, 1991); PLR 8918012 (Jan. 24, 1989); PLR 8718016 (Jan. 23, 1987); PLR 8604066 (Oct. 30, 1985).


\textsuperscript{29}See Musco Sports Lighting, Inc. v. Commissioner, 943 F.2d 906 (8th Cir. 1991) (finding a lease where, “[o]nce [the taxpayer] installed the equipment, it played no further role in its operation, aside from annual maintenance.”); PLR 9020001 (Feb. 7, 1990) (finding a service contract where the taxpayer furnished and controlled the master, officers, and crew of vessels provided to the U.S. government, and contrasting earlier rulings in which the U.S. government had its own personnel on board the vessels); PLR 8104001 (Feb. 27, 1980) (noting that the “authority given to [the school district] over the employment of drivers and regarding the maintenance of buses is not consistent with a mere service contract”). But see Rev. Rul. 68-109, 1968-1 C.B. 10 (finding a service contract where taxpayer “merely pays the installation charges and provides an operator for” switchboards).

\textsuperscript{30}See Rev. Rul. 72-407, 1972-2 CB 10 (finding a lease where cars were rented out without drivers); Rev. Rul. 71-397, 1971-2 CB 63 (photocopy machines were leased to customers); cf. PLR 9020001 (finding a service contract where vessels were provided with a crew). However, in Xerox Corp. v. United States, 656 F.2d 659 (Cl. C. 1981), the Court found a service contract notwithstanding the fact that the photocopy machines provided by the vendor were operated by the customer.
the contract and applicable legal and regulatory standards will not cause the service recipient to be treated as having control.

In Smith, the hospital was responsible for providing the personnel necessary to operate the photocopying equipment. The Court found that the hospital controlled the equipment, because hospital personnel were responsible for operating the equipment.

(3) Possessory Or Economic Interest

In the legislative history to section 7701(e), Congress explained that the service recipient will have a significant possessory or economic interest if:

- the property’s use is likely to be dedicated to the service recipient for a substantial portion of the useful life of the property;
- the recipient shares the risk that the property will decline in value;
- the recipient shares in any appreciation in the value of the property;
- the recipient shares in savings in the property’s operating costs; or
- the recipient bears the risk of damage or loss of the property.\(^{31}\)

In Smith, the Court found that the hospital had a significant economic or possessory interest in the equipment, because the four-year term of the agreement represented a significant portion of the equipment’s useful life, and because the hospital had an option to purchase the equipment at a declining price based on years of use.

(4) Risk Of Nonperformance

According to the legislative history to section 7701(e), in a true service contract the service provider bears a risk of substantially diminished receipts or substantially increased expenses if there is nonperformance on the part of either the service provider or the property.\(^{32}\)

In Smith, the hospital paid for all consumable supplies and utilities required to operate the equipment. The partnership paid to have the equipment maintained by the manufacturer under a service contract. The Court found that the partnership bore little risk of diminished receipts or increased expenditures, because it was not responsible for operating the equipment, and its maintenance obligation was discharged in advance by means of the purchase of a service contract.

(5) Concurrent Use

The legislative history to section 7701(e) suggests that “concurrent use of the property to provide significant services to entities unrelated to the service recipient is indicative of a service contract.”\(^{33}\)

In Smith, the partnership retained the right to enter into agreements with other hospitals and clinics regarding the use of the photocopying equipment. However, the partnership never actually entered into

\(^{31}\) S. Rep. No. 98-169, at 137 (1984); see also PLR 9142022 (citing H. Rep. No. 432, at 1153); PLR 8104001 (school buses provided for sole and exclusive use of school district for 12 years).


any such agreements. Therefore, the Court concluded that the partnership did not use the equipment to provide concurrent services to entities unrelated to the hospital.

(6) Contract Price

In the legislative history to section 7701(e), Congress explains that a contract price that approximates the rental value of the property is indicative of a lease. If “the total contract price is based principally on recovery of the cost of the property,” then it is most likely a lease.\(^\text{34}\) If, however, “the total contract price … substantially exceeds the rental value of the property for the contract period … [and] reflects substantial costs that are attributable to items other than the use of the property subject to the contract, then the contract more closely resembles a service contract.”\(^\text{35}\)

In \textit{Smith}, the hospital paid $1,300 per month for the use of the photocopying equipment. The Court concluded that there was no evidence that the contract price exceeded the fair rental value of the equipment.

b) Pre-7701(e) Authority

The rule that property provided to a governmental or tax-exempt entity under a service contract is not used by the recipient, and is therefore eligible for the investment credit, originated in Revenue Ruling 68-109. Over the years, the Service issued a number of public and private rulings regarding the distinction between service contracts and leases. These rulings were followed by a series of court decisions that attempted to distill from these rulings a set of factors that could be used to draw the line between service contracts and leases. Though many of the factors applied in these rulings and cases found their way into section 7701(e) in one form or another, there are other factors not mentioned in the statute that nevertheless could be relevant in this analysis. The cases and rulings dealing with the period prior to the enactment of section 7701(e) have been cited as authority to distinguish service contracts from leases in contexts other than the application of the investment credit rules.\(^\text{36}\) Therefore, the factors enumerated in these cases and rulings should be generally applicable for purposes of distinguishing service contracts from leases. The additional factors that have been cited in case law in support of services characterization include:

- the service provider had the right to remove property from service and replace it with comparable property;\(^\text{37}\)
- the property was a component of an integrated operation in which the taxpayer had other responsibilities;\(^\text{38}\)


\(^{36}\) Rev. Rul. 72-49, 1972-1 C.B. 125 (whether monthly advance payments by telephone subscribers constitute services income, eligible for deferral under Rev. Proc. 71-21, or rent); TAM 8410010 (Nov. 21, 1983) (whether daily automobile rentals to the general public are leases, giving rise to tax preference items for AMT purposes, or services contracts); TAM 8223009 (Feb. 23, 1982) (same); PLR 8213048 (Dec. 31, 1981) (whether contract is a lease of electrical generating equipment or a sale of electricity and steam for tax purposes generally); TAM 8134026 (May 20, 1981) (whether use of barges under a contract of affreightment is a lease, subject to the “at risk” limitation of section 465, or a service contract).


\(^{38}\) Xerox Corp. v. U.S., 656 F.2d 659 (Ct. Cl. 1981) (the Court in Xerox intended this factor to distinguish situations where the taxpayer used property to provide services to a customer from situations where the taxpayer provided property to a customer so that the customer could provide services to itself); Rev. Rul. 71-397, 1971-2 C.B. 63; Rev. Rul. 72-407, 1972-2 C.B. 10; PLR 7913003; PLR 7829066.
the service provider operated the equipment; and

the fee earned by the service provider was based on the number of procedures performed rather than the mere passage of time.

(1) The Rulings

In Revenue Ruling 68-109, the taxpayer, a public utility, installed communications equipment on the premises of certain governmental entities. Under its contracts with its customers, the taxpayer retained all ownership and control of the equipment. The customers merely provided an operator for the equipment. Furthermore, federal and state law prohibited the taxpayer from selling or leasing the equipment. Because the taxpayer retained “all ownership in, and possession and control over, the equipment,” the Service ruled that the contracts were service contracts, not sales or leases. Later interpretations of this ruling emphasized the regulated nature of the services provided by the taxpayer and concluded that the provision of property formed an integral part of the communication services.

In Revenue Ruling 70-313, the taxpayer placed soft drink vending machines on the premises of certain governmental entities. Some contracts provided for monthly payments per machine, while others did not. All contracts permitted the taxpayer to remove or relocate machines at his discretion. The Service concluded that while “the various kinds of vending machine agreements in the instant case may be technically classified as ‘leases,’ they more nearly resemble simple contracts that … transfer no legal interest in the machines to the so-called ‘lessee.’” The Service found it particularly significant that the taxpayer could remove or relocate machines at will.

In Revenue Ruling 71-397, the taxpayer manufactured machines, which it placed on the premises of certain governmental and tax-exempt entities. Users paid a monthly charge for each machine, plus an additional amount for each unit produced by the machine. Users provided the operator for the machine and agreed not to modify or move the machine without the consent of the taxpayer. The taxpayer could provide a user with either a new or reconditioned machine, and the machine remained the property of the taxpayer. The taxpayer agreed to maintain the machines and assumed all risk of loss or damage to the machines, unless willfully caused by the user. The Service ruled that the machines were leased because the taxpayer relinquished “possession and use of the machines on a month to month term while retaining title and all other incidents of ownership.” According to the Service, the arrangement enabled “the user to provide services for himself,” and thus the machines were provided under a lease rather than a services contract. The Service distinguished Rev. Rul. 68-109 on the basis that the provision of the communications equipment in that earlier ruling was inherent in the sale of communications services for which the parties had contracted.

In Revenue Ruling 72-407, the taxpayer supplied vehicles to the U.S. government on a daily basis. Vehicles were provided without drivers, but the taxpayer was responsible for maintaining them, including servicing them with gasoline and oil. The Service ruled that the vehicles were supplied under a lease contract. Rev. Rul. 68-109 was distinguished on the basis that “the vehicles are not part of an integrated network nor are there any government regulations prohibiting a lease,” as was the case for the

40 Smith v. Comr., 57 T.C.M. 826 (1989); PLR 7829066.
41 1968-1 C.B. 10.
communications equipment. Rev. Rul. 70-313 was distinguished on the basis that, unlike the vehicles, the vending machines “were primarily for the personal use of the employees … and were not used directly in a governmental function.” The Service cited Rev. Rul. 71-397 in support of its conclusion that the vehicles were leased because “the placing of the vehicles with the user allows the user to provide services for itself.”

In PLR 7829066 (Apr. 21, 1978), the taxpayer placed television sets on the premises of various tax-exempt hospitals for use by patients. Patients were charged for the use of the sets, of which the hospital agreed to pay the taxpayer 45 cents per day per occupied bed. The taxpayer retained ownership of the equipment, was responsible for all installation and maintenance, and had the right to enter the premises to inspect, install, repair or remove any set. Hospital employees were not permitted to work with, repair, or move any television sets. The Service ruled that the contracts with the hospitals were service contracts. Rev. Rul. 71-397 and Rev. Rul. 72-407 were both distinguished on the basis that they involved the provision of property so that users could provide services to themselves. The Service analogized the provision of television sets to the vending machines in Rev. Rul. 70-313. Because the televisions were provided for the personal use of the patients, they were not leased to the hospital.

In PLR 7847075 (Aug. 28, 1978), the taxpayer agreed to develop and operate a communications satellite system for a government agency. The agreement specified the frequencies, quality and duration of the satellite communications required by the government, but left it to the discretion of the taxpayer as to what satellites and other equipment would be required. A portion of the equipment on the ground was placed on government premises. But the taxpayer owned, maintained and operated all of the equipment in the system. The taxpayer received a monthly fee in exchange for providing satisfactory communications services and bore the risk of loss in case of system failures. Finally, the taxpayer was allowed to provide satellite communications to commercial customers on non-government radio frequencies. All of the services to be provided were covered by FCC regulations that did not authorize the sale or lease of the equipment. The Service ruled that the taxpayer had entered into a services contract. This conclusion was based on (1) the government’s lack of ownership, possession and control over the system, (2) the taxpayer’s retention of ownership and control, (3) the fact that the taxpayer bore the risk of loss, and (4) the fact that the system was available to other users.

In PLR 7913003 (Nov. 28, 1978), the taxpayer agreed to develop and operate a pipeline to transmit natural gas on behalf of a tax-exempt entity. The taxpayer retained ownership and risk of loss with respect to the pipeline and agreed to bear the entire cost of operating and maintaining the pipeline. The taxpayer agreed to regulate the flow of natural gas to the customer’s power plant in accordance with the customer’s instructions. The Service ruled that the taxpayer had entered into a services contract. According to the Service, Rev. Rul. 71-397 and Rev. Rul. 72-407 both focused on whether the taxpayer used property to provide a service to another party, or provided that party with property in order to provide services to itself. Here, the taxpayer retained possession and control of the pipeline, bore the risk of loss, operated the pipeline to transport natural gas for its customer. The taxpayer did not provide the pipeline to its customer so that the customer could provide itself with the service of transporting natural gas.

Though each of these rulings emphasized different factors, there are common threads that run throughout. As discussed below, both the Court of Claims and the Tax Court drew upon the factors applied by the Service in its rulings in order to fashion multi-factor tests for distinguishing service contracts from leases.
(2) The Xerox Case

In *Xerox Corp. v. United States*, the taxpayer entered into contracts to provide copying machines to governmental and tax-exempt entities. After analyzing the entire series of public and private rulings discussed above, the Court of Claims concluded that the distinction between a services contract and a lease was based on two broad factors: (1) the nature of the possessory interest retained by the taxpayer, and (2) the degree to which the property was a component of an integrated operation in which the taxpayer had other responsibilities. With respect to the first major factor, the Court noted that the Service in its rulings favored a services characterization if: (1) property ownership was retained by the taxpayer, (2) possession and control of the property was retained by the taxpayer, (3) risk of loss was retained by the taxpayer, and/or (4) the taxpayer reserved the right to remove the property and replace it with comparable property. The second major factor is intended to distinguish between property used by the taxpayer to provide services to its customer and property provided to a customer to allow the customer to provide services to itself.

The Court found that the taxpayer retained ownership, possession and control of the copying machines and bore the risk of loss or damage to them. The taxpayer was responsible for delivering and installing the machines at the customer’s premises. The taxpayer was required to train the customer’s personnel in the operation of the machines. The taxpayer was responsible for all maintenance and repair necessary to keep the machines operating. If a machine was not operating satisfactorily, the taxpayer would exchange it for a replacement machine at no cost to the customer. Moreover, the taxpayer periodically retrofitted machines with improvements at its own initiative and at no cost to the customer.

In exchange, customers typically paid for their use of the machines on a per copy basis. Customers were prohibited from altering the machines in any way and were required to obtain the taxpayer’s permission to move the machines to a new location. Customers provided electricity, paid for supplies and expendable parts, and performed routine housekeeping tasks, such as replacing paper and toner, clearing simple paper jams, and cleaning the exterior of the machine. Otherwise, any maintenance of the machines was the responsibility of the taxpayer.

The Court agreed with the taxpayer that “it provided a copy service, an integrated package of equipment and services designed to produce copies as its end result.” In reaching this conclusion, the Court emphasized the replacement policy as indicative that the parties were more concerned with ensuring that the customer had the use of a working machine than keeping the machine assigned to a customer in working order.

(3) The Smith Case

The taxpayer in *Smith v. Commissioner* was a limited partner in a partnership that provided certain equipment to a tax-exempt hospital. As previously mentioned, the partnership provided photocopying...

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45 656 F.2d 659 (Ct. Cl. 1981).
46 Id. at 674.
47 Id.
48 Id. at 675.
49 Id. at 676.
50 Id. at 677.
51 57 T.C.M. 826 (1989).
equipment to the hospital after the effective date of section 7701(e). The partnership also provided a CAT scanner and a digital gamma camera to the hospital before the effective date of section 7701(e).

First, the partnership entered into an agreement with the hospital under which it was obligated to (1) purchase and maintain a CAT scanner, (2) provide a trained technician to operate the scanner, (3) provide a doctor to interpret the results of the scanner, (4) provide scans whenever requested by the hospital, (5) instruct the hospital staff in the capabilities of the scanner, and (6) provide certain hardware and software enhancements to the scanner. In exchange, the hospital agreed to pay for a certain minimum number of scans per month over a six year period. If the hospital failed to use the minimum number of scans in a given month, it received a credit that could be used to pay for scans in excess of the minimums in later months. Any credit not used before the termination of the agreement would be forfeited. The partnership was permitted to provide scanning services to other hospitals and clinics, as long as doing so did not interfere with prompt service to the hospital. The scanner was housed in offices leased by the partnership adjacent to the hospital and was operated by a doctor and a technician employed by the partnership. In actual practice, the partnership did not sell scanning services to any other hospitals or clinics.

Second, the partnership acquired a digital gamma camera, which was placed in service on the premises of the hospital. The hospital paid $1,300 per month for the use of the camera. In contrast to the arrangement regarding the scanner, the hospital was responsible for providing the personnel necessary to operate the camera. The hospital paid for all consumable supplies and utilities required to operate the camera. The partnership paid to have the camera maintained by the manufacturer under a service contract. The partnership also retained the right to enter into agreements with other hospitals and clinics regarding the use of the camera. In fact, the partnership never actually entered into any such agreements.

The Court reviewed the Xerox case and the Service’s rulings and distilled from them the following factors that distinguish a service contract from a lease: (1) which party has the use and possession or control of the equipment; (2) which party operates the machine; (3) whether the fee is based on the passage of time or on the number of procedures executed; and (4) whether the equipment is part of a broader, integrated system of equipment and services. The Court then applied these four factors to the scanner and the camera.

With respect to the scanner, the Court held that the partnership had entered into a service contract with the hospital. The partnership retained possession and control of the scanner by keeping it in a building adjacent to the hospital. The partnership also operated the scanner through its employees. The hospital paid for procedures, not the mere passage of time. The Court concluded, though, that the scanner was not part of a broad, integrated system of services.

With respect to the camera, the Court held that the partnership had leased the equipment to the hospital. Because the camera was on the hospital’s premises, the hospital was in possession and control of the equipment. Furthermore, the camera was operated by employees of the hospital. The hospital also paid for the use of the camera on a monthly basis, not a per-procedure basis. Finally, the camera was not part of a broad, integrated system of services.

c) Applying the Factors to Cloud Computing

The factors under section 7701(e) and the case law that preceded it provide a useful framework for distinguishing services transactions from leases in the context of cloud computing. Most cloud computing transactions should give rise to services income. Ordinarily, the cloud provider uses hardware

52 Id. at 831.
and software to provide services to customers, owns or leases the equipment on which the software is loaded, maintains the software as needed, provides access to many customers to the same equipment, and has the right to update and replace hardware and/or software at will. The customer will not have physical possession or control over the equipment or the software, and will access the software concurrently with other customers.

In more detail, the 10 factors described above can be applied to the typical cloud hosting case as follows:

- the customer is not in physical possession of the equipment (the “possession” factor is discussed further below),
- the customer normally is not responsible for the physical maintenance of the server (the “control” factor also is discussed further below),
- the customer has no property interest in the server or software,
- the “diminished receipts / increased expenditures” factor does not seem to be particularly relevant to cloud hosting transactions, but it should be noted that in a typical hosting contract the provider will covenant to keep the equipment operational,
- many users may have access to the same equipment concurrently,
- the total cost of the provider’s hardware is spread across all customers,
- typically the provider is able to replace the servers with other equipment in the event of malfunction, etc.,
- the provision of both hardware and software would be an integrated operation,
- the host service provider normally is responsible for the maintenance and successful operation of the equipment, and
- while pricing terms may vary according to the contract and the type of service, many such transaction are priced on the basis of the amount of resources actually used rather than the mere passage of time; and even if a contract is for a specified period of time, this should be a very minor factor in light of the other relevant factors.

The nature of cloud computing is such that the user may cause many processes to occur from the user’s remote location. In a SaaS model, the user may upload or download data, and can cause the program to execute its normal functions. In an SaaS model, the user can install and uninstall its own software programs on the remote equipment, and then cause those programs to execute. In all cases, the user communicates the instructions which cause the software program to execute, and receives content or other data output through the user’s own device. Despite the user’s ability to provide instructions to the program or manipulate data hosted remotely, the section 7701(e) factors still require a “services” characterization for these transactions, because remote access should not be regarded as possession or control of the hardware or software assets of the cloud provider.

d) Possession and Control Factors

The possession and control factors merit additional discussion in the context of cloud computing transactions. These factors have featured prominently in most analyses of services versus leasing, both before and after the enactment of section 7701(e). Cloud computing transactions present some novel issues in this regard, since the hardware and software is typically in the physical possession of the service
provider, but the customer will ordinarily have the ability to manipulate software, data, and possibly even equipment remotely. In some cases, the provider may designate specific machines for the sole use of a customer, or dedicate a certain amount of disk space to a customer. The question is whether the access rights exercised remotely by the customer warrants treating the transaction as a lease, despite the physical possession of the property by the service provider.

In *Tidewater Inc. v. U.S.*, the Court addressed the characterization of vessel time charters under section 7701(e) for purposes of the foreign sales corporation rules. Under a time charter, the vessel owner supplies a vessel complete with a crew. The customer in *Tidewater* could direct the vessel to undertake any voyage permitted by the terms of the agreement. The charter covered a named vessel with specified capabilities. While the owner could provide a substitute vessel, the customer had to give its reasonable consent. The customer could sublet, assign or loan the vessel to other persons, make structural alterations to the vessel, or install additional equipment on the vessel, but in all cases subject to the owner’s reasonable consent.

The taxpayer and the Service agreed that the time charters included elements of both service and lease contracts. While the time charter contracts themselves did not separate the two elements, the taxpayer accounted separately for a service element and a rental element. The issue in front of the Court was whether the vessels were “export property” within the meaning of section 927(a). The Service argued that the contracts could not be separated into two elements for this purpose, that section 7701(e) provided the proper analytical framework, and that under those factors the time charter should be characterized as a service contract.

The Fifth Circuit agreed with the Service that section 7701(e) supplied the applicable law, and apparently agreed that a single character would be applied to all revenue under the contract. The Fifth Circuit disagreed, however, that the contract was more like a service contract.

The Court applied each of the six section 7701(e) factors to the facts of the time charter. While some of the factors weighed in favor of service characterization, the Court concluded that the most important factor was the “control” factor. On that factor, the Court concluded that the customer was in “control” of the vessel on the basis that the customer directed the movement of the vessel, cargo and passengers. In the Court’s view, this control was more important than the “operational control” exercised by the vessel’s crew.

The Court also concluded that the “physical possession” factor also weighed in favor of lease characterization. While the vessel owner provided the crew which actually operated the vessel, the Court noted that the customer “had significant control over the vessel and the crew, particularly as to when and where the vessel travelled.” In the eyes of the Court, that gave the customer “constructive possession” of the vessel.

At first glance, the opinion in *Tidewater* seems at odds with cases like *Xerox* that came before it. In *Xerox*, the Court concluded that the taxpayer had retained possession and control of the photocopying machines, even though they were installed at the customer’s premises and operated by the customer, whereas in *Tidewater* the Court concluded that the customer had possession and control of the vessel despite the fact that the crew that operated the vessel was employed by the vessel’s owner. However, in both cases it can be argued that possession and control are the result of a party’s ability to control the disposition of a particular item of property, including the ability to alter or replace it.

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53 565 F.3d 299 (5th Cir. 2009), nonacq. AOD 2010-001 (5/14/2010).
In *Xerox*, the taxpayer retained all risk of loss to the equipment, was responsible for all maintenance and repairs, and would replace or upgrade machines at its discretion and at no cost to the customer. Customers were not allowed to alter or move the machines without the taxpayer’s permission. The replacement policy, in particular, indicated that the contract was not for the use of a particular machine, but rather any working machine. In *Tidewater*, the contract was for the use of a particular vessel, and the customer could make structural alterations to the vessel and install additional equipment.

The typical cloud computing transaction is distinguishable from the facts of *Tidewater* in ways that require a “services” characterization for most cloud transactions. If anything, the customer in a cloud computing transaction has even less possession and control over the property than the customer in *Xerox*.

The cloud service provider normally is the only party in physical possession of the equipment, and is free to swap out hardware at its discretion. In fact, one of the business efficiencies offered by cloud-based models is that the user is relieved of all obligations to acquire and maintain equipment. Furthermore, the computing resources made available in a cloud computing transaction are virtualized and do not correspond to any particular piece of equipment in the real world. In contrast to the facts of *Tidewater*, cloud customers typically do not know what server hosts their data, and may not even know the location of the data center that houses the servers. Furthermore, they cannot make physical changes to the computer servers or other hardware used in the transaction.

This conclusion should prevail even in circumstances where the provider has designated specific machines for the sole use of a customer, or has reserved a certain amount of disk space on a server for a particular customer. This conclusion also should prevail in circumstances when the user may be able to designate a particular geographic location or facility of the provider where the servers will be located to store its data or host its applications. In these arrangements, the principal concerns of the user are security and functionality. Even in cases where a particular server is designated for use by the customer, the provider normally is able to substitute a different machine as long as the agreed service levels are maintained. The user’s bargain for elements of security and functionality are not affected by the change of equipment. In these cases, therefore, as the user is not in physical possession of the equipment and software provided by the cloud service provider, its remote access rights should not be regarded as controlling the property.

The characterization analysis normally is the same even in IaaS transactions where the user obtains its own software license and installs the software on the provider’s hardware. In that case, the fee paid to the cloud service provider does not cover the software license, since the user procured that separately. While the user in that case might be regarded as in possession of the software copy it licensed, that does not change the conclusion that the user is not possession of the server on which that copy is hosted.

Accordingly, in applying the “control” factor, the ability of the cloud computing customer to control the output should not be confused with control over the hardware or software that creates or delivers that output. The user accesses the hardware and software remotely and uses that hardware and software to produce a result. Where the user is not responsible for the physical maintenance of the hardware, or to assure the continued operation of the software, the user should not be regarded as being in control of those properties.

e) OECD Adoption of Section 7701(e) Principles

The OECD also has endorsed the principles of section 7701(e) for purposes of drawing a distinction very similar to that between services and leases for purposes of the OECD Model Tax Convention. In 2001, the OECD published the final report of the Technical Advisory Group on Treaty Characterisation of

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Electronic Commerce Payments. That TAG addressed the characterization analysis for a variety of e-commerce transactions for purposes of the OECD Model Convention. The TAG discussed general principles which should be applied to the characterization analysis, then specifically applied those principles to 24 specified transactions. Those 24 transactions included several remote access transactions, including “application hosting”, “web site hosting”, “data warehousing”, and “streamed (real time) web based broadcasting”.

The characterization distinction relevant for the OECD Model Convention is that between “business profits” and other categories of income. Prior to 1992, the OECD Model Convention included in Article 12 a separate category of income defined as rents or royalties “for the use of, or the right to use, industrial, commercial, or scientific equipment”. Payments falling in that category could be subject to source based withholding tax, subject to rate reductions provided by the applicable treaty. Payments not falling within that category generally would be regarded as business profits, not subject to source based taxation absent a permanent establishment of the nonresident. Accordingly, the distinction between business profits and payments for the use of industrial, commercial or scientific equipment is directly analogous to the US characterization distinction between services and rental income.

In general, the TAG adopted the principles of section 7701(e) to guide its characterization analysis. The TAG report states as follows:

27. The Group also examined a few transactions where it could be argued that tangible computer equipment (hardware) was being used by a customer so as to allow the relevant payment to be characterised as “payments for the use of, or the right to use, industrial, commercial or scientific equipment” [the report here referred to application hosting, web site hosting and data warehousing examples].

28. The Group examined various factors used to distinguish rental from service contracts for purposes of section 7701(e) of the U.S. Internal Revenue Code and found these factors to be useful for purposes of determining whether payments are for “the use of, or the right to use, industrial, commercial or scientific equipment”. Once adapted to the transactions examined by the Group, these factors, which indicate a lease rather than the provision of services, can be formulated as follows:

(a) the customer is in physical possession of the property,

(b) the customer controls the property,

(c) the customer has a significant economic or possessory interest in the property,

(d) the provider does not bear any risk of substantially diminished receipts or substantially increased expenditures if there is nonperformance under the contract,

(e) the provider does not use the property concurrently to provide significant services to entries unrelated to the service recipient, and


the total payment does not substantially exceed the rental value of the
computer equipment for the contract period.

29. This is a non-exclusive list of factors, and some of these factors may not be
relevant in particular cases. All relevant facts bearing on the substance of the transaction
should be taken into account when determining whether the agreement is a service
contract or a lease.

The TAG then applied these principles to application service provider and data warehousing transactions,
concluding in both cases that the payment would be for provision of services, and not for the lease of
industrial, commercial or scientific equipment, as follows:

30. Applying these factors to application service provider transactions, the Group
concluded that these should generally give rise to services income as opposed to rental
payments. In a typical transaction, the service provider uses the software to provide
services to customers, maintains the software as needed, owns the equipment on which
the software is loaded, provides access to many customers to the same equipment, and
has the right to update and replace the software at will. The customer may not have
possession or control over the software or the equipment, will access the software
concurrently with other customers, and may pay a fee based on the volume of
transactions processed by the software.

31. Likewise, data warehousing transactions should be treated as services
transactions. The vendor uses computer equipment to provide data warehousing services
to customers, owns and maintains the equipment on which the data is stored, provides
access to many customers to the same equipment, and has the right to remove and replace
equipment at will. The customer will not have possession or control over the equipment
and will utilise the equipment concurrently with other customers.\(^{56}\)

\[^{56}\]Id.

f) Other Analogous OECD Guidance

This distinction between (i) possession and control of the physical equipment and (ii) the ability to
remotely access software or data residing on the equipment is inherent in the OECD Commentary on
Article 5 regarding when the use in electronic commerce of computer equipment could constitute a
permanent establishment. While the section 7701(e) characterization test and the definition of a
permanent establishment, of course, are different concepts, the guidance in the Article 5 Commentary
provides a useful analogue to the section 7701(e) analysis described above. Just as access to software or
data hosted on remote equipment should not be regarded as possession or control of that equipment, the
Article 5 Commentary also distinguishes between “operation” of the equipment and remote access to the
website or data which is hosted on the equipment. The Commentary explains as follows:

The distinction between a web site and the server on which the web site is stored and
used is important since the enterprise that operates the server may be different from the
enterprise that carries on business through the web site. For example, it is common for
the web site through which an enterprise carries on its business to be hosted on the server
of an Internet Service Provider (ISP). Although the fees paid to the ISP under such
arrangements may be based on the amount of disk space used to store the software and
data required by the web site, these contracts typically do not result in the server and its
location being at the disposal of the enterprise (see paragraph 4 above), even if the
enterprise has been able to determine that its web site should be hosted on a particular server at a particular location. In such a case, the enterprise does not even have a physical presence at that location since the web site is not tangible.  

The conceptual approach in the OECD Commentary of separating the operation of the hardware from the communications activity of accessing software, content or data residing on that hardware is consistent with the conclusion that in the normal case, remote access transactions should be treated as a provision of services and not as a lease of property.

IV. Source of Income

A. Overview

Once the character of an item of income is been determined, tax rules can be applied to determine the source of that income. The fundamental consequence of this determination is which country will have the right to tax that item of income. The tax systems of many countries impose tax only on items of income derived from domestic sources. Other countries, such as the United States, may also impose tax on items of income from foreign sources. This frequently results in more than one country claiming the right to tax a particular item of income. The United States addresses double taxation through the foreign tax credit rules, but only to the extent that the taxpayer has sufficient net foreign source income as determined under US principles.

The source rules for the various types of income are intended to identify the location where that particular type of income is presumed to arise, and therefore might reasonably be subject to tax at that location. For example, services income is sourced to the location where the services are performed. The presumption in this rule is that the service provider creates value and produces income at the place where the service provider engages in the performance of services. Rental income is sourced to the location of the leased property, since the rental income is thought to arise where the income-producing asset is located.

As discussed above, the most likely characterization of the income from a cloud computing transaction is services income. There is also a particular category of services income called “international communications income” that theoretically might apply to some cloud computing transactions, and which has its own unique sourcing rules. However, as we discuss in greater detail below, cloud computing transactions generally should not result in communications income, and there is no particular reason to apply a similar rule to cloud remote access transactions by analogy.

The most significant question in determining the source of income for payments made for cloud computing transactions will be the proper application of the place of performance rule for services when there are activities in a number of jurisdictions that potentially could be considered part of the performance of the service. For example, an entity operating in one jurisdiction may contract to provide services to users in a second jurisdiction, while the relevant developers, data center assets and sales and marketing personnel all may be employees or assets of entities operating in other jurisdictions. Since the entity recognizing the cloud computing revenue must determine the source of its income on a gross income basis, the issue arises whether the participation of such other entities in the overall creation and delivery of the cloud computing service affects the source of income determination.

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57 OECD Commentary on Article 5, para. 42.3.
58 §§ 861(a)(3), 862(a)(3).
59 §§ 861(a)(4), 862(a)(4). Similarly, royalty income is sourced to the place where the licensee is entitled to use the intangible property.
60 § 863(e); Treas. Reg. § 1.863-9.
B. Communications Income

The sourcing rules for communications income start from the assumption that income in such transactions is generally created at both the point of transmission and the point of reception, but then adjusts the sourcing outcome for particular taxpayers to reflect what Congress and Treasury thought was the more appropriate allocation of taxing jurisdiction in these transactions.\(^{61}\)

Income from the transmission of communications or data between two points in the United States, or between the United States and a point in space or international waters,\(^{62}\) is considered U.S. communications income and is entirely U.S. source income.\(^{63}\) Income from the transmission of communications or data between two points where neither point is in the United States (i.e., between two points located in a foreign country, a possession of the United States, or in space or international waters), is considered foreign communications income and is entirely foreign source income.\(^{64}\) Both U.S. communications income and foreign communications income are sourced to the location of the activity, without regard to the residence of the payor or payee.

International communications income is income “derived from the transmission of communications or data from the United States to any foreign country (or possession of the United States) or from any foreign country (or possession of the United States) to the United States.”\(^ {65}\) It also includes income from transmissions to the United States from a point in space or international waters of communications originating in a foreign country or U.S. possession.\(^ {66}\) For U.S. persons\(^ {67}\) and controlled foreign corporations (“CFC”),\(^ {68}\) international communications income is split 50-50 between U.S. and foreign sources, consistent with the notion that half of the income is created where transmitted, and half where received.

International communications income earned by a foreign person other than a CFC is 100% foreign source\(^ {69}\) unless the income is attributable to either (1) an office or other fixed place of business of in the United States of such foreign person,\(^ {70}\) or (2) a United States trade or business of such foreign person,\(^ {71}\) in which case the income is 100% U.S. source income. Therefore, international communications income of a foreign person is sourced not to the place where communications are transmitted and received, but rather by reference to the business activity of the foreign person with which the communication income is associated.

\(^{61}\) See JCT Explanation of the Tax Reform Act of 1986, JCS-10-87, at 933 (legislative history to the enactment of the source rules under section 863 for space and ocean income and international communications income).

\(^{62}\) Except for transmissions to the United States from a point in space or international waters of communications originating in a foreign country or U.S. possession. Treas. Reg. § 1.863-9(h)(3)(ii)(B).

\(^{63}\) Treas. Reg. § 1.863-9(c), (h)(3)(iii). If the taxpayer cannot establish the two points between which the taxpayer is paid to transmit the communication, then the income from that transaction is treated as 100% U.S. source income, effectively setting up a rebuttable presumption that the communication is between two points in the United States. Treas. Reg. § 1.863-9(f).

\(^{64}\) Treas. Reg. § 1.863-9(d), (h)(3)(iv).

\(^{65}\) § 863(e)(2); Treas. Reg. § 1.863-9(h)(3)(ii)(A).

\(^{66}\) § 863(e)(1)(A); Treas. Reg. § 1.863-9(b)(1).

\(^{67}\) Treas. Reg. § 1.863-9(b)(2)(i).

\(^{68}\) Treas. Reg. § 1.863-9(b)(2)(ii).

\(^{69}\) Treas. Reg. § 1.863-9(b)(2)(iii).

\(^{70}\) Treas. Reg. § 1.863-9(b)(2)(iv).
Finally, space/ocean communications income is income from the transmission of communications or data between two points in space or international waters, and is generally sourced to the residence of the recipient of the income.  

Most cloud computing transactions, as defined in this article, should not generate communications income. According to the regulations under section 863, “communications activity consists solely of the delivery by transmission of communications or data … [and] also includes the provision of capacity to transmit communications.” Provision of “content or any other additional service” is not communications activity. Income from communications activity is income derived from “the delivery by transmission of communications” or “the provision of capacity to transmit communications.” The taxpayer need not perform the transmission activity itself, but will only have income from communications activity if it “is paid to transmit, and bears the risk of transmitting, the communications.” Most cloud computing transactions involve the provision of hosted computing services, which tend to be delivered over public networks (i.e., the Internet). The fees charged are for the hosted services, not for the transmission of data or communications.

There are a few examples in the regulations that shed some light on what sort of activities might fall outside the definition of communications activity. Remote access to a data base was treated as a non-communications activity where the provider “assumes no responsibility for the transmission of the information via telephone.” A monthly fee for access to the Internet, where the Internet service provider serves as a portal to the Internet and transmits data from the subscriber to a recipient in another country, was treated as communications income. Caching of frequently requested web sites solely to speed up response time was assumed to be a de minimis non-communications activity. Video services, and possibly other unspecified Internet services, were assumed to be non-de minimis non-communications activities. Television program content was assumed to be a non-de minimis non-communications activity. The non-communications activities described in these examples involve the provision of content or the performance of services at a remote location rather than the “delivery by transmission of communications or data” or “the provision of capacity to transmit communications.” IaaS, PaaS and SaaS transactions involve the provision of virtualized computing resources at a remote location. While access to these resources is effected over a network, the cloud service provider generally is not responsible for this connection. The examples in the regulations treat a variety of remote content and service transactions, such as data base access, data caching, video streaming, and entertainment content, as non-communications activities. Cloud computing transactions are strikingly similar to these transactions, and therefore should be considered non-communications activities as well.

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73 Treas. Reg. § 1.863-9(e) (citing the space and ocean activity rules of section 863(d) and the regulations thereunder).
76 Treas. Reg. § 1.863-9(h)(2).
77 Treas. Reg. § 1.863-9(h)(2).
78 Treas. Reg. § 1.863-9(j), Ex. 1.
82 Treas. Reg. § 1.863-9(j), Ex. 15.
That said, it could be asked whether a rule analogous to the international communications rules should be applied to cloud transactions. There is no compelling policy reason to do so. If such a rule were to be applied, then presumably some portion of the income would be sourced at the user’s location. Given that none of the business activities of the service are performed at the user location, there is no policy basis to allocate any part of the income to that location. The possible allocation on the provider side is just as problematic, as there is no good basis to allocate the income for sourcing purposes to the server which the user accesses, for example, in contrast to any of the other business activities of the enterprise. Accordingly, the elderly better approach is to determine the location of the actual performance of the services, and determine source by reference to those activities.

C. Services Income

Given that cloud computing transactions most likely would be characterized as services, and that such services should generally not be considered communications activity, the income from such transactions should be sourced under the rules for services to the place where the services are performed.\(^83\)

In practice, the most difficult issues arise when the services are performed through inputs that are provided in different locations, and by personnel and assets owned by different legal entities. For example, it is not uncommon for one legal entity in a group to enter into contracts to deliver the cloud computing service, but personnel in other locations employed by different legal entities could be responsible for development, customer support, and sale and marketing. Due to the need to locate data centers near adequate communications and power resources, and the need to reduce latency for users, the equipment infrastructure used to deliver the service could be located in multiple other jurisdictions. Given the many outsourced service providers in the marketplace who provide hosting services to other enterprises, the equipment infrastructure used by a SaaS provider in many cases will be supplied by an unrelated party.

The applicable authorities, supported by the policy foundations of the source rules, suggest that the income of each of the entities in the value chain described above should be sourced according to the place its own personnel and assets are used to provide its part of the service, regardless of the fact that such entity may have procured inputs from related or unrelated parties in other geographic locations in order to provide its service.

1. Place of Performance

The fact that cloud computing providers utilize electronic means to provide their services over longer distances should not change the basic concept of “source” with respect to those services. The source of income, including services income, should be determined by reference to where that income is actually generated; i.e., where value is created. Creation of value has historically been the focus of the courts in source cases. As the U.S. Board of Tax Appeals (now the U.S. Tax Court) has explained:

[The source of income] is not a place, it is an activity or property. … Thus, if an [item of] income [is to] be taxed [in the United States], … the property or activities out of which the income issues or is derived must be situated within the jurisdiction so that the source of the income may be said to have a situs in this country.\(^84\)

\(^83\) §§861(a)(3), 862(a)(3).

\(^84\) Piedras Negras Broad. Co. v. Comr., 43 B.T.A. 297, 309 (1941), nonacq., 1941-1 C.B. 18, aff’d, 127 F.2d 260 (5th Cir. 1942), quoting Paul and Mertens, Law of Federal Income Taxation, vol. 4 at 350. See also Howkins v. Comr., 49 T.C. 689, 694 (1968) (“Congress thought of the ‘source’ of an item of income in terms of the place where the income was ‘produced’”).
In *Piedras Negras*, the taxpayer earned essentially all of its income from the sale of advertising time on a radio station that broadcast from a transmitter in Mexico, just over the border from Texas.\(^{85}\) Its advertising was clearly targeted towards U.S. listeners, and almost all of its income was earned from advertisers located in the United States.\(^{86}\) Nevertheless, the Court held that the advertising income was foreign-source income.\(^{87}\) Thus, the location of the advertisers and the consumers of the broadcast programs (i.e., the listeners) was not determinative of the source of the advertising income. Even where services are consumed in a place other than where they are produced, the place where the service provider is located when he performs the activities for which the customer is paying should govern the source of that income. The place where the consumer of those services is located should be immaterial to the analysis.

2. Multiple Activities of a Service Provider

An enterprise may undertake a variety of activities in a variety of different places, all of which may have some relationship to the provision of services to the customer. Cloud computing transactions involve the provision of virtualized computing resources, and therefore can be more challenging to analyze. It would seem that the services income should be sourced, at least in part, at the location of the servers and data centers through which the cloud computing services are provided. However, there may be additional inputs that are relevant to the sourcing analysis, such as the location of the personnel responsible for programming, configuring, and maintaining the hardware and software through which the cloud computing services are delivered.

Although the *Piedras Negras* case was decided long before the advent of the Internet, the case provides useful guidance regarding the proper sourcing of income from cloud computing transactions. In determining that the taxpayer’s income was from sources outside the United States, the Court in *Piedras Negras* did not simply rely on the fact that the radio transmissions that gave rise to the income were made from Mexico. On the contrary, the Court also considered a number of other inputs that were important to the taxpayer’s ability to realize income from the broadcasts:

> But for the contracts entered into in Mexico, the radio station therein, and the broadcasts from Mexico, no gain or income would have been realized or received by petitioner from the advertisers in the United States. The property, the power station, and the activities, the radio entertainment at the studio, which originated broadcast programs and advertising, all were in Mexico and without the jurisdiction of the United States.\(^{88}\)

\* * * *

The source [of the income], we think, was the studio and power plant or broadcasting station in Mexico and the labor there employed. With and through them, as instrumentalities, the petitioner employed capital and labor, and earned its income.\(^{89}\)

Based on *Piedras Negras*, it would appear that income from providing cloud computing services should be sourced by reference to the capital and labor inputs that directly contribute to the production of that income. Under *Piedras Negras*, the location of the server should not be the sole determinant of the source

\(^{85}\) *Piedras Negras*, 43 B.T.A. at 299.
\(^{86}\) Id. at 303.
\(^{87}\) Id. at 313.
\(^{88}\) Id. at 312.
\(^{89}\) Id. at 313.
of cloud computing services income. The location of the servers that host the cloud computing resources and that of the personnel who operate and maintain the hardware and software are both relevant to this determination. To the extent that the cloud computing provider has servers and employees in multiple countries that are involved in the performance of cloud computing services, it may be necessary to allocate the income from such transactions to multiple sources.

The Treasury Regulations governing the sourcing of services income provide that where services are performed both within and without the United States, the income therefrom must be allocated between U.S.-source and foreign-source income based on all the facts and circumstances. There is no de minimis rule that would allow minimal amounts of services performed in the United States to be disregarded. However, there is some authority for disregarding certain activities of a service provider that are not integral to its performance of services.

For example, the Court in *Piedras Negras* explicitly declined to consider, in determining the source of the taxpayer’s advertising revenue, those activities that consisted of sorting mail received by advertisers and dividing the proceeds of remittances received. Those activities took place in the United States, but the Court did not deem them relevant to its analysis. Although not expressed as a rationale in the case, this result makes sense under the theory that ancillary activities should not be considered. Although the mail sorting and receipt division were necessary parts of the taxpayer’s business, they were only indirectly related to the actual service provided to the advertisers; i.e., the broadcasting of radio advertising to listeners.

Relying on *Piedras Negras*, the taxpayer in *Tipton and Kalmbach, Inc. v. U.S.* attempted to argue that, because the services that it provided in the United States were “merely incidental” to the predominant services that it rendered in Pakistan, all of its income should be sourced outside the United States. The Tenth Circuit rejected this argument, explaining that the Court in *Piedras Negras* found that “all of the services [the company] rendered in connection with its business were performed in Mexico.” In other words, the Court in *Tipton* did not consider the U.S.-based activities in *Piedras Negras* to be part of the services that were rendered by the taxpayer. In contrast, the U.S.-based activities in *Tipton* appear to have been of essentially the same nature as those performed in Pakistan; i.e., professional engineering services. Therefore, the taxpayer was not entitled to disregard its activities in the United States, regardless of how minimal in amount they might be relative to its activities outside of the United States. Consequently, the Court in *Tipton* determined that the taxpayer’s income had to be allocated between U.S. and foreign sources.

3. Activities of Agents or Contractors

In *Piedras Negras*, the taxpayer itself apparently performed all of the activities necessary to operate a radio station. Even in that case, however, the taxpayer relied on others to create content, namely the entertainment material that it broadcast. Similarly, in many cloud computing transactions various inputs will be provided by related or unrelated parties. Where an entity contracts with third parties for the

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90 Regs. §1.864-4(b)(1)(i).
92 480 F.2d 1118 (10th Cir. 1973).
93 Id. at 1120.
94 Id., quoting *Piedras Negras*, 127 F.2d at 261. It should be noted that the Court in *Piedras Negras* was not forced to deal with the question of allocation of source among jurisdictions, since neither party to the proceeding had raised the question of whether the advertising income could have been sourced partly within and partly without the United States.
95 Id.
performance of activities that are inputs to the principal’s own provision of services, one must also
determine whether the activities of those agents or contractors should be considered in applying the
source rules to the principal’s gross income.

It is clear from *Piedras Negras* that not all third party inputs (such as creating the radio station’s content)
affect the source of services income. There are at least some circumstances under U.S. law, however,
where activities of an agent are taken into account in determining the source of income generated by the
principal. In *Helvering v. Boekman*,96 the taxpayer was a Dutch commodities broker who hired a clerk in
the United States to perform certain activities. The Court was faced with the question whether the
taxpayer had performed “personal” services in the United States. The taxpayer argued that he did not
perform personal services in the United States because he did not perform them himself. The Court
rejected this argument, explaining that the clerk provided personal services as the taxpayer’s agent. “It
can hardly be,” the Court stated, “that when an alien employs agents in this country to do things from
which he collects a profit, Congress intended him to escape, though it meant to tax him, if he came here to
do them himself.”97

The activities of agents, however, will not always be attributable to a principal for purposes of applying
sourcing rules. In *Perkins v. Comr.*,98 an Italian resident executrix hired a New Jersey attorney to
represent her in the probate of her husband’s U.S. estate. In exchange for her services as executrix, the
taxpayer earned a commission from the estate. The Service argued that the New Jersey attorney was the
taxpayer’s agent and that her services as executrix were therefore performed, via the attorney, in the
United States. The Court disagreed, holding that the taxpayer did not hire the attorney to perform
services that she herself was responsible to perform in her duties as executrix. On the contrary, the
taxpayer was compensated for performing services separate and apart from those provided by her
attorney.99 Thus, the Court determined that the commission that the taxpayer received from the estate was
not U.S.-source income.100

In *Le Beau Tours Inter-America, Inc. v. U.S.*,101 the taxpayer was a New York corporation that arranged
Latin American package tours for travelers from the United States. It contracted with local hotels and
tour operators in Latin American countries to provide accommodations to travelers. In discussing these
arrangements, the Court specifically pointed out that these local service providers “were independent
contractors not under [the taxpayer’s] legal control other than by contract.”102 Bookkeeping and other
clerical work for the taxpayer was performed by its parent, another New York corporation, for an annual
lump sum fee. The Court determined that the taxpayer’s income was income from providing services to
its customers, the US travelers.103 In determining the source of that income, the Court declined to
consider the activities of the foreign hotel and tour operators, because the taxpayer was “far more than an
agent for its local Latin American contacts.”104 The Court did, however, include in its consideration the

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96 107 F.2d 388 (2d Cir. 1939).
97 Id. at 389.
99 Id. at 344.
100 Id. at 345.
101 415 F. Supp. 48 (S.D.N.Y.), aff’d, 547 F.2d 9 (2d Cir. 1976).
102 Id. at 50.
103 Id. at 52.
104 Id.
bookkeeping and other activities performed by the taxpayer’s parent. The Court did not explicitly base this last holding on any finding of agency. Instead, the Court justified attributing the activities of the parent to the taxpayer on the basis that these activities were “necessary functions … carried out in order to provide the services to its customers from which it derived its gross income.” It is worth noting that an alternative argument put forward by the Service, but considered too factual to address in this summary judgment proceeding, was that the taxpayer was a sham, created by its parent corporation solely for tax avoidance purposes.

In *Miller v. Comr.*, a foreign corporation was hired to provide research and development services to a domestic investment partnership. The foreign corporation, in turn, hired its domestic subsidiary to perform some of the research and development. Because the domestic subsidiary performed research and development services in the United States, the Service argued that a portion of the foreign corporation’s income under the contract was U.S.-source services income subject to U.S. withholding tax. The Court disagreed and held:

> The fact that a lower tier corporation performs some services in the United States is insufficient to support a conclusion that its higher tier parent corporation also performs services in the United States. The two corporations are and should be treated as separate persons unless one corporate form is a sham.

According to the Court: “In order for [the foreign corporation] to be considered as having U.S. source income by virtue of the performance of services, [the foreign corporation] itself would have to perform the services through agents or employees of its own.”

The basic rule of these cases appears to be that activities of employees or agents may be attributed to the taxpayer for determining the source of the taxpayer’s services income, while activities of independent contractors will not. The Court in *Le Beau Tours* took pains to describe the independence of the foreign tour operators, whose activities were not attributed to the taxpayer for purposes of sourcing the taxpayer’s services income. Likewise, the Court in *Miller* described the U.S. subsidiary as “doing business under its own name as a separate and distinct entity,” and therefore concluded that the activities of the U.S. subsidiary should not be attributed to its Hong Kong parent. The attorney in *Perkins* was separately compensated out of the decedent’s estate for the services that he performed, leading the Court to conclude that he did not act as the taxpayer’s agent and that the source of the taxpayer’s income should be based solely on where she herself performed services. In contrast, it seems likely that the agent in *Boekman* did not work for anyone other than the taxpayer and was entirely under his control. As previously noted, the Court in *Le Beau Tours* did not explicitly find that the parent corporation of the taxpayer acted as the taxpayer’s agent. However, the Court’s consideration of the issue may have been colored by the suggestion that the taxpayer was nothing more than a sham or alter ego for its parent, formed solely for the purpose of qualifying a portion of the parent’s income for the benefits of the Western Hemisphere Trading Corporation regime.

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105 *Id.*
106 *Id.* at 48.
107 73 T.C.M. 2319 (1997).
108 *Id.* at 2323.
109 *Id.*
110 *Miller,* 73 T.C.M. at 2323.
Given that multinational enterprises may locate different elements of the entire value chain in several jurisdictions, the proper treatment of such distributed value chains is an important unresolved issue for cloud computing providers. Take, for example, a SaaS provider that earns all of its income from the provision of hosted software services. Applying the reasoning of Piedras Negras, it would appear that the SaaS provider should source its income to the location of the people and equipment responsible for the operation of the hosted software service. That might include the location of the computer servers on which the software is hosted and the personnel who maintain the hardware and software used in delivering the service. The SaaS provider may subcontract various activities to third parties, including contract software developers, third-party content providers, and hosting service providers. Based on the authorities described above, it seems reasonable to conclude that the SaaS provider should source its services income based solely on the location of its own employees and agents that are engaged in the provision of SaaS services. As long as the SaaS provider and its various subcontractors have sufficient substance to avoid attack as a sham, then inputs by such independent contractors should not affect the source of the services income earned by the SaaS provider.

The possible alternative approaches are not supportable as a policy matter. Sourcing the income entirely to the location of the equipment which hosts the service grossly overweighs the contribution of that one particular asset to the provision of most cloud based services. That result is additionally unsupportable when the hosting function is supplied by a third party cloud hosting provider.

There also is little policy basis to justify locating through to other entities in the value chain in order to determine the source of gross income of the entity recognizing customer revenue. A single example can demonstrate the logic. Assume a SaaS provider group which operates through three legal entities (A, B and C). The first enters into contracts with users to deliver the service and recognizes the services gross income. The second develops the software which is the SaaS application. The third operates the data center in which the application is hosted. Assume that the assets and employees of each of the legal entities are located exclusively in countries A, B and C, respectively. Assuming that the group has set the prices for the B and C intercompany services according to the arm’s length standard, the taxable income of entities A, B and C appropriate reflects the economic value added by each entity in the value chain.

Determining source of income by reference to the activities of each entity separately thus exactly matches the amount of income sourced in country A, B and C with the economic value added in that jurisdiction. Any rule which determines source by reference solely to the equipment location overallocates to jurisdiction C. Any system which looks through entity A to determine the source of entity A’s income by reference also to the personnel and assets of entities B and C will overallocate source to jurisdictions B and C, as those entities on a standalone basis will presumably determine their income as 100% sourced in jurisdictions B and C, respectively.

This treatment creates a parallel with the source of income on sales of finished goods which are the end product of a value chain of other inputs. A finished good may incorporate property acquired through several prior purchases in a value chain of materials, parts, assemblies and final finished goods. The income of the seller of the finished good, however, is determined solely by reference to the applications of section 861(a)(6), 862(a)(6) and 863(b)(2), without reference to the source of income of any of its suppliers.

Finally, a note on apportionment. If the taxpayer performs services through a single legal entity whose employees and assets are located in multiple jurisdictions, then the services income must be apportioned on an appropriate basis between or among the relevant locations.

The issue of the relative weight to give personnel versus equipment, and how to deal with income arising from the case of intangible property, is a thorny one whose resolution can wait for another day.
V. Nexus

The most frequently raised issue in the context of cloud computing service is whether the use of a data center located in the United States would give rise to a US tax nexus for an enterprise which otherwise is providing its services through employees and assets located outside the US. The absence of guidance on this point likely has made some non-US groups hesitant to invest in US infrastructure or engage US third party hosting service providers to support their businesses.

A. Overview

The United States imposes tax at the normal graduated rates of tax on the net income of a non-resident effectively connected with the conduct of a trade or business in the United States.\(^\text{111}\) If that non-resident is a resident of a country that has entered into a tax treaty with the United States, however, then the taxing jurisdiction of the United States will be determined under the provisions of the treaty instead. Under most income tax treaties, the business profits of an enterprise will not be subject to tax in the source country unless that income is attributable to a permanent establishment in the source country. What follows is a discussion of the issue of whether establishing a US affiliated entity to own and operate a data center for a nonresident cloud service provider should create taxable nexus for the nonresident.

1. United States Trade or Business

The United States imposes tax at the normal graduated rates of tax under §§1 and 11 on the net income of a foreign corporation or non-resident alien that is effectively connected with the conduct of a trade or business in the United States.\(^\text{112}\) In order for this tax to apply, therefore, a non-resident must (1) be engaged in the conduct of a U.S. trade or business, and (2) have income that is effectively connected with such U.S. trade or business.

a) Conduct of a Trade or Business in the United States

Whether a foreign corporation is engaged in a trade or business in the United States is a question of fact and depends on all the circumstances surrounding the corporation’s economic activities in the United States.\(^\text{113}\) In order to be engaged in the conduct of a trade or business in the United States, a foreign corporation must be engaged in business activity in the United States that is “considerable … continuous and regular.”\(^\text{114}\) Isolated or occasional transactions do not constitute a U.S. trade or business.\(^\text{115}\) However, a single transaction can be the conduct of a U.S. trade or business if it is significant in relation to the total activities of the foreign corporation.\(^\text{116}\)

b) Effectively Connected Income

Determining that a foreign corporation has a U.S. trade or business does not end the inquiry as to whether its profits are taxable at regular corporate rates in the United States. Only income that is “effectively

\(^{111}\) §§871(b), 882.

\(^{112}\) §§871(b)(1), 882(a)(1).


\(^{114}\) Pinchot v. Comr., 113 F.2d 718 (2d Cir. 1940).


\(^{116}\) Rev. Rul. 58-63, 1958-1 C.B. 624; see also Johansson v. U.S., 336 F.2d 809 (5th Cir. 1964); Ingram v. Bowers, 57 F.2d 65 (2d Cir. 1932).
connected” with a U.S. trade or business will be so taxed. Generally, all U.S.-source income will be effectively connected income.

2. Permanent Establishment

The rules for determining taxability in the United States of income from remote access services sold to US users may be different from the rules described above if the foreign corporation can obtain the benefits of a tax treaty. Where a treaty is applicable, the U.S. domestic rules on taxing jurisdiction are preempted.

Pursuant to most treaties between the United States and foreign nations, the business profits of a foreign taxpayer cannot be taxed in the United States unless the taxpayer maintains a “permanent establishment” in the United States. If there is no permanent establishment, income of the foreign taxpayer is not taxable in the United States even if a U.S. trade or business exists, and even if the foreign enterprise’s business profits are U.S.-source income under U.S. domestic law. Moreover, even if the foreign taxpayer does have a U.S. permanent establishment, under most treaties the taxpayer may be taxed only on those business profits that are attributable to that permanent establishment.

a) Fixed Place of Business PE

The term permanent establishment is defined in most treaties as “a fixed place of business through which the business of an enterprise is wholly or partly carried on.” To satisfy this test, therefore, requires (1) a “place of business” in the local country; (2) the place of business must have a sufficient degree of permanence to be considered “fixed”; and (3) the business of the foreign enterprise must be carried on through such fixed place of business. A place of business includes premises, facilities or installations owned or leased by the foreign enterprise, but can also exist where the enterprise “simply has a certain amount of space at its disposal” in the local country, including premises, facilities or installations owned by another enterprise.

A place of business may not be “fixed” if business is carried on at such location for less than six months, though a far shorter period of time may be sufficiently permanent if “the nature of the business is such that it will only be carried on for that short period of time.” A business is ordinarily carried on by employees and dependent agents of the foreign enterprise, but can also be carried on through automatic

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117 §882(a).
118 §864(c)(3). U.S.-source capital gains and periodical income will be effectively connected only if (i) the income is derived from assets used in the conduct of the trade or business or (ii) the activities of the trade or business were a material factor in the realization of the income. §864(c)(2). If U.S.-source capital gain or periodical income is not considered effectively connected with a U.S. trade or business under these rules, then it will be taxed as non-business income at a flat 30% of gross income. §881(a).
120 E.g., U.S. Model Treaty, Article 7, ¶1.
121 Id., Article 5, ¶1.
122 OECD Commentary on Article 5, para. 2.
123 OECD Commentary on Article 5, para. 4.
124 OECD Commentary on Article 5, para. 6.
equipment, even if no personnel of the foreign enterprise are required at the location of the equipment.

A nonresident cloud computing service provider often will not itself own or lease any tangible property, or employ any persons, in the source country. Employees of the nonresident entity may upload software and data onto equipment located in a data center in the source country, but the equipment and the premises frequently will be owned by a third party. The software and data does not constitute tangible property, and therefore cannot, by itself, be a fixed place of business. In the case of an enterprise that does not own or lease the servers on which its web site is hosted, the servers and their location are not typically considered to be “at the disposal” of the enterprise, “even if the enterprise has been able to determine that its web site should be hosted on a particular server at a particular location.”

b) Dependent Agent PE

U.S. treaties usually also have provisions explaining the circumstances under which the activities of an agent of a foreign enterprise will give rise to a U.S. permanent establishment of that enterprise. Generally, a foreign enterprise will not have a permanent establishment in the United States as a result of the activities of an agent unless the agent is a dependent agent with authority to conclude contracts in the name of the non-resident principal. Thus, typical U.S. treaty definitions of permanent establishment consider both the nature of the activities carried on by a foreign enterprise (or its agents) and the physical character of the operations.

c) Preparatory or Auxiliary Activities

Most U.S. treaties explicitly exempt certain activities from the definition of a permanent establishment, even if those activities are carried on through a fixed place of business. For example, storage of merchandise, delivery of merchandise, display of merchandise, and maintenance of a fixed place of business in order to collect information are generally labeled “preparatory or auxiliary” activities and do not give rise to a permanent establishment pursuant to most treaties signed by the United States.

3. Application to US Data Center

The OECD Commentary expresses several important principles regarding the circumstances under which a server might constitute a PE. The general rule in the Commentary regarding a “place of business” reads as follows:

The term “place of business” covers any premises, facilities or installations used for carrying on the business of the enterprise whether or not they are used exclusively for that purpose. A place of business may also exist where no premises are available or

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125 OECD Commentary on Article 5, para. 10.
126 OECD Commentary on Article 5, para. 42.6. The United Kingdom has filed an observation on this section of the Commentary expressing the view that a server, by itself of in combination with a web site, is not sufficient to create a PE. OECD Commentary on Article 5, para. 45.5.
127 OECD Commentary on Article 5, para. 42.2.
128 OECD Commentary on Article 5, para. 42.3.
129 Id., Article 5, ¶5 and 6.
130 Id., Article 5, ¶4.
required for carrying on the business of the enterprise and it simply has a certain amount of space at its disposal.\textsuperscript{131}

The Commentary then addresses the possibility of creating a fixed place of business through a server or other automated equipment as follows:

Whilst a location where automated equipment is operated by an enterprise may constitute a permanent establishment in the country where it is situated …, a distinction needs to be made between computer equipment, which may be set up at a location so as to constitute a permanent establishment under certain circumstances, and the data and software which is used by, or stored on, that equipment. For instance, an Internet web site, which is a combination of software and electronic data, does not in itself constitute tangible property. It therefore does not have a location that can constitute a “place of business” as there is no “facility such as premises or, in certain instances, machinery or equipment” … as far as the software and data constituting that web site is concerned. On the other hand, the server on which the web site is stored and through which it is accessible is a piece of equipment having a physical location and such location may thus constitute a “fixed place of business” of the enterprise that operates that server.\textsuperscript{132}

So hardware, which is tangible, can constitute a fixed place of business, but software and data, by itself, cannot. If software or data of one enterprise is hosted on hardware owned and operated by another enterprise, the issue arises as to whether the hardware of the hosting provider can give rise to a fixed place of business of the enterprise that has only software or data in the jurisdiction where the servers are located. The Commentary speaks to the treatment of a web site hosted on the server of an Internet service provider (“ISP”) as follows:

Although the fees paid to the ISP under such arrangements may be based on the amount of disk space used to store the software and data required by the web site, these contracts typically do not result in the server and its location being at the disposal of the enterprise …, even if the enterprise has been able to determine that its web site should be hosted on a particular server at a particular location. In such a case, the enterprise does not even have a physical presence at that location since the web site is not tangible. In these cases, the enterprise cannot be considered to have acquired a place of business by virtue of that hosting arrangement. However, if the enterprise carrying on business through a web site has the server at its own disposal, for example it owns (or leases) and operates the server on which the web site is stored and used, the place where that server is located could constitute a permanent establishment of the enterprise if the other requirements of the Article are met.\textsuperscript{133}

Some have expressed concern that an enterprise might be considered to have a server “at its disposal”, even if the enterprise does not itself own or lease the server, if the enterprise can manage the software and data on the server from a remote location. The literal text of the Commentary would appear to require that the enterprise “own or lease” the equipment, as well as “operate” the server, in order to have a place of business at the server location. However, some might argue that this language is expressed as an example, and thus a foreign enterprise theoretically might have a server at its disposal that it does not own, lease or operate. Furthermore, some have argued that the reference to an “ISP” in the Commentary

\textsuperscript{131} OECD Commentary on Article 5, para. 4.
\textsuperscript{132} OECD Commentary on Article 5, para. 42.2.
\textsuperscript{133} OECD Commentary on Article 5, para. 42.3.
refers to an unrelated party, thereby implying that a different rule might apply if a related person owns the data center. These arguments should not prevail, however. As noted in the Commentary, a PE requires a physical place of business. A foreign enterprise that does not own or lease hardware or the data center premises does have the requisite physical presence in the jurisdiction, and the ability of the foreign enterprise to remotely manipulate the software and data hosted on a server does not cause that server to become a fixed place of business of such foreign enterprise.

The Canada Revenue Agency (“CRA”) has issued a ruling that provides some very useful guidance regarding the circumstances under which a data center owned and operated by a resident affiliate of a foreign enterprise will not constitute a PE of the foreign enterprise or another group member company.134

The ruling describes a business arrangement whereby a Canadian affiliate of a US parent acquired the assets to operate a data center in Canada. The data center hosted the group’s website, held user data, served up advertising, and performed transaction processing. Employees of the Canadian company were principally responsible for the installation, operation, maintenance and repair of the equipment located in the data center. Employees of the US company were expected to visit the data center location from time to time for purposes of inspection, maintenance or similar purposes. Importantly, the ruling expressly notes that the following activities would be performed remotely by employees of the US company or other affiliates:

27. Applications and data hosted in the Data Centre will be managed remotely by employees of the Taxpayers located outside of Canada. Such persons will have the ability to monitor performance of the hardware and software located in the Data Centre, install and uninstall applications, perform maintenance on the hosted applications, and otherwise manage the software and data resident in the Data Centre by remote access.

On the basis of those facts, the CRA concluded that the US company did not have a permanent establishment in Canada by virtue of the operation of the data center, either on the basis of a fixed place of business or on the basis of the deemed “services PE” recently included in the US-Canada treaty. This conclusion is significant as it is the first public guidance in any country which has concluded that a data center operated by an affiliate of the taxpayer does not constitute a permanent establishment of the principal. While the ruling does not explicitly refer to the OECD Article 5 Commentary on servers, the outcome is consistent with the conclusion that the reference in paragraph 42.3 of the Art. 5 Commentary to an enterprise which “owns (or leases) and operates” a server on which a website is stored, does not extend to an enterprise (such as the US parent here) which may be able to manage applications and data remotely. Hopefully this ruling will put to rest the issue of whether the remote management of data and applications can cause a server to be “at the disposal” of the remote person for purposes of determining a PE. The United States should follow suit and adopt a similar position with respect to the hosting of software and data on servers located in the United States.

VI. Concluding Thoughts

[TO BE ADDED]