THROUGH THE LOOKING GLASS:
COMPUTER SERVERS AND E-COMMERCE PROFIT ATTRIBUTION

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SUMMARY

[1] This report discusses, from a tax policy perspective, the problems associated with permitting countries to tax profits attributable to computer servers (that is, computers that have been networked to the Internet). Part I discusses reform efforts where OECD member states agreed that, under traditional international tax principles, a server can constitute a permanent establishment in some circumstances. Part II describes how the OECD has attempted to constrain abusive tax planning through proposed profit attribution rules with respect to e-commerce profits and servers. Part III argues that the "one-two" punch of these reform efforts will result in a test that emphasizes economic presence instead of physical presence, a significant departure from traditional international tax principles.

I. SERVERS AS PERMANENT ESTABLISHMENTS

A. BACKGROUND

[2] In November 1996, the U.S. Treasury Department issued a report that discussed the emerging international tax challenges posed by the Internet economy. /1/ The report was groundbreaking because it set the terms for subsequent discussions of those issues. In particular, Treasury suggested that traditional international tax laws and principles would likely suffice to confront emerging challenges. /2/ In the wake of this report, a number of other national tax authorities issued similar statements calling for the preservation of international tax principles. /3/ In October 1998, the OECD similarly agreed that traditional international tax principles would generally be sufficient to deal with emerging challenges created by the Internet. /4/

B. REFORM EFFORTS AND SERVER/PES

[3] Countries negotiate bilateral tax treaties to govern the income taxation of cross-border economic activities. One of the most important roles that each tax treaty plays is the identification of the threshold of economic activity necessary to permit a country to tax a particular economic activity taking place within its borders. Tax treaty partners generally agree that they will not impose their income taxes on foreign businesses unless these businesses maintain a significant physical presence within the taxing country's borders. This

physical presence is called a "permanent establishment" (PE) within tax treaties and is defined to include among other things, a store, branch, building, or depot. /5/ The PE principle assists in determining whether a country is permitted to extend its tax jurisdiction over a cross-border transaction and hence determines in part how tax revenues are divided between nations.

[4] For two years, a Working Party to the OECD studied whether the definition for a PE should include a computer server. /6/ Computer servers are used for a number of purposes, including posting Web sites and transmitting digital goods and services. Many net e-commerce importing OECD member states were concerned that they would not enjoy income tax revenues from the purchase and consumption of e- commerce products and services within their borders resulting from cross-border remote sales. Creating a server/PE might permit these countries to tax these remote sales. The OECD adopted the Working Party's conclusion that computer servers should constitute PE in some circumstances. /7/ For example, a computer server constitutes a PE if the server performs integral aspects of a cross-border transaction such as order-taking via a Web site, payment processing, and transmission of a good or service, even in the absence of any human intermediary.

C. INCOME SHIFTING AND SERVER/PES

[5] In previous works, I have discussed at length the problems associated with this rule that proposes to assert legal control over a physical aspect of the Internet's infrastructure (that is, a computer server). /8/ The main deficiency of the approach is that a computer server need not have any geographic connection with its income-producing activities and taxpayers will take advantage of this fact to shift income to low or nil tax jurisdictions. Two simplified examples -- one involving a company that produces digital goods and one involving a company that produces traditional tangible goods -- follow to illustrate this point.

[6] Hypothetical
1. Consider a hypothetical online music company called WorldMusic4U.com, based in the United States that wants to expand its sales to consumers residing in the European Union. WorldMusic4U can lease a server in Ireland, a country with a low corporate income tax rate in comparison to other EU nations. The company can additionally ensure that the software functions within this server perform integral aspects of the cross-border transaction on any sales of digital music files (MP3 files) to consumers located throughout the European Union. The software within the server located in Ireland will hence be designed to advertise the music via a Web site, take a consumer's order, process payment, and transmit the digital music file to the end consumer.

[7] Under the OECD proposal, the server will constitute a PE entitling Ireland to tax all of the profits attributable to the server's operations. But it makes little sense to permit Ireland (or worse, a tax haven) to collect the resulting tax revenues from the profits because Ireland is not where WorldMusic4U is based nor is it where the actual sales took place. Under traditional tax principles, tax jurisdiction is normally allocated to the country where a business is based or incorporated or, alternatively, to the country where significant business activity is taking place (as evidenced by the presence of a traditional PE such as a store).

[8] The use of a computer server as a substitute for traditional physical presence fails to take into account the nature of the Internet. The server/PE focuses attention on the software functions performed within the server to determine whether the requisite threshold of activities has been surpassed. The income- producing functions hence will be allocated according to software functions, which can be shifted to anyplace in the world. /9/ This shifting entails certain transaction costs (for example, lease payments for a server and maintenance and modification of the computer code within the server), but these costs may be low.

[9] Hypothetical 2. In the second example, Company A is an original equipment manufacturer that produces auto parts for car manufacturers. Company A is based in the United States and contracts out the manufacture of powertrain components to a firm based in Brazil and a firm based in Malaysia. The components are ultimately transported to Company A's manufacturing facilities in Detroit and Windsor, Ontario, for final assembly. Company A is networked via an extranet to its customers to enhance efficiencies surrounding the timing of the delivery of the powertrains to the car manufacturers (that is, the car manufacturers want Company A to supply the powertrains "just-in-time" for the final assembly of the automobile's engine). Assume that the payment for each powertrain is conducted through the use of electronic agents: In other words, the payment for each powertrain occurs automatically via the extranet through the workings of software code. /10/

[10] Company A may be able to lower its overall worldwide tax burden by shifting income attributable to the supply of the powertrains to a low- or nil-tax jurisdiction. Company A can set up a corporation to own the server to defer tax liability and may even wish to hire employees to maintain or service the server in the foreign country. Under traditional tax principles, the profit attributable to the corporation or the permanent establishment should be identical (because the permanent establishment is treated as a fictional separate legal entity), but Company A may still try to use the existence of the corporation and the employees to bolster its argument that profits should be attributed to the country where the server is located.

[11] The receipt of the order for the powertrain, the issuance of an order to ship the powertrain, the negotiation of the price for the supply, and the completion of the order can now all be accomplished through the use of electronic agents based on the automated functioning of computer code located within a server, which may be characterized as a PE. Computer code within a server located in a low- or nil-tax jurisdiction can additionally accomplish other overhead-related functions related to accounting, finance, intellectual property rights management, or other areas. Again, it makes little sense to permit Company A to shift income to low- or nil-tax countries simply by owning or leasing a server in these countries.

D. TAX HAVENS AND HARMFUL TAX COMPETITION

[12] While there does not yet appear to be a broad migration of e- commerce companies to tax havens, there are early indications that businesses are moving to, or are basing their operations within, these income tax-free countries. /11/ For example, tax havens such as Bermuda, /12/ Antigua and Barbuda, /13/ Barbados, /14/ and Costa Rica /15/ have reportedly attracted a number of Internet businesses, suggesting that it is technologically feasible to maintain major e-commerce operations in these offshore countries.

[13] Further, the setting up of a full e-commerce operation within a tax haven may entail significant costs, including hiring workers and setting up facilities. Alternatively, companies based within the United States or elsewhere can nominally shift income attributable to workings of computer code within servers; this nominal shifting is cheaper and logistically easier to accomplish, suggesting it may become far more prevalent. Cost-sharing strategies and offshore licensing arrangements may be used to circumvent rules that impose a "toll" on the transfer of intangible assets (for example, a computer program) to a foreign country. /16/

[14] Beginning in 1997, national tax authorities began to attack the problem of harmful tax competition through multilateral EU and OECD efforts. /17/ Extending tax jurisdiction over the location of a computer code for e-commerce purposes arguably represents a serious setback to these efforts because countries will invariably compete for this highly mobile factor of production.

II. CONSTRAINING INCOME SHIFTING: PROFIT ATTRIBUTION

[15] Tax treaty partners generally are only permitted to tax profits attributable to a PE. /18/ For example, a French retail branch of a U.S.-based retail chain will be obligated to pay the French government tax only on any profits that are attributable to the branch such as the profits derived from all sales from the French retail outlet to French consumers. In February 2001, a Technical Advisory Group to the OECD issued a draft report (the OECD E-Commerce Profit Attribution Report) that discussed how taxpayers should attribute profits to their computer servers in the context of Internet retailing (assuming a PE is found to exist). /19/

[16] Under general transfer pricing rules, multinational companies are required to allocate profits to each PE under arm's- length principles that create a fiction where the organization must charge an objective (arm's length) price for its related party transfers as if each part of the organization was dealing with independent companies. The OECD E-Commerce Profit Attribution Report applies a two-step process for determining the appropriate amount of profits attributable to the server/PE. /20/

[17] Step one employs a functional and factual analysis to determine which of the identified activities can be associated with the computer server and to what extent. /21/ The functional analysis asks what risks are being assumed by the PE in the course of its operations and how the PE uses its assets. /22/ A Web server, in the context of an online retailing operation, that

takes a customer's orders, processes payment, and delivers a digital product to the end consumer is compared with a traditional retailer. /23/ A traditional retailer makes a number of decisions involving functions such as ordering and maintaining inventory and negotiating terms with suppliers. In contrast, the OECD report notes that a Web server lacks this type of decisionmaking ability and accordingly is not the same as a full-function retail outlet. /24/

[18] Further, the risks assumed by the Web server are scrutinized because profitmaking activities generally are associated with the assumption of different forms of risk (for example, an investor who buys shares in a public company assumes greater risk and hence expects a potentially greater return in comparison to an investor who buys an asset with minimal risk such as a government bond with a fixed return). The OECD report concludes that the Web server's primary function is to provide support services for the retailing activities of the firm and that the server operations assume very little operational risk (for example, credit risk, technological risk, and marketing risk). /25/

[19] Step two determines the amount of profits attributable to the computer server by looking at what an appropriate return would be, assuming it was earned by a distinct enterprise providing the same transaction. /26/ For example, a Web server generally is said to employ assets used or developed by the head office and thus the server would have to compensate the head office for this use. /27/ As a service provider, the Web server is entitled to be compensated only by fees, and should not be entitled to a percentage of the profits derived from Internet sales. /28/ By tightening up the profit attribution rules, the OECD presumably hopes that abusive tax planning will be limited.

[20] It should also be noted that the appropriate tax treatment for an international transaction must take into consideration two additional areas surrounding anti-avoidance tax rules, such as the subpart F rules in the United States and income characterization rules. Both of these areas are attracting reform efforts but any serious consideration of the implications of those efforts is outside of the scope of this report. /29/

III. TOWARD AN ECONOMIC PRESENCE TEST

[21] This part argues that the United States and other OECD member states have, despite assertions that traditional tax principles must be preserved, moved toward an economic presence test for cross-border e-commerce income tax purposes, a significant departure from traditional international tax principles that focus on the need for a physical presence within a taxing state. /30/

A. ECONOMIC ACTIVITIES OF SERVER/PES

[22] As discussed, the OECD member states agreed that physical aspects of the network (for example, a computer server or any other computer equipment that performs core business functions) could now lead to a taxable presence within foreign countries in some circumstances, diluting the traditional PE principle to the point of meaninglessness for e-commerce activities. Hence, a PE is now elective (at least for medium to large firms with

sufficient resources for tax planning) because a company can choose to lease a server in any country they wish and ensure that software functions within the server perform integral aspects of the cross-border transaction. /31/

[23] In an apparent attempt to constrain abusive practices, an OECD Technical Advisory Group has tentatively proposed rules to govern the amount of profits that should be allocated to a server for tax purposes. The focus under this approach scrutinizes the activities of the server/PE to determine what substantive economic activities are being conducted by the server/PE. Questions that need to be answered include: What types of sales are being generated by the server? How did the server acquire rights to intangible assets? What functions does the server perform? What risks does the server assume?

[24] The impact of these two developments may lead to a fundamental shift in the approach used by taxpayers and tax authorities in their efforts to allocate profits among activities in different countries for e-commerce purposes. The main result is a conceptual change where taxpayers and tax authorities will no longer ask what sort of taxable presence exists within each country (that is, what is it?). Rather, the question that will be asked is what type of economic activity is occurring within each country where a server/PE is located (that is, what does it do?).

[25] The former approach emphasized the need for a physical presence and slotted different potential candidates into categories such as stores, depots, or branches. The latter approach scrutinizes the substantive economic activities taking place within the server/PE. In other words, the physical presence test has been replaced by an economic presence test that looks to the activities taking place at the location where an e-commerce good or service ostensibly is being produced for sale.

B. TAX PLANNING AND SERVER/PES

[26] Despite the efforts to constrain abusive tax planning by trying to tighten up the profit attribution rules, the approach may still lead to adverse outcomes for tax authorities. First, the OECD E- Commerce Profit Attribution Report appears to assume that taxpayers in many circumstances will be prevented from attributing profits to a server because, after taking into consideration the operations of a hypothetical server/PE, the server performs negligible profitmaking activities. /32/ But, to determine that a server constitutes a PE, an earlier finding is required that determines the server performs integral aspects of a cross-border business transaction. /33/ This finding seems contrary to the later finding by the OECD E-Commerce Profit Attribution Report that a server does not perform any real value-adding activities.

[27] To back up this point, consider the international tax treatment of a hypothetical traditional franchisee-retail outlet. The franchisor, a well-branded bookstore chain, is located in country A and enters into a franchise agreement with a retail bookstore located in country B. The franchisor (somewhat unrealistically) makes all important managerial decisions with respect to the operations of the franchisee located in country B, including decisions surrounding hiring, marketing, and inventory. Under traditional treatment, country B would be entitled to tax all of the profits attributable to book sales from the franchisee's store. These

profits would be reduced by franchise payments from the franchisee to the franchisor (which in turn would increase revenues and profits that could be taxed by country A).

[28] Now consider an Internet book retailer located in country A. The Internet retailer owns a server located in country B that constitutes a PE: digital books are purchased and transmitted via the server to consumers located in country B. Under the new approach, tax authorities are asked to scrutinize the activities taking place within the server. The server/PE, at least according to the OECD E- Commerce Profit Attribution Report, should be analogized with a service provider and country B should be able to tax only any profits related to service fees paid to the server/PE by the head office. But country B might argue that the server/PE should attract the same tax treatment as the franchisee/PE, entitling country to tax profits attributable to the sale of digital books.

[29] In other words, aggressive taxpayers and tax authorities from e- commerce importing nations may argue that significant profits should be allocated to the jurisdiction where the server is owned or leased. Consider the following arguments.

[30] First, a taxpayer with a server leased within a tax haven may argue that the server/PE acts as the global sales and distribution center for the organization and assumes significant risks to bring the products to the market place: The taxpayer could argue that the server was placed in the tax haven as a result of the sophisticated network security maintained by the particular hosting facility where the server resides. One outside hacker attack could take out the server, knocking out worldwide sales for an indefinite period. The server/PE hence assumes great risk and should be appropriately compensated for that risk by allocating a significant part of all sales profits to the server/PE. /34/

[31] Second, the ownership and location of intangible assets has traditionally been a sore point for international tax principles. As a result of the difficulty in identifying what part of a legal entity owns the intangible rights, traditional international income tax rules allocate the costs of creating the intangible asset among the various parts of the global operations of a single legal entity. /35/ Accordingly, a taxpayer could argue that its server/PE owns part of a particular intangible (for example, a Web site) that was developed by the head office and should be compensated for the use of the intangible rights to generate sales for the entire organization. /36/

[32] Third, the OECD E-Commerce Profit Attribution Report offers the tantalizing suggestion that intangible assets created by the server/PE, including "e-Commerce marketing intangibles," will belong to the server/PE. /37/ Software within the server can be designed to data mine Web site visitors, compile marketing information and "sell" this information to the head office, generating profits for the PE (and creating an offsetting deduction for payments by the head office to lower its profits in a high tax jurisdiction). Or perhaps the software will customize the Web page of site visitors (by maintaining records on these visitors through "cookies") to enhance sales through targeted marketing, raising an additional argument that the server/PE should participate in the profits of Web site sales.

[33] Finally, the software within the server could contract with a third-party Web advertiser so that targeted banner ads appear on the Web site (again, the direct marketing efforts will rely on previous data collected by the server), suggesting that the server/PE should be entitled to advertising revenues from the third-party advertiser. To the extent that the server/PE enters into a more interactive relationship with its customers, it would seem to support arguments for greater profit attribution to the server/PE. /38/ These are but a few of the options available to taxpayers to bolster their arguments that revenues and profits should be allocated to the server/PE.

IV. CONCLUSION

[34] The "one-two punch" of creating a server/PE along with proposed profit attribution rules for e-commerce may lead to adverse consequences for OECD tax authorities. The commendable efforts of the OECD Technical Advisory Group will clearly restrict abusive tax planning efforts in many areas. But, in some circumstances, e- commerce profits may be diverted away from countries that have any meaningful connection to the profit-making activities (that is, the country where an e-commerce business is based, the country where the intangible assets were developed, or the country where the e-commerce good or service is purchased). Accordingly, the new rules will not effectively share tax revenues between e-commerce exporting nations and e-commerce importing nations.

[35] By clinging to traditional principles, OECD member state tax authorities have inhibited the ability to protect their income tax bases. Further, the combination of the two reform efforts appears to move international tax principles toward an economic presence test for e-commerce purposes, a significant departure from traditional principles that focused on the need for a physical presence within the taxing state.

/1/ See United States, Department of the Treasury, Office of Tax Policy, Selected Tax Policy Implications of Global Electronic Commerce (November 1996).

/2/ Id. at para. 1 ("In most cases, this will require that existing principles be adapted and reinterpreted in the context of developments of technology. In extreme cases, it may be necessary to develop new concepts."). See also The White House, A Framework for Global Electronic Commerce, para. I.1. (July 1997) ("The taxation of commerce conducted over the Internet should be consistent with the established principles of international taxation. . . . The system should be able to accommodate tax systems used by the United States and our international partners today.").

/3/ See, e.g., Minister's Advisory Comm. on Elec. Commerce, Electronic Commerce and Canada's Tax Administration, para. 2.4.3.3 (1998).

/4/ See OECD, Taxation Framework Conditions 4 (October 1998).

/5/ See, e.g., U.S. Department of the Treasury, Model Income Tax Convention, Sept. 20, 1996, at art. 5 [hereinafter, U.S. model treaty].

/6/ See OECD Working Party No. 1 on Tax Conventions and Related Questions, Proposed Clarification of the Commentary on Article 5 of the OECD Model Convention (Dec. 22, 2000) [hereinafter, OECD Server/PE Proposal].

/7/ The conclusions of the Working Party will be adopted into the OECD's commentary to the OECD model tax treaty. This commentary, in turn, is used by courts to help to interpret the meaning of the term "permanent establishment." See, e.g., United States v. A. L. Burbank & Co., 525 F.2d 9, 15 (2d Cir. 1975); and North W. Life Assurance Co. of Canada v. Commissioner, 107 T.C. 363, Doc 96-32148 (71 pages), 96 TNT 242-14 (1996).

/8/ See Arthur J. Cockfield, "Balancing National Interests in the Taxation of Electronic Commerce Business Profits," 74 Tulane L. Rev. 133, 186-91 (1999) [hereinafter, Balancing National Interests] and Arthur J. Cockfield, "Transforming the Internet into a Taxable Forum," 85 Minn. L. Rev. 1171, 1177-2000 (2001). See also Arthur J. Cockfield, "Should We Really Tax Profits From Computer Servers?" Tax Notes Int'l, Nov. 20, 2000, p. 2407.

/9/ For a discussion of income shifting strategies that could be employed by software firms, see David R. Tillinghast, "Taxation of Electronic Commerce: Federal Income Tax Issues in the Establishment of a Software Operation in a Tax Haven," 4 Fla. Tax Rev. 339 (1999). See also Jinyan Li, Slicing the Digital Pie With a Traditional Knife -- Effectiveness of the Arm's Length Principle in the Age of E-Commerce (Center for Innovation Law and Policy Working Paper, 2001) and Tax Notes Int'l, Nov. 19, 2001, p. 775; Reuven S. Avi-Yonah, "Tax Competition and E-Commerce," Tax Notes Int'l, Sept. 17, 2001, p. 1395.

/10/ Recent legal reform efforts in many countries generally accept that so-called electronic agents (i.e., software programs) can create legally binding contracts. See, e.g., Uniform Law

Conference of Canada, Uniform Electronic Commerce Act (1999).

/11/ The definition of a PE within tax treaties will have little effect with respect to cross-border transactions involving tax havens because most nations do not negotiate tax treaties with tax havens. But the notion that computer code can create active business income, even in the absence of a human intermediary, may lead to shifting strategies to these tax havens.

/12/ See Michael Allen, "As Dot-Coms Go Bust in U.S., Bermuda Hosts Odd Little Boomlet," Wall St. J., Jan. 8, 2001, at A1 (discussing how tax havens are running fiber- optic cables over the seabed to gain better access to the United States and other markets). A recent book explores possible use of offshore tax havens for e-commerce operations. See Michael H. Grosh, Choosing an Offshore: Cybertax in the New Millennium 189-93 (2000) (ranking tax havens in part according to telecommunications facilities).

/13/ For a description of efforts on behalf of U.S. expatriates to set up e-commerce operations in tax havens such as Antigua, see Mark Schone, "EPZ Money," WIRED, p. 124 (November 2000).

/14/ "Barbados: An Island With Digital Signature," Economist, June 2, 2001, at 39 ("Developing Barbados as an e-commerce jurisdiction is a priority of the bank.").

/15/ Costa Rica is home to the world's largest online gambling company, World Sports International. The company maintains that it "does not report [gambling winnings] to the IRS because it is a Costa Rican owned company." See World Sports International Web page, available at http:// www.betwsi.com/sb-faq.html.

/16/ Current rules try to stop this shifting through a number of devices. The main constraint to this type of strategy under U.S. laws is the so-called super-royalty imposed on cross-border transfers of intangible assets. A transferee company must pay a royalty to the transferor company as if the transferor company had merely licensed the technology to the transferee company. See section 367(d).

/17/ The member states of the European Union have agreed, through a nonbinding political commitment, to eliminate tax measures that promote harmful tax competition by January 1, 2003. See Conclusions of the ECOFIN Council Meeting on December 1, 1997 Concerning Taxation Policy, reprinted in "EC Update," 38 European Taxation EC-5 (1998). OECD member states have similarly agreed to reduce harmful preferential tax regimes in the context of mobile financial and other services by April 2003. See OECD, OECD Harmful Tax Competition Report (1998); Fiscal Affairs Comm., Towards Global Co-operation: Progress in Identifying and Eliminating Harmful Tax Practices (2000).

/18/ See, e.g., U.S. model tax treaty, supra note 5, at art. 7(2). A major exception to this general rule is the restricted force of attraction rule suggested by the United Nations model tax treaty, which is often requested by developing countries. See United Nations, Taxation Convention Between Developed and Developing Countries, Jan. 1, 1980, at art. 7(1).

/19/ OECD Technical Advisory Group on Monitoring the Application of Existing Treaty Norms for the Taxation of Business Profits, Attribution of Profit to a Permanent Establishment Involved in Electronic Commerce Transactions (Discussion Paper 2001) [hereinafter, OECD E-Commerce Profit Attribution Report]. It was indicated that the principles developed within the paper could "equally apply to other forms of e-commerce but would need to be adapted to the particular factual situation." Id. at para. 15.

/20/ The OECD E-Commerce Profit Attribution Report is based on another recent OECD discussion paper that discusses in a broader sense the applicability of the profit attribution rules to all economic activity. See OECD, Discussion Draft on the Attribution of Profits to Permanent Establishment (2001).

/21/ See OECD E-Commerce Profit Attribution Report, supra note 19, at paras. 28-31.

/22/ Id. at para. 28.

/23/ Id. at paras. 62-63.

/24/ Query the application of so-called intelligent agent software that can negotiate, for example, the price of inputs with the automated software of a supplier. The draft report notes that more sophisticated software may call for a greater allocation of market risk to the server/PE. Id. at para. 61 n.5.

/25/ Id. at para. 64. Under the "contract service provider" model, the head office is considered to retain economic control over all the property (tangible and intangible) transferred to the PE thus the risks associated with the use of the assets are considered to remain with the head office. Id. at para. 67. Under the "independent service provider" model, the server/PE assumes greater risk and hence potentially greater returns.

/26/ Id. at paras. 72-73.

/27/ Id. at para. 78.

/28/ The report concludes that the functional analysis "would, in all likelihood, leave the PE with a quantum of profit that is insignificant relative to either the value of transactions processed through the permanent establishment or the arm's length cost of securing the use of the hardware and software required to ensure the continuous operation of the server without human intervention." Id. at para. 105.

/29/ See U.S. Department of Treasury, The Deferral of Income Earned Through U.S. Controlled Foreign Corporations (December 2000); and OECD Technical Advisory Group on Treaty Characterization of Electronic Commerce Payments (2001).

/30/ Commentators have discussed how the PE principle has been weakened by evolving business practices in contexts outside of e-commerce. See, e.g., Arvid A. Skaar, Permanent Establishment: Erosion of a Tax Treaty Principle (1991).

/31/ There may be reasons that motivate a multinational to maintain a server in a high-tax country (such as the need to ensure faster download times in large consumer markets). But the firm can elect to ensure its server does not constitute a PE (and hence will not attract taxation) through strategies such as hosting the firm's Web site on a server owned by an unrelated ISP or ensuring that the software functions within the server perform mere auxiliary or preparatory activities such as transmitting the digital product.

/32/ See OECD E-Commerce Profit Attribution Report, supra note 19, at para. 105 (discussing how, in the context of an online retailer, "the permanent establishment is only performing low-level automated functions that make up only a small proportion of the functions necessary to act as a full function retail outlet/distributor or as a full function service provider. The level of profit earned is likely to be commensurately low and be very significantly less than that earned by full function retail outlet/distributors or full function service providers.").

/33/ A PE, under traditional tax principles, provides core business functions. This was the conclusion of the earlier OECD Working Party report with respect to the server/PE principle. See OECD Server/PE Proposal, supra note 6, at para. 42.8. ("Where [the server] functions form in themselves an essential and significant part of the business activity of the enterprise as a whole, or where other core functions of the enterprise are carried on through the computer equipment . . . there would be a permanent establishment."). The Working Party considered a typical online retailing operation and concluded that the comprehensive automated functions of the server such as order taking, processing of payments, and the delivery of products and found these comprehensive functions would give rise to a PE. Id. at para. 42.9.

/34/ In fact, the TAG report noted that some technological risk could be assigned to the PE. See OECD E- Commerce Profit Attribution Report, supra note 19, at para. 60. However, if the server is characterized as a service provider then the provider may not be expected to fully compensate the purchaser for lost transactions. Id. at para. 65.

/35/ See OECD, Model Tax Convention: Attribution of Income to a Permanent Establishment 17-29 (1994). For discussion of these rules in the context of e-commerce, see Balancing National Interests, supra note 8, at 195- 97. The TAG notes the problems associated with these rules in the context of the e-tailing hypothetical. The main problem is that different rules exist to allocate intangible rights among related legal entities (e.g., corporations) which produces different results when PEs are used. See OECD E-Commerce Profit Attribution Report, supra note 19, at paras. 83-88.

/36/ The TAG advocates a change in tax policy whereby only the head office would maintain ownership over the intangible asset and hence only the head office should be compensated for its use. Id.

/37/ Id. at paras. 50 and 103.

/38/ Many U.S. courts have developed a similar interactive Web site test to see whether the exercise of jurisdiction by a U.S. court over a foreign company will meet constitutional requirements surrounding due process. See, e.g., Zippo Manufacturing v. Zippo Dot Com, 952 F.

Supp. 1119 (1997) (adopting a sliding-scale test whereby the greater the commercial activity conducted via the Internet, the greater the chance that personal jurisdiction will be found).