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TAXATION OF SOFTWARE DEVELOPMENT COSTS

I. OVERVIEW

The rapid development and growth experienced by the software industry has induced substantial technological change in a relatively short period of time.[1] Each year consumers in the United States spend billions of dollars on computer software and related products.[2] In spite of this enormous investment, however, the tax treatment of software development costs is unclear. In some cases, a software developer immediately may expense the costs of development; in other cases, a developer must capitalize and amortize such expenditures.

The decision to capitalize or expense a cost is a significant one in any area of business or industry. The mere time value of money makes it advantageous to deduct costs related to the development of an item as they are incurred rather than to capitalize these costs. This is due to the fact that because it reduces the overall tax burden, expensing costs enhances one's cash flow, which ultimately provides more dollars for expansion or for realization of profit.

This Note discusses the proper tax treatment of the expenses incurred while developing computer software. First, it focuses on the state of the present law. Second, it explores the tax treatment of similiar expenditures. Third, it examines the manner in which software costs are treated for accounting purposes. Finally, its analysis turns to the tax treatment of softward expenditures under the Haig-Simons and consumption tax bases.

II. PRESENT AVAILABILITY OF DEDUCTIONS FOR SOFTWARE DEVELOPMENT COSTS

Tax Reform Act of 1986[3] (hereinafter "TRA 86") eliminated section 174(a)[4] from the Internal Revenue Code (hereinafter "IRC"). In the past, taxpayers expensed software development costs through section

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1. Stivers, Kertz, *What's Proper Accounting For Software Development?*, CA MAGAZINE, Jan. 1985, at 28.
2. *Id.*
3. Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. at 2085 (codified at scattered sections of 26 U.S.C.).
4. I.R.C. § 174(a) (1986) (pre-TRA 86).

174(a) which provided a current deduction for research and experimental costs paid within the taxable year and incurred in connection with the taxpayer's trade or business.[5]

In Revenue Procedure 69-21[6] the Internal Revenue Service ("IRS") stated:

> The costs of developing software . . . in many respects so closely resemble the kind of research and experimental expenditures that fall within the purview of section 174 of the Internal Revenue Code of 1954 as to warrant accounting treatment similar to that accorded such costs under that section. Accordingly, the Internal Revenue Service will not disturb a taxpayer's treatment of costs incurred in developing software, either for his own use or to be held by him for sale or lease to others where . . . [a]ll of the costs properly attributable to the development of software by the taxpayer are consistently treated as current expenses and deducted in full in accordance with rules similar to those applicable under section 174(a) of the Code.[7]

In Revenue Procedure 71-248[8] the IRS again observed the similarity between software development costs and research and experimental costs under section 174.[9]

A series of private letter rulings reinforced the argument that software development expenditures were eligible for section 174 treatment. The Commissioner held that the software development costs at issue were specifically deductible as section 174 expenses[10] or, indicated that at minimum, the deductibility of software costs under section 174 would be analyzed on a case by case basis.[11]

Another series of letter rulings addressed the situation where a taxpayer hired an individual to develop a software package. The IRS wished to determine whether contractual payments to the party hired to develop the software qualified as development costs or merely constituted the purchase price. The Commissioner determined:

> [The] taxpayer in the instant case contracted with X and Y to convert certain computer programs to be compatible with . . . equipment for a fixed price of X dollars. It is our understanding that neither the opera-

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5. The ensuing historical progression of section 174 legislation illustrates the development and pattern of the IRS's perception of software production expenses. While a thorough discussion of the application of section 174 is not necessary here, a brief discourse on it establishes the current state of IRS perception of software development costs.

6. Rev. Proc. 69-21, 1969-2 C.B. 303, § 3.

7. *Id.* at § 3.

8. Rev. Proc. 71-248, 1971-1 C.B. 55.

9. Interestingly, the IRS did not specifically state that software development costs *were* research and experimental expenditures, only that they "closely resembled" research and experimental expenditures.

10. Priv. Ltr. Rul. 8136024 (Sept. 16, 1981).

11. Priv. Ltr. Rul. 8145077 (Nov. 18, 1981); Priv. Ltr. Rul. 8245018 (Nov. 24, 1982); Priv. Ltr. Rul. 8303090 (Jan. 26, 1983).

tional feasibility nor the cost of the software were in doubt at the time the contract was entered into . . . . The only risk thus borne by the taxpayer was that the element once converted would not be a commercial success. Accordingly, we do view the cost of converting the software in the instant case as a cost of developing software.[12]

In a subsequent letter ruling, the Commissioner added:

If computer software is custom made for the taxpayer, and the developing party is responsible for its operability, then the transaction would be substantially the same as that of a "purchase" and thus out of the purview of section 174(a) . . . . Thus, the agreement between the taxpayers and Corporation A must be examined in its entirety to determine which party bears the risk of the software's functional utility . . . . [I]f payments made by the taxpayer are costs of developing software . . . [they] may be currently deducted under section 174(a).[13]

Later rules treated software development costs less favorably than they were treated under section 174.[14] In a proposed treasury regulation the IRS established a general rule that "the costs of developing computer software specifically were not to be considered research or experimental expenditures."[15] The treasury regulation carved out an exception for expenditures incurred in the production of new or substantially improved computer software. These expenditures could qualify as section 174 costs. This favorable tax treatment applied to production and improvement costs only if serious doubts existed about the operational feasibility of the program. This is a relatively harsh standard compared to the standards applied other items of technology eligible for section 174 deductions.[16] Private industry greeted the proposal described above with a certain amount of hostility; accountants, lawyers, congressmen and others feared the negative impact that the proposals could have on the economy.[17]

As mentioned, TRA 86,[18] effective January 1, 1987, eliminated section 174 research and development deductions from the IRC. That leaves the taxpayer in a difficult situation. Past capitalization or expensing decisions focused on whether the taxpayer could effectively characterize his or her software development costs as costs incurred in the pursuit of speculative research. Today that distinction is moot.

The tax treatment of software expenses has been uncertain and becomes even more uncertain with the elimination of section 174. In light of the fact that practically all of the past legislation focused on it, the

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12. Priv. Ltr. Rul. 7804007 (Jan. 27, 1978).
13. Priv. Ltr. Rul. 8136024 (Sept. 16, 1981).
14. DiBernardo, *The Taxation of High Technology*, TAXES, Dec. 1983, at 813, 817.
15. *Id.*
16. *Id.*
17. *Id.* at 817.
18. *See supra* note 3.

absence of section 174 indicates that expensing treatment for software development costs no longer exists. Although this conclusion seems extreme, it is not impossible to reach.

A final consideration is the distinction between the purchase of pre-developed software and the development of one's own software package. Each transaction results in the acquisition of a product. However, purchased software is more easily capitalized as it requires less subjectivity in determining the exact cost. This is because the development cost is easily identified as the purchase price. Also the decision to purchase a particular program reflects the taxpayer's opinion on the potential future economic benefit of that package.[19]

In the case of independently developed software, neither of these characteristics exist. Such software has an indeterminable cost and improbable future economic benefit. The differences between the essential characteristics of purchased and developed software justify different tax treatment. Parallel treatment of both types of software costs is inadequate to resolve the cost allocation problems. Capitalization of all development costs is not a workable solution.

III. CASE LAW PRECEDENT IN OTHER AREAS

The question of whether to expense or to capitalize development or production expenditures has a long history. The issue has been litigated as it relates to the development of manuscripts, motion pictures and artwork.

A. MANUSCRIPT DEVELOPMENT COSTS

The line of cases, revenue rulings and legislation concerned with manuscript development costs incurred by authors and publishers leans toward allowing a taxpayer to expense the costs. As one commentator states "the Commissioner generally allowed a professional with an established system of accounting either to deduct or to capitalize according to his normal practice as long as he was consistent."[20] Another commentator reaffirms this view as "the Commissioner reputedly has been liberal in allowing professional writers and artists to deduct legiti-

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19. *See, e.g.,* Rev. Proc. 69-21, 1969-2 C.B. 303; *Deductibility of "Computer Software" Costs,* N.Y. CERTIFIED PUB. ACCT., Dec. 1969, at 987; Fed. Tax Coordinator 2d (Res. Inst. Am.) L-1514 (Feb. 17, 1983) Purchased software must be capitalized under present law. The buyer of a software package treats it one of two ways, depending on how it is characterized or billed. If the software is included in the purchase price of the hardware, then it must be depreciated over the useful life of the hardware. If the charge for the software can be severed from the cost of the hardware, then it may be amortized over five years or a shorter useful life that the taxpayer establishes.

20. Note, *A Comparison of Tax Treatment of Authors and Inventors,* 70 HARV. L. REV. 1419, 1422 (1957).

mate costs as current expenses, provided that the taxpayer has been consistent in his accounting procedures."[21]

One of the first cases addressing this issue is *Doggett v. Burnett*,[22] in which the taxpayer in 1933 was permitted to deduct $38,000 in expenditures for printing, advertising, sale, salary and travel relating to the publication of religious books. In 1952, the tax court held similarly in *Kluckhohn v. Commissioner*[23] and allowed the taxpayer, a newspaper correspondent, to deduct the attributable portion of his wife's travel costs to Australia to collect information for use by the taxpayer in his writing. In 1959, the court in *Brooks v. Commissioner*[24] permitted a freelance research scientist to deduct travel costs incurred during research despite the fact that she did not expect a profit from publication of her results. The court held that because the expenses were made in good faith, for the purpose of making a future profit, they qualified as deductible.[25]

In 1963, the Commissioner put his stamp of approval on the *Brooks* holding in Rev. Rul. 63-275,[26] which legitimated the deduction of research expenses (including travel expenses) incurred by university professors with an intent to publish scholarly materials. The rationale was that expenses related to scholarly publications could not be considered incurred for the purpose of acquiring a specific, income-producing asset, and therefore they were not the type of expenses which required capitalization.

In many revenue rulings, however, the Commissioner favored capitalization. In Rev. Rul. 68-194,[27] the Commissioner indicated that expenses of an author, including secretarial help, art work, supplies, postage and travel incurred in the production of a literary manuscript were capital expenditures under section 263;[28] thus the proper treatment for the expenses was to include them in the basis of the taxpayer's property and to amortize them over the actual income producing life of the book. In Rev. Rul. 73-395,[29] the Commissioner established that the taxpayer could not deduct all his writing, editing, design and artwork for visual teaching portfolio texts. The Commissioner determined that as their products had an ascertainable useful life of more than one year, the expenses were capital in nature. The taxpayer

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21. Shine, *Some Tax Problems of Authors and Artists*, 13 TAX. L. REV. 439, 446 (1958).

22. Doggett v. Burnett, 65 F.2d 191 (D.C. Cir. 1933).

23. Kluckhohn v. Commissioner, 18 T.C. 892 (1952).

24. Brooks v. Commissioner, 274 F.2d 96 (9th Cir. 1959).

25. *Id.*

26. Rev. Rul. 63-275, 1963-2 C.B. 85.

27. Rev. Rul. 68-194, 1968-1 C.B. 87.

28. I.R.C. § 263 (1973).

29. Rev. Rul. 73-395, 1973-2 C.B. 87.

capitalized the expenditures under section 263[30] and depreciated them under section 167(a);[31] however, the products of these expenses were not afforded inventory status under section 471.[32] These revenue rulings indicated that all prepublication expenditures must be capitalized.

After the promulgation of Rev. Rul. 73-395, the House Ways and Means Committee manifested its disapproval the IRS' approach.[33] The committee's apprehension was based on their perception that retroactive application of the revenue ruling would have a negative impact on established taxpayer practices. Historically, however, no standard procedures had been developed to assist the taxpayer. The House Committee sought to neutralize the effect of the revenue ruling by allowing taxpayers to continue to treat their prepublication expenditures in a manner consistent with their past treatment until the IRS could establish uniform regulations for the publishing industry. Therefore, Congress directed that the revenue ruling be applied prospectively.[34]

In the Tax Reform Act of 1976,[35] Congress enacted IRC section 280,[36] addressing the capitalization issue. Section 80(a) allows amounts attributable to the production of a book to be deducted if the deductions meet the requirements of section 280(b). Section 280(b) regulates the timing of the amounts deductible to those taxable years ending during the period in which the taxpayer reasonably may be expected to receive substantially all of the income he will receive from the book. The amount deductible for that taxable year is the amount which bears the same ratio to the sum of all such amounts attributable to the book as the income received from the property for that taxable year bears to the sum of the income the taxpayer reasonably may be expected to receive during such period. Congress elected that this section take effect after December 31, 1975. Evidently, Congress' reaction to the erratic state of the law concerning manuscript development costs was to employ a strict one year rule.

Recent case law dealing with the issue of author's expenses indicates a return to a more lenient approach. In *Faura v. Commissioner*,[37] authors were allowed to treat their expenditures as ordinary and necessary business expenses that could be deducted immediately even though such expenses result in the creation of long lived assets, such as books.

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30. I.R.C. § 263 (1973).

31. *Id.* § 167(a).

32. *Id.* § 471.

33. H.R. REP. NO. 658, 94th Cong. 1st Sess. 337 (1975).

34. *See* Faura v. Commissioner, 73 T.C. 849, 860 (1980).

35. Tax Reform Act of 1976, Pub. L. No. 94-455, § 210, 90 Stat. at 1520 (codified at 26 U.S.C. § 280).

36. I.R.C. § 280 (1976).

37. *Faura*, 73 T.C. at 849.

The *Faura* court reasoned that "[n]ot only has prior case law almost invariably allowed an individual in the trade or business of writing some current deductions, but commentators have uniformly favored such deductions or at least observed that they were often permitted in practice by the [Commissioner].[38]

The most recent case on the issue of the deductibility of the cost of producing a manuscript makes a retreat from *Faura*'s permissibility of expensing the costs to develop a manuscript. In *Encyclopaedia Britannica v. Commissioner*,[39] the court considered the deductibility of a dictionary commissioned by Encyclopaedia Britannica from an outside author. The court observed that while some expenses may be deductible, they are never deductible when the expenses relate to acquiring or producing a specific asset.[40]

The debate about whether to expense or capitalize development costs incurred by authors and publishers has had a volatile history. Some revenue rulings and cases support expensing. Yet the Commissioner, through various revenue rulings, has manifested his discontent with this approach and has attempted haphazardly to forestall expensing. The legislature has consistently responded in an attempt to protect the taxpayer from the confusion of this unsettled area of the law. The legislature has signaled that it would give favorable consideration to any proposals providing uniformity to the existing law.

B. MOVIE PRODUCTION COSTS

Case law addressing the allocation of the costs of movie production began in 1939 with *May v. Commissioner*.[41] The taxpayer was employed by Columbia Pictures and Fox Film Corporation as a writer and director. He was allowed to deduct entertainment, automobile and communication costs as the ordinary and necessary expenses of his trade or business of being a writer and director. The court allowed expensing of similar items in *Shumlin v. Commissioner*[42] and declined to require capitalization of the costs of travel, entertainment and other business expenses into separate plays.

The most recent legislation regarding motion picture development costs is section 210 of the Tax Reform Act of 1976.[43] Section 210 denies expensing treatment for such costs. Instead, movie production costs

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38. *Id.* at 861.

39. Encyclopaedia Britannica v. Commissioner, 685 F.2d 212 (7th Cir. 1982).

40. The court specifically reserved its opinion from application to a publisher whose business is producing capital assets and did not make a determination as to the deductibility of these recurring business expenses of one whose business is producing capital assets.

41. May v. Commissioner, 39 B.T.A. 946 (1939).

42. Shumlin v. Commissioner, 16 T.C. 946.

43. *See supra* notes 35 and 36 and accompanying text.

must be capitalized. The legislative history of section 280(a) indicates that it was aimed primarily at investors in motion picture tax shelters.[44] The Senate report accompanying the legislation states that "[t]he capitalization requirement applies to costs of producing, displaying or distributing a film . . . or similar property,"[45] unless the taxpayer can demonstrate that he reasonably expects substantially all the income from the production to be received in the same taxable year.[46]

The accounting practice of the development of motion pictures also requires capitalization of these expenditures. Financial Accounting Standards Board ("FASB") requires film production costs to be capitalized as inventory and amortized to future periods as related revenues are recognized.[47]

C. ARTISTS' CREATION COSTS

Artists' costs have also been the subject of litigation. A court examining the expenses of a sculptor in *Rood v. United States*[48] held that expenses relating to the creation of sculptures, including teaching, operating a gallery and writing, were all deductible as ordinary and necessary business expenses under section 162. A subsequent case, *Synder v. United States*,[49] allowed a photographer to deduct the expenses relating to photographs he took (which he later compiled in a photography book) as included in the term ordinarily under section 162(a). The court focused primarily on the determination of whether the taxpayer's activity qualified as a business within the meaning of section 162. The taxpayer in question had another full time profession as a lawyer and as of yet, had not sold any of the products of his photography labor. Once the hurdle of establishing a legitimate business was overcome, the court had no difficulty in finding the taxpayer's expenditures to be deductible.[50]

D. RELEVANCE OF THE TAX TREATMENT OF SIMILIAR EXPENDITURES

What relevance does the tax treatment of the development expenses of manuscripts, motion pictures and artwork have to the tax

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44. S. REP. No. 938, 94th Cong., 2d Sess. 71-81 (1976).

45. *Id.* at 78.

46. I.R.C. § 280(b) (1976).

47. FIN. ACCOUNTING STANDARDS BD., FINANCIAL REPORTING BY PRODUCERS AND DISTRIBUTORS OF MOTION PICTURE FILMS, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 53 1981.

48. Rood v. United States, 184 F. Supp. 791 (D. Minn. 1960).

49. Synder v. United States, 679 F.2d 1359 (1982).

50. The Court relied on the one year rule as a mere guidepost and held according to *Faura* that the expenditures could be deducted as ordinary and necessary business expenses even though they resulted in long-lived assets.

treatment of software development expenses? Like manuscripts, films and artwork, software qualifies as an "original work of authorship,"[51] and as such it is protected by the Copyright Act of 1976.[52] However, the fact that all four are works of original authorship and receive copyright protection does not justify parallel tax treatment.

The rationale for treating software like films is even more attenuated. Software resembles motion pictures in that each requires a relatively large investment of capital and time to develop a final product. Yet advocates of the software industry claim similarities to the motion picture industry are negligible. A more precisely defined relationship between costs and attributable benefits exists in the movie industry. Movie productions run a lesser risk of failure. Software must be constantly upgraded to meet technological innovations. It is perpetually in a development stage;[53] it is always vulnerable to rapid technological development and obsolescence.

Manuscripts, motion pictures and artwork bear little resemblance to software designs and legislation concerning the tax treatment of such products need not address the same concerns as legislation pertaining to the tax treatment of software development costs. Also, each field is in a state of confusion concerning how to handle the relevant development costs. Thus, similar case law precedent is not particularly helpful or even relevant to the dilemma of deciding whether to capitalize or expense software expenditures.

IV. ACCOUNTING METHODS

The trend in the accounting field is to capitalize software development costs.[54] According to a recent survey, twenty percent, if not more, of computer industry firms capitalize some of their software expenditures.[55] Another survey details the considerable impact capitalization has on reported earnings-per-share (hereinafter "EPS") calculations.[56] The survey estimates that if a major computer firm capitalized fifty percent of its software costs, their EPS would increase about forty cents.

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51. Nimmer, *The Subject Matter of Copyright Under The Act of 1976*, 24 UCLA L. REV. 978 (1977).

52. *Id.* at 992-96 and 998-1004.

53. England, *Accounting For Software Costs: Capitalize Or Expense?*, MICH. C.P.A., Wtr. 1985, at 62, 65.

54. *Id.* at 62.

55. *A Pen Stroke Could Swell Software Profits*, BUS. WK., March 19, 1984, at 71. (Deloitte, Haskins and Sells performed a recent survey and determined that at least 20 percent of the firms in the software industry capitalize certain software development costs).

56. *Id.* at 72.

Still, most software firms expense all costs of software development.[57] This diversity in accounting treatment has led accounting profession regulatory agencies to voice their concerns.

On August 8, 1983, the Securities Exchange Commission (hereinafter "SEC") issued a moratorium on the capitalizing of software development due to the agency's uneasiness about the lack of uniform methodologies for accounting for development costs. According to SEC rules, a company could capitalize software costs only if it had made a practice of doing so in statements filed with the SEC prior to April 14, 1983, and had disclosed its capitalization policy in those statements.[58] Otherwise, capitalization was prohibited.[59] The SEC goal in creating the temporary rule was to induce uniformity of financial statements. The SEC announced that it would reconsider its position when appropriate accounting and reporting guidance was available.[60]

The Financial Accounting Standards Board responded by promulgating three pronouncements elaborating on the accounting treatment of software development costs.[61] The pronouncements use broad categories of research and development and exhibit a strong bias toward expensing software development costs in the period incurred.

FASB Statement No. 2[62] required that unless a future use existed for them, all research and development costs were to be expensed in the period incurred. If a future use existed, then such expenses should be capitalized and amortized over future periods. One can criticize statement No. 2 because it does not provide explicit guidance as to the appropriate designation of a cost incurred because of research and development. Thus, FASB Statement No. 2 did not adequately address the ambiguities inherent in analyzing software development expenses.

FASB Interpretation No. 6[63] addressed the issue of which software development expenditures could be expensed as research and development costs. Interpretation No. 6 established that in general, all internal costs to develop software for sale or lease, other than minor modification costs, should be expensed. However, interpretation No. 6 still

57. Stivers, *supra* note 1, at 29.

58. United States Securities and Exchange Commission, Rule 3-21, 17 C.F.R. § 210. Release Nos. 33-6641 and 34-19674, File No. 57-968.

59. *Id.*

60. *Id.*

61. Each of these three pronouncements specifically excludes software developed under contract, software developed for internal use in selling or administrative functions and purchased software.

62. FIN. ACCOUNTING STANDARDS BD., ACCOUNTING FOR RESEARCH AND DEVELOPMENT COSTS, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 2 (1974).

63. FIN. ACCOUNTING STANDARDS BD., APPLICABILITY OF FASB STATEMENT NO. 2 TO COMPUTER SOFTWARE, INTERPRETATION OF FINANCIAL ACCOUNTING STANDARDS NO. 6 (1975).

failed to clarify when it would be appropriate to either expense or capitalize development costs.

Finally, the FASB issued Technical Bulletin No. 79-2[64] which determined that statement No. 2 and interpretation No. 6 did not make all software production costs expensible research and development costs. The bulletin, however, failed to provide guidelines for determining which costs were expensible. Determinations of expensibility were to be made "in light of all the facts and circumstances surrounding the particular statement."[65] The pronouncement failed to indicate what facts and circumstances determined which costs were to be expensed and which were not. Also, even if some costs could be earmarked for capitalization, the decision of which future periods would be appropriate amortization remained unresolved.

The FASB pronouncements proved difficult to interpret and apply; essentially they lacked realistic guidelines for determining what treatment to give various expenses. The FASB requested the American Institute of Certified Public Accountants ("AICPA") to study the issue. AICPA published a position paper in February of 1984 entitled "Accounting For Costs of Software For Sale or Lease."[66] The paper analyzed the software development process in two major phases: the planning and design phase and the construction phase. In order to establish a coherent model for determining what software costs should be capitalized and amortized and what costs should be expensed as research and development, the AICPA paper describes the various phases in the software development process.

During the planning and design phase, a product plan, a construction plan and a financial feasibility plan is developed. The product plan defines the consumer and business needs, conducts market and environmental analysis and investigates technical constraints.[67] The financial flexibility plan forecasts sales, costs and expected rate of return on investment. At this juncture, technological feasibility is determined.[68] If feasible, the project will go on to the construction phase. The construction plan determines the method of physical construction or actual building of the software.[69]

In the construction phase, actual manufacturing activities of the

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64. Computer Software Costs, Technical Bulletin No. 79-2 (Fin. Accounting Standards Bd. (1979)).

65. *Id.* at ¶ 3.

66. AM. INST. OF CERTIFIED PUB. ACCOUNTANTS, TASK ACCOUNTING FOR COSTS OF SOFTWARE FOR SALE OR LEASE FORCE ON ACCOUNTING FOR THE DEVELOPMENT AND SALE OF COMPUTER SOFTWARE, (1984).

67. *Id.* at ¶ 17.

68. *Id.* at ¶ 33.

69. *Id.* at ¶ 32.

product are performed in three stages. The phase begins in the detail program design stage where a general design is changed into a detailed design. Then coding and testing occurs, where virtually thousands of precise computer language instructions are written, encoding the detail design. Testing for accuracy follows the coding phase. Next, in the packaging stage, master versions of all the software components are created. After packaging, the construction phase is complete and the software package is ready for sale and distribution.

The AICPA, after examining the two phases described above, concluded that:

> NO SOFTWARE COSTS MAY BE CAPITALIZED BEFORE THE COMPLETION OF THE PLANNING AND DESIGN PHASE. CONSTRUCTION COSTS SHOULD BE CAPITALIZED ONLY IF TECHNOLOGICAL, MARKET AND FINANCIAL FEASIBILITY HAS BEEN ESTABLISHED AND THEIR RECOVERABILITY OF THESE COSTS FROM FUTURE SALES IS LIKELY TO OCCUR.[70]

Thus, feasibility assurance in the development process determines at what point capitalization of software costs begins. Normally feasibility assurance will be developed by the end of the planning and design phase. In some cases, it may not be established until some time in the construction phase. In any case, all software development costs incurred prior to establishment of technical, market and financial feasibility will be permitted to be expensed.

In response to the AICPA paper, the FASB issued an exposure draft, "Accounting For the Costs of Computer Software To Be Sold, Leased or Otherwise Marketed".[71] This draft had the same goals of dispelling confusion about how to account for software costs and improving uniformity among financial reporting.

The FASB recommendations in the exposure draft are similar to the AICPA's in that both propose selective capitalization of development costs. Overall, the FASB capitalization criteria are more restrictive than the AICPA criteria. In addition to elaborating on capitalization guidelines, the exposure draft establishes recoverability assessments and amortization schedules. Recoverability will be assessed on a product by product basis. Amortization of capitalized costs should start when the product becomes available and will be based on projected revenue (with an annual minimum equal to the straight line amortization over the estimated economic life of the product).[72]

The FASB and AICPA positions lean heavily toward expensing of software development costs. Curiously, accountants dislike the trend

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70. *Id.*

71. FIN. ACCOUNTING STANDARDS BD., ACCOUNTING FOR THE COSTS OF COMPUTER SOFTWARE TO BE SOLD, LEASED OR OTHERWISE MARKETED, EXPOSURE DRAFT (1984).

72. *Id.* at ¶¶ 10, 11 and 13.

toward expensing. They anticipate that the software products industry will be left without assets. They believe that immediate expensing of software development costs indicates a low net income, or possibly a loss, which is unattractive to potential investors.[73]

Support for this position is documented in a National Association of Accountants (hereinafter "NAA") study.[74] The study developed two fictional companies. One of the companies, for tax analysis purposes, capitalized its software costs. The second virtually identical company expensed its software costs. Two commercial lending officers were each sent a survey. The results of the surveys illustrated that the company capitalizing software costs would obtain a loan more easily than the company expensing the same costs. This effect on the investment decision can have an even stronger impact on new software companies whose start-up costs would attract additional capital investment as a result of capitalization.

Other views challenge the proposition that capitalization of costs is the best method. Expensing is more attractive to investors and creditors who favor a conservative treatment of expenditures on a financial statement.[75] It is more easily understood as it approximates cash flows.[76] Also, investors may be confused by financial statements of computer companies. If all software development costs are permitted to be expensed, uniformity may develop within the computer industry. However, financial statements of the computer industry no longer may be comparable with financial statements of other industries. The result may be that investors and creditors will have a difficult time comparing expected industry returns.

The overriding concern remaining is whether uniformity of tax and accounting methods is a desirable goal. Uniformity would avoid the need for two sets of extremely technical determinations. The simplicity of one set of determinations would bind the two communities and enhance effective communication between tax and accounting specialists. Likewise, it would avoid the necessity of keeping one set of books for tax purposes and another for accounting purposes. Yet, in many situations, accounting methods address considerations that similar tax procedures do not address. For example, generally, accounting methods seek to encourage capitalization of expenses. Capitalization ensures that the financial statements of "fly by night" companies will reflect their weak position by reducing the light cash flow the company has on paper. A

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73. Englard, *supra* note 53, at 63.

74. Stivers, *supra* note 1, at 32.

75. *Id.* at 33.

76. Chan & Jensen, *Immediate Expensing of Capital Assets*; TAXES, Oct. 1979, at 672, 673.

tax advisor, however, might encourage a new company to expense development costs if doing so would make them deductible.

Superficially, the adoption of accounting methods appears to provide the cure for the evasive and incomplete state of the tax law. However, close scrutiny reveals that accounting methods have not reached a state of sophistication that makes them adaptable to other fields. Mere application of accounting procedures to software development costs will not provide the uniformity essential to resolve the erratic state of taxation of these costs that presently exists.

V. TAX BASE ANALYSES

The previous examination of the present state of the law, precedential cases and accounting methods requires the conclusion that existing practices are not a means to clarification of the issue of whether to capitalize or expense software development costs.

> A good definition of income is an indispensible intellectual foundation for the evaluation of an income tax structure. It serves as a basis for the orderly consideration of specific questions about inclusions, exclusions and deductions. Without such a basis, discussion is likely to be unnecessarily discursive and the ad hoc conclusions reached may lack force.[77]

The proper measure of income can be determined by analyzing the goals of an effective tax system.

An often cited criterion for taxation is revenue raising potential. An important objective of any system of taxation is revenue; however, that observation does nothing to illuminate what method of raising revenue is best. If merely raising revenue were the goal, we would tax gross income, not net. Some authorities have suggested that taxing gross income would be unfair and unsound.[78] Possibly, this is why our system does not tax gross income.[79] Revenue raising is not the underlying goal to utilize in determining the appropriate method of taxation.

There are three basic goals of a good tax system: (a) fairness, (b) administrative feasibility and (c) economic rationality.[80] Fairness includes elements of vertical and horizontal equity.[81] Vertical equity is assessed by the relative amount of taxes paid by individuals of different income. The United States system of taxation is progressive. The proportion that one pays in taxes is based on the principle that people with

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77. M. MACINTYER & GAHN, *The Choice of the Base For a Personal Tax System: Income Versus Consumption*, in READINGS IN TAX POLICY 1.

78. BITTKER, STONE & KLEIN, FEDERAL INCOME TAXATION 11 (6th ed. 1984).

79. *Id.*

80. *Id.* at 11-16.

81. *Id.* at 12.

the more income should pay more tax. The principle behind horizontal equity is that people of equal income should pay equal tax.

Administrative feasibility develops the notion that the cost of implementing the system of taxation should be as low as possible.[82] In addition, the tax system must be objective: it should only impose those taxes that are capable of being collected. Objectivity may require some arbitrary rules in order to minimize the intrusion of enforcement on the individual taxpayer.

Economic rationality demands that before it imposes a tax, the government must assess the economic effects of such a tax.[83] Any tax will provide incentive or disincentive to various activities and investments. While tax neutrality seems best in theory, in practice we want individuals to make decisions that maximize resources. Therefore, tax law should encourage activities which maximize resources.

These three goals, fairness, administrative feasibility and economic rationality, provide a crucial framework for analyzing any method of taxation. Two methods of determining taxable income, Haig-Simons and a consumption tax, will be assessed within that framework to determine the appropriate method in the context of software development.

A.   HAIG-SIMONS THEORY OF INCOME

"A traditional starting point in formulating the base of the personal income tax has been the Haig-Simons definition of income."[84] This definition is reflected by a formula where personal income is the "algebraic sum of (1) the market value of rights exercised in consumption and (2) the change in value of the store of property rights between the beginning and the end of the period in question."[85] The Haig-Simons theory analyzes the sum of a taxpayer's consumption during the taxable period plus the increase (or minus the decrease) in the taxpayer's net worth during that period.

Within a Haig-Simons system of taxation, software development costs would be capitalized. As a new product is developed, the costs represent the money value of the net accretion in economic power between two points of time.[86] As it is income, this accretion is taxable.

How does the Haig-Simons definition of income as applied to software development costs perform under the criteria of fairness, administrative feasibility, economic rationality? Fairness is sacrificed be-

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82. *Id.* at 14.

83. *Id.*

84. MACINTYER, *supra* note 77, at 1.

85. H. SIMONS, PERSONAL INCOME TAXATION 50 (1938).

86. HAIG, *The Concept of Income—Economic and Legal Aspects,* THE FEDERAL INCOME TAX 7 (1921), *reprinted in* READINGS IN THE ECONOMICS OF TAXATION 59 (1959).

cause to apply a pure Haig-Simons analysis and to require capitalizing of software development costs would treat software more strictly than other accretions to capital. The Haig-Simons definition assumes that income is the amount an individual consumes without increasing or decreasing his capital. In practice, capital maintenance excludes from income many accretions to capital. Unrealized property appreciation, a form of saving, goes untaxed.[87] Retirement savings held in qualified pension plans, another form of saving, goes untaxed.[88] Many similar examples exist in the IRC. The result is to exclude from income various recurrent and nonrecurrent accretions to capital.[89]

Development costs are a form of saving in that they are an investment in a product with the expectation that it will reap more profit in the future. The fact that software investment is more speculative than existing non-taxed capital accretions strengthens the case for expensing software development costs.

The capitalization of investment costs generally falls short of the goal of vertical equity. Individuals of higher income may invest proportionately more of their income in items which must be capitalized than individuals of lower income. The higher income individual will pay more tax, yet he or she will have less cash to do so as the taxed dollars are reinvested. This individual is not wealthier and should not be taxed on the software development investment. As individuals of equal income will pay the same tax, despite the fact that the individual who invests will have less cash to do so, the capitalization approach fails to serve horizontal equity.

Administrative feasibility is sacrificed because the taxpayer seeks to defer the taxation in any way possible.[90] Various businesses and industries interpret and utilize capitalization and expensing in different manners. Some companies determine a minimum dollar value below which any expenditure, capital or not, is expensed. The figure will vary within different industries; typically, the taxpayer will take an agressive position on the deductibility of these expenses.[91] While the IRC does not specifically provide for such a practice, for administrative convenience, both for the IRS and the taxpayer, a certain amount of trade custom is recognized and allowed.[92]

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87. I.R.C. § 1031 (1987).

88. *Id.* § 219.

89. MACINTYER, *supra* note 77, at 11.

90. Doane, *To Capitalize or Expense—That is The Question*, TAXES, Aug. 1969, at 486.

91. *Id.* A specified minimum should be officially established and enforced. The implementation of a recognized minimum dollar value of a capital investment would enhance fairness and uniformity. The minimum could be developed by the industry's standards, IRS criteria or by an arbitrary amount.

92. *Id.* at 489.

Some taxpayers deliberately expense an obviously capital cost in expectation that the IRS agent will easily identify and protest the item. The taxpayer relies on the hope that other, less obvious items that should have been capitalized, yet were not, will not be identified.[93]

Another attempt to expense business costs that are ordinarily capitalized is to divide a large expenditure into a series of small ones which will fall under the acceptable minimum.[94] This type of behavior should be exposed easily by the experienced IRS agent; yet, the taxpayer has the superior knowledge of the industry and the ability to manipulate the facts surrounding the expenditure to his or her advantage. Consequently, the IRS fails to identify many "recast" expenses.

The efforts necessary to eliminate these abuses would cost too much to satisfy the goal of administrative feasibility. Application of a pure Haig-Simons tax requiring capitalization of these costs would impose a tax incapable of being collected.

When applying a Haig-Simons approach to the taxation of software development costs, the inconsistencies inherent in the Haig-Simons tax base create additional barriers to administrative feasibility. The distinction between when to capitalize and when to expense is vague. An expenditure is capital if it results in an acquisition of an asset or of something of value to the taxpayer with a useful life of more than one year.[95] Expenditures must be capitalized if they result in the creation of asset or of something of value with a useful life exceeding the taxable year.[96] It makes no difference whether the asset falls within IRC section 1221's definition of a capital asset. Such outlays mean the taxpayer has purchased an asset not merely incurred an expense. The IRC makes a capital outlay expressly nondeductible.[97]

The IRC codifies these concepts. Section 162, the section which deals with trade or business expenses, states: "In general—There shall be allowed as a deduction all the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business . . . ."[98] Section 162 is qualified by another IRC rule, section 263, which

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93. *Id.*

94. *Id.*

95. *See* Colorado Springs National Bank v. United States, 505 F.2d 1185, 1191-92 (10th Cir. 1974) (quoting Hotel Kingkade v. Commissioner, 180 F.2d 310, 312 (10th Cir. 1950) an expenditure should be capitalized "if it brings about the acquisition of an asset having a period of useful life in excess of one year or if it serves a like advantage to the taxpayer.")

96. Georator Corporation v. United States, 485 F.2d 283 (4th Cir. 1973) *cert. denied,* 417 U.S. 945 (1974). A distinction exists between capitalization and capital assets. Capital assets, when sold, qualify for capital gain or loss treatment. I.R.C. § 1221 (1986) (pre-TRA 86) states that all property held by a taxpayer is a capital asset except for specifically listed statutory exceptions. This topic presents issues beyond the scope of this article.

97. I.R.C. § 263 (1987).

98. *Id.* § 162.

"forbids the immediate deduction of capital expenditures" even if they are ordinary and necessary business expenses.[99]

Some case law suggests the one year rule of capitalization functions as a "mere guidepost for the resolution of the ultimate issue, not as an ultimate rule."[100] No absolute line of demarcation can be drawn between expenses that must be capitalized and those that can be expensed out.

Cardozo illustrated the absurdity of the current state of law best in his observations in *Welch v. Helvering*, "[O]ne struggles in vain for any verbal formula that will supply a ready touchstone."[101] If one takes literally the distinction of a capital expenditure as one that produces income, actual or imputed, beyond the one year useful life limitation, the logical result is to require capitalizing of practically every business expense. For example, companies typically deduct the salaries paid to employees. Under the preceding analysis, a salesman's selling activity could create goodwill or perhaps contractual relations, assets that would yield income for periods beyond the year in which the salary expense was incurred. Consequently, all salaries would have to be capitalized!

The capitalization requirement might sacrifice economic rationality as well. As recently as 1986, the Senate Finance Committee subscribed to the notion that the elimination of all tax preferences in the IRC is inappropriate. "[T]here are many preferences that the committee believes are socially economically beneficial. This is especially true when such preferences are used primarily to advance the purposes on which Congress relied in enacting them, rather than to avoid taxation of income from sources unrelated to the preferred activity."[102] If one abandons the goal of tax neutrality, as the Senate Finance Committee Report seems to advocate, then the rational result is to allow expensing of software development costs. This result seems particularly appropriate if one assumes that the goal of the tax law is to encourage maximization of resources.

Technological advance in the software industry is desirable. A policy paper issued by the Democratic National Committee task force, call-

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99. *Id.* § 263. The cost can be recovered by depreciation (or loss, depletion or bad debt). Depreciation theory allows the taxpayer to apportion to the corresponding years the diminution or decrease in value of the asset. The effect is to match this decrease against the income produced from the asset. The measure of the wearing out of assets the taxpayer deducts each year is an arbitrary percentage of the asset cost. The cost of an asset is determined by its unadjusted basis added with subsequent expenditures that the taxpayer capitalized. If an asset is an intangible (copyrights or patents), the depreciation deduction is called amortization.

100. Colorado Springs National Bank v. United States, 505 F.2d 1185, 1192 (10th Cir. 1974) (quoting United States v. Wehrli, 400 F.2d 686, 689 (10th Cir. 1968)).

101. Welch v. Helvering, 290 U.S. 111, 115 (1933).

102. S. REP. NO. 313, 99th Cong., 2d Sess. 713, 715 (1986).

ing for tax policies that would increase investment in the high technology area, predicts a technological revolution in the next twenty years as basic as the industrial revolution. The tax policy is a means to "speed its arrival and harness its potential."[103] The Economic Recovery Tax Act[104] introduced research and experimentation legislation because "in recent years spending for these purposes has not been adequate . . . [and] the decline in this country's research and development activities has adversely affected economic growth, productivity gains, and our competitiveness in world markets."[105]

Scientific research and technological development is an essential policy goal that must be encouraged. The taxpayer will consider the tax advantages and disadvantages of software development. Preferential taxation will encourage research and development. Thus, the Haig-Simons theory demanding capitalization will provide a disincentive to technology. This would be an economically irrational result.

The preceding analysis illustrates that an application of the Haig-Simons definition of income fails to provide rational guidance to the taxation of software development costs. The Haig-Simons approach is unfair, inconsistent and discourages essential research. The consumption tax is a more efficient approach to taxation of software development costs.

B. CONSUMPTION TAX

The premise implicit in a consumption tax is that individuals are taxed on what they consume, not what they earn. A tax on consumption is the same as a tax on income with a deduction for savings. Income is essentially "yield" which consists of services provided by property or individuals.

> Savings and increases or decreases in the value of capital assets are explicitly excluded . . . . [N]o provision is made for capital maintenance . . . . [N]o attention is paid to the question of permanence or recurrence. Income is equivalent to consumption, regardless of whether spending is financed out of current earnings or by using up capital.[106]

Within a pure consumption tax, software development costs should be expensed. The costs of software development are expenditures set aside in investment (specifically investment in new technology) and not

103. 1982 Legislative Outlook, 12 SkPL RPT (BNA) (Jan. 18, 1982).

104. Economic Recovery Tax Act, Pub. L. No. 97-34, 95 Stat. at 241-47 (1981).

105. H.R. REP. NO. 201, 97th Cong., 1st Sess. at 111 (1981).

106. MACINTYER, *supra* note 77, at 8 (referring to IRVING FISHER, THE NATURE OF CAPITAL AND INCOME (1906)); *Income in Theory and Income Taxation in Practice*, 5 ECONOMETRICA 1-55 (Jan. 1937); *The Concept of Income: A Rebuttal*, 7 ECONOMETRICA, 357-61 (Oct. 1939); IRVING FISHER AND HERBERT W. FISHER, CONSTRUCTIVE INCOME TAXATION: A PROPOSAL FOR REFORM (1942)).

wealth that is consumed and will not be replaced. The development costs are deducted, leaving the developed asset (the software) with a basis of zero.[107] When the software is fully developed and has a potential for profit (either through implementation of the technology within the individual's own business or through sale of the finished product) income is increased by the full proceeds. When this increased income is spent, the consumption tax takes effect. The result is a pure cash-flow system.[108]

How does the consumption tax, as applied to software development costs, perform under criteria of fairness, administrative feasibility, economic rationality? Fairness is adequately served. The expensing of the costs of software development encourages profit oriented investments. The investor who increases his profit has the opportunity to increase his consumption. As individuals with greater incomes spend more and therefore pay more tax, the consumption approach achieves vertical equity. Horizontal equity is achieved as individuals who spend similar amounts are taxed alike.

The consumption tax serves administrative feasibility in several ways. First, immediate expensing procedures are simpler than capitalizing. They naturally lend themselves to lessened litigation and administration costs.[109] Capitalizing complicates the investment decision and must be explained in detail to many existing and potential creditors and investors.[110]

Second, the nature of computer software development is not conducive to the criteria used for capitalization.[111] The definition of an asset is "a probable future economic benefit obtained or controlled by a particular entity as a result of past transactions or events."[112] Due to competition in the computer industry and the rapid rate of technological development, future revenues or benefits are not "probable."

Third, and most importantly, a consumption tax may be more consistently applied than a Haig-Simons tax. Under a consumption tax, all non-personal expenses are deductible. The persistent problem of how to characterize capital and non-capital outlays that plagues the Haig-Simons approach is not an issue in the consumption tax.

If one adheres to the notion that any tax will provide an incentive or disincentive to various activities and investments,[113] then software

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107. BITTKER, *supra* note 78, at 407.
108. Andrews, *A Consumption-Type or Cash Flow Personal Income Tax*, 87 HARV. LAW REV. 1113 (1974).
109. Chan, *supra* note 76, at 673.
110. Stivers, *supra* note 1, at 33.
111. Englard, *supra* note 53, at 65.
112. *Id.*
113. MACINTYER, *supra* note 77, at 8.

development costs should be expensed because this approach maximizes the individual's resources. A safe assumption can be made that the individual invests in software development because he or she believes he will benefit in the future. If a tax is imposed on the initial investment capital (instead of the proceeds the taxpayer collect and consumes), then the individual will have less of it. This will result in less future profit. A more efficient method allows the taxpayer to defer the tax by expensing the costs and taxes him later on his increased consumption. This method serves the tax system because the deferral provides more tax dollars later, at the same time the taxpayer is satisfied that he or she gets to defer and possibly increase his or her consumption dollars.

A final distinction must be addressed. While software development and business purchase costs may be properly expensed, personal software purchases should still be capitalized. A personal purchase of software is consumption. The individual buys a product that fits his or her needs. He or she consumes that software and ultimately will need to replace it. The consumption tax applies in that context. A developer invests in continuing research to acquire the product. He or she is not consuming a tangible thing. The developer merely seeks to increase his or her consumable dollars by investing in a potentially profitable venture. Likewise, the consumption tax, by definition, allows deduction of non-personal expenses like a business purchase of computer software.

VI. CONCLUSION

Software development costs should be expensed according to a consumption tax theory. This method will serve to establish clearcut guidelines for the software developer without sacrificing the crucial elements of taxation, fairness, administrative feasibility and economic rationality. A consumption tax applied to software development costs provides essential uniformity and cohesiveness while reconciling the goals of the tax system and the individual taxpayer.

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