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NOTES

CAPITAL GAIN TREATMENT OF A SALE OF COMPUTER SOFTWARE BY A RESEARCH AND DEVELOPMENT LIMITED PARTNERSHIP

> Computers represent an elegant technology. They deserve an equally elegant treatment at the hands of lawyers. Without it, society could be deprived of the full benefit of the technology which it requires desperately in order to function at current levels of development and population.[1]

The computer industry continues to grow at an astronomical rate, despite a lack of software[2] that threatened to slow its momentum in the early 1980s.[3] Nevertheless, many corporations still find it difficult to raise sufficient capital to support software development. With careful planning, these corporations may be able to use the research and development (R & D) limited partnership as an investment vehicle to provide the needed capital.

The usefulness of this financing approach depends on the availability of significant tax benefits to investors. These benefits include deductions for research and development costs and long-term capital gain treatment of the sale of the software developed. This Note deals primarily with the latter benefit, argning that software is "know-how" that can be held and transferred by an R & D limited partnership in a manner entitling it to capital gain treatment. The Note analyzes software developed through an R & D limited partnership arrangement in light of the

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1 Freed, *Introduction: Will Lawyers Impede Computerization,* 30 EMORY L.J. 345, 345 (1981).

2 The term "software" encompasses the programs that direct the operation of a computer.

> Hardware consists of tangible objects—integrated circuits, printed circuit boards, cables, power supplies, memories, card readers, line printers, and terminals—rather than abstract ideas or instructions.
>
> Software, in contrast, consists of algorithms (detailed instructions telling how to do something) and their computer representations—namely, programs. Programs can be represented on punched cards, magnetic tape, photographic film, and other media, but the essence of software is the set of instructions that make up the programs, not the physical media on which they are recorded.

A. TANENBAUM, STRUCTURED COMPUTER ORGANIZATION 10 (1976).

3 *Missing Computer Software,* BUS. WK., Sept. 1, 1980, at 46 ("The computer revolution is running into a bottleneck that is beginning to slow its momentum."). The lag existed despite the growth of independent software companies and foreign developments. *Id.* at 47, 53. Major problems in software development appcared to be shortages of resources, high development costs, and an acute programmer shortage. *Id.* at 47-49.

long-term capital gain treatment of know-how. It argues that the only significant barriers to granting such treatment are the holding period requirement of section 1223[4] and the possibility that the Service and the courts may characterize the arrangement as a disguised borrowing or a purchase of a net-profits interest. The Note concludes that a sale of software by an R & D limited partnership can satisfy all of the requirements necessary to qualify for long-term capital gain treatment.

I
THE SOFTWARE MARKET

For years software development has lagged behind the rapidly advancing computer hardware market.[5] Some commentators have argued that lack of patent protection for software is a major factor retarding the software industry's growth;[6] because the development of computer programs is both time-consuming and costly, an inventor needs to know in advance whether he will be able to reap the benefits of his labor. Nevertheless, even though the availability of patent protection remains an unsettled issue,[7] the computer industry has begun to focus on software

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4 I.R.C. § 1223 (1976).

5 *See supra* note 3.

6 Bender, *Computer Programs: Should They Be Patentable?*, 68 COLUM. L. REV. 241, 244-48 (1968); Note, *An Anomaly in the Patent System: The Uncertain Status of Computer Software*, 8 RUT. J. COMPUTERS, TECH. & L. 273, 277 (1981). *But see* Gemignani, *Legal Protection for Computer Software: The View from '79*, 7 RUT. J. COMPUTERS, TECH. & L. 269, 309-10 (1980) (arguing that because software growth has been so phenomenal without patent protection, no further incentive is needed for continued progress).

7 An increasingly accepted definition of software includes three elements: "(1) the underlying process or algorithm upon which the program is based; (2) the program itself coded in some programming language; and (3) the supporting documentation including items such as flow charts, instruction manuals and other materials that explain the operation of the program." WORLD INTELLECTUAL PROPERTY ORGANIZATION, PUB. NO. 814-3, MODEL PROVISIONS ON THE PROTECTION OF COMPUTER SOFTWARE 12 (1978). The debate over patentability turns on the distinction between the algorithm and the program itself. The Court of Customs and Patent Appeals uses a two-step analysis:

> First, it must be determined whether the claim directly or indirectly recites an "algorithm" in the *Benson* sense of that term ["[a] procedure for solving a given type of mathematical problem" Gottschalk v. Benson, 409 U.S. 63, 65 (1972)], for a claim which fails even to recite an algorithm clearly cannot wholly preempt an algorithm. Second, the claim must be further analyzed to ascertain whether in its entirety it wholly preempts that algorithm.

In re Freeman, 573 F.2d 1237, 1245 (C.C.P.A. 1978).

In a recent Supreme Court case, Diamond v. Diehr, 450 U.S. 175 (1981), the Court held that the use of a computer program to implement an otherwise patentable invention did not detract from its patentable nature. Although the opinion did not mention the *Freeman* test, the Court of Customs and Patent Appeals has construed *Diehr* as upholding the *Freeman* analysis. *See In re* Pardo, 684 F.2d 912, 915 (C.C.P.A. 1982) ("[T]he second part of [the *Freeman*] test conforms to the opinion of the Supreme Court in *Diamond v. Diehr.*"); *In re* Abele, 684 F.2d 902, 907 (C.C.P.A. 1982) (applying *Freeman* test post-*Diehr*). Commentators, however, disagree over whether *Diehr* has resolved the issue. *Compare* Nimtz, Diamond v. Diehr: *A Turning Point*, 8 RUT. J. COMPUTERS, TECH. & L. 267, 270 (1981) ("The Supreme Court decision in the *Diehr* case has finally resovled a twelve-year-old legal controversy over the

development.[8] Financing software development has thus become a major concern,[9] with the R & D limited partnership providing an attractive alternative to more traditional methods of financing because of the potential tax benefits it affords investors.

II
THE R & D LIMITED PARTNERSHIP ARRANGEMENT

The heart of the R & D limited partnership arrangement is current expensing of what would otherwise be considered nondeductible capital expenditures. Section 174 provides an exception to the general rule that pre-operating or start-up expenses cannot be deducted under section 162.[10] Under seetion 174 a taxpayer can deduct research and develop-

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'patentability of computer programs.' ") *with* Note, *supra* note 6, at 302 ("While the *Freeman* test has been used by the C.C.P.A. in recent years as a clear indicator of patentability, the Supreme Court has ignored this standard and applied yet another test of statutory subject matter in *Diehr.* ") (footnotes omitted).

Even if the Court of Customs and Patent Appeals is correct in continuing to apply the *Freeman* test, the outcome in any particular case is not easy to predict. The dissent in *Diehr* emphasizes the confusion existing in this area: "The cases considering the patentability of the program-related inventions do not establish rules that enable a conscientious patent lawyer to determine with a fair degree of accuracy which, if any, program-related inventions will be patentable." *Diehr,* 450 U.S. at 219 (Stevens, J., dissenting). Justice Stevens suggested an alternative holding:

> (1) . . . [N]o program-related invention is a patentable process . . . unless it makes a contribution to the art that is not dependent entirely on the utilization of a computer, and
> (2) an unequivocal explanation that the term "algorithm" . . . is synonymous with the term "computer program."

Id. (footnote omitted). *See generally* Battaglia & Herskovitz, *Organizing a computer software research and development program for top tax advantage,* 58 J. TAX'N 92 (1983).

8 Egan, *Investing in the Computer Revolution,* N.Y. MAG., Sept. 20, 1982, at 28 ("[G]iven the ready availability of sophisticated computer equipment at relatively modest cost from numerous manufacturers, the industry's focus today is shifting from equipment to software . . . ."); *see also The Incredible Explosion of Start-ups,* Bus. Wk., Aug. 2, 1982, at 53 ("[One computer company] spends 35% of its revenues on marketing and dedicates more than two-thirds of its development people to software.").

9 This Note assumes that development of software is good for society. One may question whether Congress has embraced this policy and to what extent capital gain treatment of a sale of computer software by an R & D limited partnership promotes the policy. Arguably, Congress expressed its intent to encourage software development in the Report of the Ways and Means Committee of the House on the Economic Recovery Tax Act of 1981. The committee acknowledged that Revenue Procedure 69-21 brought software within the purview of § 174 and stated that "expenditures which otherwise would qualify for the new [§ 44F credit for incrcasing research activities] are not to be disqualified solely because such costs are incurred in developing computer 'software,' rather than in developing 'hardware,' " H.R. REP. No. 201, 97th Cong., 1st Sess. 114 (1981) [hereinafter cited as HOUSE REPORT]. This may be as far as Congress wants, or needs, to go. The benefits afforded investors under Revenue Procedure 69-21 may be siguificant enough to preclude the need for further encouragement via the capital gain provisions. Nevertheless, given that a sale of computer software by an R & D limited partnership can satisfy both the formal and substantive requirements of the capital gain provisions as they stand, a mere negative implication of congressional intent should not be enough to deny such treatment.

10 *See, e.g.,* NCNB Corp. v. United States, 651 F.2d 942 (4th Cir. 1981) (bank must

ment expenditures incurred "in connection with [its] trade or business."[11] The Supreme Court has held that the "in connection with" language of section 174 is less restrictive than the "carrying on a trade or business" language of section 162.[12] Thus, a limited partner in a partnership organized to develop a marketable product may deduct his share of research and experimental costs in the year paid, even though the partnership is not carrying on a trade or business,[13] and even though another person or organization conducts the research on the partnership's behalf.[14]

The Service has stated in Revenue Procedure 69-21[15] that it will treat the costs of developing software in a manner similar to that accorded section 174 expenses.[16] In addition, a taxpayer may treat pay-

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capitalize costs of opening branch offices), *vacated and aff'd on other grounds,* 684 F.2d 285 (4th Cir. 1982) (en banc); Madison Gas & Elec. Co. v. Commissioner, 633 F.2d 512, 517 (7th Cir. 1980) (holding that start-up costs must be capitalized and rejecting that taxpayer-partner's partnership venture was expansion of the partners' existing business); Goodwin v. Commissioner, 75 T.C. 424 (1980) (same result where partnerships not engaged in business while project under construction and before completion; rejecting "aggregate" theory of partnerships); *cf.* United States v. Manor Care, 490 F. Supp. 355, 359-62 (D. Md. 1980) (two nursing homes' pre-operating expenses of type that would recur were deductible).

11 I.R.C. § 174(a)(1) (1976) ("A taxpayer may treat research or experimental expenditures which are paid or incurred by him during the taxable year in connection with his trade or business as expenses which are not chargeable to capital account. The expenditures so treated shall be allowed as a deduction.").

12 Snow v. Commissioner, 416 U.S. 500, 502-04 (1974). *But see* Kilroy v. Commissioner, 41 T.C.M. (CCH) 292, 295 (1980) (citing *Snow* for the proposition that "[t]he concept of 'trade or business' in section 174 is similar to that in section 162.").

13 Snow v. Commissioner, 416 U.S. 500 (1974).

14 Treas. Reg. § 1.174-2(a)(2) (1957); *see Snow,* 416 U.S. at 502 (outside engineering firm doing "shopwork"). Such research costs, however, if incurred "in connection with the construction or manufacture of *depreciable* property by another" are deductible only if made "upon the taxpayer's order and at his risk." Treas. Reg. § 1.174-2(b)(3) (1957) (emphasis added); *see also* Battaglia & Herskovitz, *supra* note 7, at 92-93. This fact is significant in light of the position taken in this Note that software is depreciable property. *See infra* notes 88-98 and accompanying text.

15 1969-2 C.B. 303.

16 "The costs of developing software (whether or not the particular software is patented or copyrighted) in many respects so closely resemble the kind of research and experimental expenditures that fall within the purview of section 174" that they may be deducted as current expenses as well. *Id.* at 303. Under I.R.C. § 57(a)(6) (West Supp. 1983), however, § 174 deductions are a tax preference item to the extent they exceed amounts that would have been allowed as deductions had the expenditures been capitalized and amortized over 10 years. Whether this applies to amounts deducted under Revenue Procedure 69-21 is not clear. *See infra* note 68.

The Treasury Department is currently considering amendments to proposed regulations under I.R.C. § 174 under which software development costs would not qualify for an incremental 25% tax credit unless the operational feasibility of the project were in doubt. *See R & D: Critics Blast Tax Credit Proposals, as IRS Maintains Historical Software Deduction,* Daily Tax Rep. (BNA) No. 76, Apr. 19, 1983, at G-7. Critics complain that "few software costs would qualify under the proposals beeause 'almost any idea or concept is operationally feasible.' " *Id.* In the past, the Service has only applied the "doubtful operational feasibility" standard to software development contracted-out to third parties, *see infra* note 17 and accompanying text, and in Internal Revenue News Release 83-74, [1983] 10 STAND. FED. TAX REP. (CCH)

ments to a third party as costs of developing software if the costs are incurred at the risk of the taxpayer and for the development of new or significantly improved programs, as distinguished from other software costs where the operational feasibility of the program is not seriously in doubt.[17]

For example, a company may want to develop computer software but be unable or unwilling to finance the project either with internal funds or debt or equity capital.[18] As a first step toward setting up the R & D limited partnership, the company may notify an independent R & D funding organization of its need for investors.[19] The funding organization will locate individuals interested in becoming limited partners in a partnership that will hire the company to develop the software. Once the funding organization has located enough investors, it forms a limited partnership and acts as general partner.[20] The partnership then enters into three agreements with the company: a research and development contract, an option to license, and an option to purchase.

The research and development contract is drafted to allow the partnership to treat payments to the company as costs of developing software under Revenue Procedure 69-21. This contract specifies that

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¶ 6527, the Service stated that "the method of accounting for computer software development costs established in 1969 will not be superseded by" these amendments. However, despite the favorable tone of the Release and the Service's historic treatment of software under Revenue Procedure 69-21, the taxpayer should bear in mind that Congress has attributed the "doubtful operational feasibility" gloss to the meaning of "costs of developing computer software" in Revenue Procedure 69-21 generally. HOUSE REPORT, *supra* note 9, at 114.

[17] *See* Ltr. Rul. 7804007, at 2-3:

> It is [the Service's] understanding that neither the operational feasibility nor the cost of the software were in doubt at the time the contact was entered into . . . . Accordingly, we do not view the cost of converting software in the instant ease as a cost of developing software within the meaning of section 3 of Rev. Proc. 69-21, but rather as a cost of purchased software.

[18] For a comparison of the advantages and disadvantages of the R & D limited partnership with debt and equity financing see F. Chilton, J. Fuller & J. Garahan, *R & D Partnerships* in COMPUTER FINANCE AND LEASING, RECENT TRENDS IN FINANCING AND MARKETING (PLI) 553 (1982) [hereinafter cited as *R & D Partnerships*].

[19] R & D funding organizations are similar to venture-capital companies. They specialize in raising R & D money and acting as general partner in the resulting limited partnerships. The company may also form a new subsidiary to seek out investors and act as general partner itself. *See* Battaglia & Herskovitz, *supra* note 7, at 92.

[20] Selecting the general partner can raise difficult confiict-of-interest problems. Ideally, the company, acting as general partner, could retain control over the development and exploitation of the software. Because the general partner is a fiduciary for the limited partners, however, such an arrangement could create conflicts of interest. For example, if the company acts as both general partner and R & D contractor, it must monitor its own compliance as contractor. The company acting as general partner is one factor the Financial Accounting Standards Board considers in raising a rebuttable presumption that the R & D arrangement is a disguised borrowing. FINANCIAL ACCOUNTING STANDARDS BOARD, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 68, RESEARCH AND DEVELOPMENT ARRANGEMENTS ¶¶ 8(c), 32 (Oct. 1982) [hereinafter cited as FASB STATEMENT NO. 68]; *see also R & D Partnerships, supra* note 18, at 564-67.

the company is to use such payments solely for research or experimental expenditures. The company agrees to develop specified software on behalf of the partnership but does not guarantee the success of the project. The partnership agrees to bear all risks associated with the development and holds all legal rights to any patents, copyrights, trade secrets, or know-how developed under the contract.

The parties enter into two other agreements that regulate the timing and terms of the company's option to purchase the software developed. The interim license agreement grants the company an option to license the software on a nonexclusive basis for one year following its development.[21] The option and sale agreement grants the company an option to purchase the software after the interim license has expired.[22] These agreements ensure the company's right to purchase the software if development is successful, and allow the partnership to satisfy the one-year holding period requirement of section 1223.[23]

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21 *See R & D Partnerships, supra* note 18, at 557.

22 *Id.*

23 *See generally* Battaglia & Herskovitz, *supra* note 7, at 92-95 (discussing requirements that R & D limited partnership must satisfy to obtain § 174 deduction).

The R & D limited partnership arrangement described here (the "royalty partnership") is one of at least three alternative methods of financing with limited partnerships. The other two—the "equity partnership" and the R & D "joint venture"— pose fewer capital gains problems, but introduce additional problems of their own. The preceding terminology and following discussion are taken substantially from *R & D Partnerships, supra* note 18, at 555-64.

The "equity partnership" can be used where an individual inventor, rather than a going corporation, is seeking financing. The inventor and investors who are not interested in immediate deductions form a corporation that becomes the general partner in the R & D limited partnership. Investors who become limited partners will receive immediate deductions under § 174. The partnership need not, and does not, contract-out the development work because the corporate general partner can perform these services. Once the software is developed, all the partners exchange their partnership interests for stock in a tax-free § 351 formation of a controlled corporation that will exploit the software. After holding the stock for more than one year, the partner-shareholders can sell their shares in the corporation and obtain long-term capital gain treatment. The "equity partnership" presents problems in establishing the status of the partnership under § 761, qualifying the incorporation under § 351, and finding a market for the shares of the new corporation once the holding period has passed.

The R & D "joint venture" arrangement begins with an existing corporation and a limited partnership consisting of limited partners and an independent general partner. The limited partnership and the corporation enter into a joint venture structured as a general partnership. The corporation contributes part of its on-going business, such as marketing, to allow the joint venture to be carrying on a trade or business under § 162 during the research period. The joint venture then enters into a contract with the corporation under which the corporation agrees to develop the software on behalf of, and at the risk of, the joint venture under Revenue Procedure 69-21. The corporation and the limited partnership each have an option to purchase the other's interest in the joint venture more than one year after the research period ends, with the corporation's option taking precedence. Because the joint venture is carrying on a trade or business it can deduct nonresearch costs under § 162, and may qualify for the research and development credit under § 44F. *See supra* note 9. The joint venture arrangement, however, creates the problems of integrating the "contributed" on-going business with the research activities, and determining whether a purchase of the partner-

III
QUALIFYING THE SALE FOR LONG-TERM CAPITAL GAIN TREATMENT

A sale of computer software will qualify for long-term capital gain treatment if the software is a capital asset and the transaction satisfies both the sale or exchange and holding period requirements of the Code.[24]

A. Software As a Capital Asset

Section 1221 defines capital asset broadly as "property held by the taxpayer (whether or not connected with his trade of business)."[25] This definition is limited, however, by section 1221's five exclusions[26] and judicial decisions restricting its scope.

1. *Software as "Property" under Section 1221*

The Supreme Court has held that "[w]hile a capital asset is defined in [section 1221] as 'property held by the taxpayer,' it is evident that not everything which can be called property in the ordinary sense and which is outside the statutory exclusions qualifies as a capital asset."[27]

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ship interest in lieu of a purchase of the software will qualify for long-term capital gain treatment.

24 Under certain circumstances, a sale of computer software may qualify for long-term capital gain treatment even though the software does not qualify as a capital asset. *See infra* notes 105-08 and accompanying text.

25 I.R.C. § 1221 (1976) (Capital Asset Defined) provides:

> For purposes of this subtitle, the term "capital asset" means property held by the taxpayer (whether or not connected with his trade or business), but does not include—
>
> (1) stock in trade of the taxpayer or other property of a kind which would properly be included in the inventory of the taxpayer if on hand at the close of the taxable year, or property held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business;
>
> (2) property, used in his trade or business, of a character which is subject to the allowance for depreciation provided in section 167, or real property used in his trade or business;
>
> (3) a copyright, a literary, musical, or artistic composition, a letter or memorandum, or similar property, held by—
>
> (A) a taxpayer whose personal efforts created such property,
>
> (B) in the case of a letter, memorandum, or similar property, a taxpayer for whom such property was prepared or produced, or
>
> (C) a taxpayer in whose hands the basis of such property is determined, for purposes of determining gain from a sale or exchange, in whole or in part by reference to the basis of such property in the hands of a taxpayer described in subparagraph (A) or (B) . . . .

26 *Id.* The fourth and fifth exceptions deal with notes and accounts receivable and publications of the United States government.

27 Commissioner v. Gillette Motor Transp., Inc., 364 U.S. 130, 134 (1960). Although state and loeal taxing authorities disagree over whether software is tangible or intangible property for purposes of sales, use, and property taxes, no reported decision has held that software is not property "in the ordinary sense." *See* Comment, *Software Taxation: A Critical Reevaluation of the Notion of Intangibility*, 1980 B.Y.U. L. REV. 859, 860-61.

Computer software developed under an R & D limited partnership arrangement qualifies as section 1221 property for three reasons. First, software is analogous to types of know-how that courts have held to be property within the meaning of section 1221. Second, it satisfies the Service's requirement that know-how be secret. Finally, because the partnership has not been "hired to invent," the software constitutes property rather than services.

The Code does not state whether know-how is property within the meaning of section 1221.[28] Indeed, neither property[29] nor know-how[30] has been precisely defined for tax purposes. In general usage, know-how encompasses nearly all the tangible products of mankind's ideas and skills.[31] Software certainly satisfies this definition;[32] a computer program embodies the knowledge of its producer and applies that knowledge without further human intervention. However, not all know-how is section 1221 property.

Courts have held that know-how in the form of secret formulas, industrial knowledge, and manufacturing processes as represented by manuals, reports, and other documents, constitutes section 1221 property.[33] Software is functionally similar to a manual. A computer pro-

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28 The only references in the Code to the property status of know-how are in §§ 861 and 862 (determination of income earned by nonresident aliens and foreign corporations from sources within and without the United States) which construe rents and royalties to include payments for the use of "patents, copyrights, secret processes and formulas, goodwill, trademarks, trade brands, franchises and other like property." I.R.C. §§ 861(a)(4), 862(a)(4) (1976).

29 I.R.C. §§ 317 (corporate distributions), 614 (depletion allowance), 1231 (property used in a trade or business), and 1235 (patents as property) provide specialized definitions of property but add nothing to its generic definition or its application to know-how.

30 "A great deal of difficulty has been experienced in defining the categories of commercial and industrial know-how which will qualify as 'property' for Section 1221 purposes . . . . [T]he term 'know-how' has had a confused meaning." J. BISCHEL, TAXATION OF PATENTS, TRADEMARKS, COPYRIGHTS, AND KNOW-HOW ¶ 1.2a[3], 1-5 to -6 (1974).

31 *See* J. BISCHEL, *supra* note 30, at 1-6.

32 In no case dealing with the property status of know-how under § 1221 has the Service challenged the taxpayer's characterization of the asset as know-how. *See infra* note 33 (cases cited presume without discussion that property at issue is know-how).

33 *See, e.g.,* Hooker Chem. & Plastics Corp. v. United States, 591 F.2d 652, 659-62 (Ct. Cl. 1979) (company can realize capital gain on assignment of patent rights and know-how concerning the chemical treatment of metal surfaces for bonding and rustproofing); Ofria v. Commissioner, 77 T.C. 524, 544-45 (1981) (proposals for improving fuse bomb coupler are know-how qualifying as property for § 1221 purposes); United States Mineral Prods. Co. v. Commissioner, 52 T.C. 177, 199 (1969), *acq.,* 1969-2 C.B. xxv (manuals, reports, and other documents describing the methods for manufacturing a sprayed insulation product are capital assets); Speicher v. Commissioner, 28 T.C. 938, 944-45 (1957) (inventor can realize capital gain on assignment of unpatented machines).

Other cases have considered trade secrets or unpatented technology to be capital assets although ultimately finding that the transaction failed to satisfy the sale or exchange requirement. *See, e.g.,* Pickren v. United States, 378 F.2d 595, 599-601 (5th Cir. 1967) (secret formula); E.I. Du Pont De Nemours & Co. v. United States, 288 F.2d 904, 909-12 (Ct. Cl. 1961) (secret process for producing sodium); Kaczmarek v. Commissioner, 43 T.C.M. (CCH) 501, 505 n.5 (1982) (unpatented industrial-material shredding machine with manufacturing

gram is, in tangible form, a set of instructions designed to cause the computer to perform certain actions.[34] A manual is similar except that it instructs a human being rather than a computer to perform the actions. In some instances the relationship transcends similarity; industrial processes that would have been encoded in manuals in the past are being encoded in computer programs today.[35]

According to the Service, know-how must be secret to qualify as section 1221 property.[36] Courts, however, have rejected this strict re-

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drawings, technical data, and know-how); Glen O'Brien Movable Partition Co. v. Commissioner, 70 T.C. 492, 502-05 (1978) (know-how relating to partition-system business); Taylor-Winfield Corp. v. Commissioner, 57 T.C. 205, 206-13 (1971), *aff'd,* 467 F.2d 483 (6th Cir. 1972) (industrial knowledge); *see also infra* notes 121-37 and accompanying text (discussion of sale or exchange requirement).

34 *See* Rev. Proc. 69-21, 1969-2 C.B. 303 ("For the purpose of this Revenue Procedure, 'computer software' includes all programs or routines used to cause a computer to perform a desired task or set of tasks.").

35 *See, e.g.,* Diamond v. Diehr, 450 U.S. 175 (1981) (involving computer program that controlled industrial rubber-curing process).

36 Section 1221 know-how cases frequently involve the argument that know-how must be secret to constitute property. *See, e.g.,* Huckins v. United States, 60-1 U.S. Tax Cas. (CCH) ¶ 9394, at 76,091 (S.D. Fla. 1960) (Government contended "secret process" was not § 1221 property because process had previously been made available to Navy.); Ofria v. Commissioner, 77 T.C. 524, 542 (1981) ("The Government . . . contends that . . . the property right qualifying trade secrets as capital assets is the right to a competitive advantage by use of data unknown to others . . . ."); PPG Indus., Inc. v. Commissioner, 55 T.C. 928, 1011 (1970) (Service argued that process in issue was "widely known" and therefore did not qualify as property for purposes of capital gains treatment); United States Mineral Prods. Co. v. Commissioner, 52 T.C. 177, 197 (1969), *acq.,* 1969-2 C.B. xxv ("The parties agree that if [the formulas] were 'secret,' they constituted 'property' within the meaning of section 1221.").

Further, although there is no necessary connection between § 351 (transfer to corporation controlled by transferor) and § 1221, the Service has developed an extensive theory under § 351 as to when know-how constitutes property. Revenue Ruling 64-56, 1964-1 (Part 1) C.B. 133, states:

> The term "property" for purposes of section 351 of the Code will be held to include anything qualifying as "secret processes and formulas" within the meaning of sections 861(a)(4) and 862(a)(4) of the Code and any other secret information as to a device, process, etc., in the general nature of a patentable invention without regard to whether a patent has been applied for and without regard to whether it is patentable in the patent law sense. Other information which is secret will be given consideration as "property" on a case-by-case basis.
>
> . . . .
>
> It is assumed for the purpose of this Revenue Ruling that the country in which the transferee is to operate affords to the transferor substantial legal protection against the unauthorized disclosure and use of the process, formula, or other secret information involved.

Id. at 134 (citations omitted). Revenue Procedure 69-19, 1969-2 C.B. 301, provides guidelines for when know-how will be treated as property for purposes of advance rulings under §§ 367 and 351. Revenue Procedure 69-19 requires, inter alia, representations that the "information" is "original, unique, and novel," that it is not disclosed by the product on which it is used or to which it is related, and that it is "secret," being "known only by the owner and those confidential employees who require the "information" for use in the conduct of the activities to which it is related and adequate safeguards have been taken to guard the secret against unauthorized disclosure." Note, however, that Revenue Procedure 69-19 has no effect

quirement[37] and have held that section 1221 property includes: know-how that is secret at the time of transfer even though later revealed to others,[38] know-how disclosed to another party prior to sale,[39] and know-how contained in sales and cost-estimating manuals available to competitors.[40]

Although the Service has rarely succeeded on the secrecy issue[41] and in some cases, even failed to raise it,[42] the Commissioner may still assert the theory and has done so as recently as 1981.[43] Thus, although one can argue that secrecy is not the best means by which to measure the property status of know-how,[44] to avoid litigation and to protect its

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upon the substantive provisions and requirements of Revenue Ruling 64-56. Rev. Proc. 69-19, at 302.

Further, Revenue Procedure 74-36, 1974-2 C.B. 491, makes Revenue Procedure 69-19 specifically "applicable to a request for a ruling that the transfer of 'computer software' is a transfer of property within the meaning of section 351." Rev. Proc. 74-36, 1974-2 C.B. 491. Each of the 11 private letter rulings issued determining the status of computer software under § 351 has held the software to be property. *See, e.g.,* Ltr. Ruls. 8301004, 8034158, 8034096, 8028103, 7940059, 7938057, 7851089, 7841073, 7824043, 7817055, 7427058.

37 E.I. Du Pont De Nemours & Co. v. United States, 288 F.2d 904 (Ct. Cl. 1961), a case involving the proposition that know-how must be secret, is frequently cited in connection with § 1221 patent and know-how cases. However, a careful reading of the case reveals that the § 1221 property status of know-how was not even in question. The government had conceded that the "secret" formula at issue was property. The only issue in question was whether secrecy affected the transaction's meeting the sale or exchange requirement. For examples of cases citing *DuPont,* see, Ofria v. Commissioner, 77 T.C. 524, 539 (1981); Taylor-Winfield Corp. v. Commissioner, 57 T.C. 205, 215 (1971), *aff'd,* 467 F.2d 483 (6th Cir. 1972); PPG Indus., Inc. v. Commissioner, 55 T.C. 928, 1012 (1970); United States Mineral Prods. Co. v. Commissioner, 52 T.C. 177, 199 (1969), *acq.,* 1969-2 C.B. xxv.

38 Ofria v. Commissioner, 77 T.C. 524, 543-44 (1981).

39 Huckins v. Commissioner, 60-1 U.S. Tax Cas. (CCH) ¶ 9394, at 76,092 (S.D. Fla. 1960).

40 United States Mineral Prods. Co. v. Commissioner, 52 T.C. 177, 199 (1969), *acq.,* 1969-2 C.B. xxv.

41 *See, e.g., supra* notes 37-40 and accompanying text.

42 *See, e.g.,* Cubic Corp. v. United States, 72-1 U.S. Tax Cas. (CCH) ¶ 9165 (S.D. Cal. 1971) (Service failed to make argument that nonsecret manufacturing know-how does not constitute § 1221 property); Kaczmarek v. Commissioner, 43 T.C.M. (CCH) 501, 504 (1982) (Service did not even raise issue of whether know-how was property, restricting argument to theory that there had not been sale of all substantial rights); Taylor-Winfield Corp. v. Commissioner, 57 T.C. 205 (1971), *aff'd,* 467 F.2d 483 (6th Cir. 1972) (same as *Cubic Corp.*).

43 *See* Ofria v. Commissioner, 77 T.C. 524, 542 (1981).

44 Indeed, the first Restatement of Torts protects trade secrets not on the basis of property theory, but upon the theory that misappropriation of a trade secret is a breach of the duty of good faith. RESTATEMENT OF TORTS § 757 comment a (1939). This section was not included in the second Restatement of Torts because the drafters no longer considered the law of unfair competition and trade regulation to be dependent upon tort law. RESTATEMENT (SECOND) OF TORTS, Division Nine, Introductory Note, at 1-2 (1977).

Further, secrecy is by no means the only indication of the value of know-how:

> In contrast to the rather narrowly defined trade secret there would appcar to be other forms of know-how in which the possessor may own something of value for a potential purchaser. For instance, the know-how may consist of a process known only by a few competitors in a large industry. Such a process may, nevertheless, eonstitute valuable information to one who desires to enter that industry. Another example of valuable information might consist of a

investment, the R & D limited partnership should maintain secrecy by obtaining nondisclosure agreements from all persons working on the project.[45]

The software may also lose its capital asset status if the buyer has

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> complete package of documents disclosing a highly technical although commonly known process in the industry. The reduced cost of acquiring this information in mass, rather than piecemeal, could prove to be a substantial savings, and thus of value to a potential purchaser. Finally, the possibility always exists that what is considered common knowledge at one place may be considered a revelation at another.

Bischel, *Exportation of American Technology and the Federal Income Tax,* 22 SYRACUSE L. REV. 867, 877-78 (1971).

For some purposes, however, secrecy may be a reliable measure of value. For example, in a non-arm's length transaction, secrecy of the know-how transferred may be useful in determining whether related parties have assigned it a value that is, in fact, consideration for something else.

45 Under certain circumstances it may be unnecessary to maintain trade secrecy to protect the software or to establish § 1221 property status. If the partnership is reasonably certain that patent protection will be available, the sale or exchange of the software may qualify for long-term capital gain treatment under § 1235 (sale of patents) without regard to secrecy. *See generally* Garahan, *Subtle Legal Problems: Research and Development Limited Partnerships,* Nat'l L.J., Sept. 20, 1982, at 17, col. 1, at 22, col. 3. Section 1235 affords such treatment regardless of the length of the seller's holding period and regardless of whether the seller holds the patent primarily for sale to customers in the ordinary course of his trade or business, provided the "holder" transfers "all substantial rights to a patent." *See infra* notes 122-34 and accompanying text.

The taxpayer must fulfill a number of technical requirements to qualify under § 1235. Although § 1235 only applies to patentable software, neither the patent nor the patent application need be in existence at the time of the transfer. Treas. Reg. § 1.1235-2(a) (1957). A holder of a patent is defined as the inventor or any individual (other than the inventor's employer or a related person within the meaning of § 1235(d)) who purchases an interest in the patent before it is "reduced to practice." I.R.C. § 1235(b) (1976). Thus, in an R & D limited partnership arrangement, the partnership must obtain its rights to the software from the individual inventors, not from the company, and the partnership must not employ the inventors. Also, if the sum of the partners' stock interests in the company exceeds 25%, the amounts paid those partners will not qualify because § 1235 does not apply to related parties. *Id.* § 1235(d).

If both the software and the partners qualify under § 1235, the partnership will not have to wait a year before completing the sale, it will not have to avoid the "held primarily for sale to customers in the ordinary course of . . . trade or business" restriction of §§ 1221 and 1231, and its future royalties will not be taxed as interest income, *id.* § 483(f)(4) (1976); *see infra* note 136 and accompanying text.

If a transfer of patentable software does not qualify under § 1235, "[t]he tax consequences of such transfers shall be determined under other provisions of the internal revenue laws." Treas. Reg. § 1.1235-1(b) (1957). Although the Tax Court has held that "if the payments for a patent are contingent upon productivity, use or disposition . . . section 1235 is the holder's exclusive provision for qualifying for capital gains treatment," Poole v. Commissioner, 46 T.C. 392, 404 (1966), the Service has taken the position that "the mere fact that a patent transfer by a holder for contingent amounts does not qualify . . . under Section 1235 . . . will not prevent it from qualifying . . . under other provisions of the Code," Rev. Rul. 69-482, 1969-2 C.B. 164, 165; *see also* Lee v. United States, 302 F. Supp. 945 (E.D. Wis. 1969) (although taxpayer not entitled to long-term capital gain treatment under § 1235, he is entitled to such treatment under §§ 1221 and 1231); Thomson v. United States, 70-1 U.S. Tax Cas. (CCH) ¶ 9193, at 82,798-800 (E.D.N.Y. 1969).

"hired" the developer to "invent" it.[46] Under the "hired to invent" doctrine, a court may deny property status to know-how if it determines that the partnership has been compensated for services rather than paid in exchange for a transfer of property. The determination is factual[47] and although courts developed the guiding principles in cases involving transfers of patents,[48] the principles apply equally well to transfers of know-how.[49] In general, if a contract provides that inventions developed during performance of a contract become the property of the employer, then the courts will treat payments to the inventor as compensation for services. If the contract does not so provide, the inventor may have property rights in the invention and the courts are more likely to treat payments for the invention as payments in exchange for property.[50]

The "hired to invent" doctrine will only affect the transfer of software from the partnership to the company, if the company has hired the partnership to develop the software. Under the research and development agreement, in contrast, the partnership hires the company. One might argue, however, that despite the express language of the agree-

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46 *See* United States v. Dubilier Condenser Corp., 289 U.S. 178 (1933):

> One employed to make an invention, who succeeds, during his term of service, in accomplishing that task, is bound to assign to his employer any patent obtained. The reason is that he has only produced that which he was employed to invent. His invention is the precise subject of the contract of employment. A term of the agreement necessarily is that what he is paid to produce belongs to his paymaster. On the other hand, if the employment be general, albeit it cover a field of labor and effort in the performance of which the employee conceived the invention for which he obtained a patent, the contract is not so broadly construed as to require an assignment of the patent.

Id. at 187 (citations omitted); *see also* Treas. Reg. § 1.1235-1(c)(2) (1957) (discussing whether payments to employee are payments for services or payments for transfer of rights to invention).

47 *See* Beausoleil v. Commissioner, 66 T.C. 244, 247 (1976); *see also* Treas. Reg. § 1.1235-1(c)(2) (1957) ("[W]hether payments received by an employee from his employer . . . are attributable to the transfer by the employee of all substantial rights to a patent . . . or are compensation for services rendered the employer by the employee is a question of fact.").

48 *See, e.g.,* Melin v. United States, 478 F.2d 1210, 1213-15 (Ct. Cl. 1973); Beausoleil v. Commissioner, 66 T.C. 244 (1976); Gable v. Commissioner, 33 T.C.M. (CCH) 1427, 1432-33 (1974); Hamrick v. Commissioner, 43 T.C. 21, 35 (1964); Chilton v. Commissioner, 40 T.C. 552, 562-63 (1963); Blum v. Commissioner, 11 T.C. 101 (1948), *aff'd,* 183 F.2d 281 (3d Cir. 1950).

49 Ofria v. Commissioner, 77 T.C. 524, 535 (1981) (patent principles regarding "hired to invent" doctrine apply "to payments for commercially valuable trade secrets or know-how, or data similar to patents"). Even though this is the only ease that considers the services-property issue in connection with unpatented technology, courts have frequently held that patent cases are applicable to cases involving unpatented technology and know-how. *See infra* notes 122, 139 and accompanying text.

50 *Compare* Downs v. Commissioner, 49 T.C. 533, 537-39 (1968) (compensation for services) *and* Blum v. Commissioner, 11 T.C. 101, 108-10 (1948) (same), *aff'd,* 183 F.2d 281 (3d Cir. 1950) *with* Ofria v. Commissioner, 77 T.C. 524, 535-36 (1981) (payment in exchange for property) *and* Chilton v. Commissioner, 40 T.C. 552, 562-63 (1963) (same) *and* McClain v. Commissioner, 40 T.C. 841, 849-50 (1963) (same).

ment, it was actually the company that hired the partnership because the company originally sought out the partnership. For the partnership to be "hired to invent," however, any software developed would have to become the property of the company under the contract. The research and development agreement precludes this problem by providing that the partnership owns the software at all times. The company can acquire the software only by exercising its option to purchase.

One might argue that the costs of according know-how favorable tax treatment by treating it as section 1221 property outweigh the benefits. Because know-how frequently straddles the line between property and services, and because know-how transactions are relatively insignificant compared to the types of transactions that Congress intended to be able to qualify for capital gain treatment, the social cost of litigation to determine the status of any particular item of know-how outweighs the individual benefit.

This argnment overlooks several points. First, the partnership can obtain a private letter ruling from the Service in advance on these issues and thus avoid the cost of litigation.[51] Second, the broad language of section 1221 and the extension of capital gain treatment to the sale of patents under section 1235, indicate congressional intent to leave some flexibility in the definition of "property." Third, although courts have limited the meaning of property under section 1221 in some respects, they have expressly extended it to include know-how,[52] and in doing so have frequently drawn upon the Code provisions and case law concerning the sale of patents.[53] Finally, neither Congress nor the courts have ever chosen to limit the application of capital gain treatment on cost-benefit grounds.

2. *Statutory Exclusions*

a. *Section 1221(1).* Section 1221(1) excludes from capital asset status "property held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business."[54] This section presents three problems for the R & D limited partnership arrangement. First, the software developed must not come within the literal or substantive

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[51] Applying for the letter ruling entails its own costs in the forms of attorney's fees and IRS resources expended, but usually these costs will be less than those incurred in litigation.

[52] *See supra* notes 33, 37-40 and accompanying text.

[53] *See infra* notes 122, 139 and accompanying text. One can also argue that software is property within the meaning of § 1221 because it can be copyrighted. A copyright that is not excluded by § 1221(3)'s "personal efforts" and "same basis" requirements may be a capital asset. *Cf.* Battaglia & Herskovitz, *supra* note 7, at 95.

[54] I.R.C. § 1221(1) excludes from capital asset status:

> stock in trade of the taxpayer or other property of a kind which would properly be included in the inventory of the taxpayer if on hand at the close of the taxable year, or property held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business.

meaning of the section. Second, in avoiding section 1221(1), the partnership runs the risk of losing its section 174 deduction. Third, if the company impliedly or expressly agrees to purchase the software developed regardless of the project's success, it runs the risk of jeopardizing the arrangement's tax benefits.

The software sold by the R & D limited partnership to the company does not constitute property held primarily for sale in the ordinary course of its trade or business. Courts, in cases involving patents or inventions,[55] have considered the following factors in making this determination:[56] (1) the frequency of comparable sales; (2) the number and

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[55] Two cases have extended the patent-or-invention principles to know-how. Cubic Corp. v. United States, 72-1 U.S. Tax Cas. (CCH) ¶ 9165, at 83,683 (S.D. Cal. 1971) (court assumed it was dealing with know-how, a patent, or a combination of both); Ofria v. Commissioner, 77 T.C. 524, 535 (1981). Courts generally extend patent-law principles to know-how cases. *See, e.g., infra* notes 122, 139 and accompanying text.

[56] In patent cases the courts use the "factor" test to determine not only whether a trade or business exists, but also whether a patent is held primarily for sale. Indeed, the cases do not even distinguish the issues. *See, e.g.,* cases cited *infra* note 59. Thus, if a court determines that a taxpayer is engaged in the trade or business of selling patents or inventions it will also find that the patents or inventions are held primarily for sale, and they will be excluded from capital asset status under § 1221(1).

Even if a court found that a taxpayer was not engaged in the trade or business of selling patents or inventions, it could still exclude the items under § 1221 by ignoring the "factor" test and analyzing the "held primarily for sale" issue as the First Circuit did in International Shoe Mach. Corp. v. United States, 491 F.2d 157 (1st Cir.), *cert. denied,* 419 U.S. 834 (1974). In that case, a manufacturer of shoe machinery was engaged primarily in leasing the machinery but would sell it if a customer insisted. The court held that the word "primarily" in the statute invoked a contrast, not between sales and leases, but between sales made in the ordinary course of business and sales made as nonroutine liquidations of inventory.

If *International Shoe Machine* were applied to single-venture patent cases, many casual inventors might be found to hold their inventions primarily for sale in the ordinary course of business, even though they were not engaged in the trade or business of selling patents or inventions. For example, in Ofria v. Commissioner, 77 T.C. 524, 545 (1981), know-how was not "held 'primarily for sale to customers in the ordinary course of . . . business' " because the evidence indicated that "the sale of inventions was not an accepted and predictable part of [the inventor's] business, and that the sales . . . were isolated, nonrecurring transactions." Presumably, the court could have applied *International Shoe Machine* and found that because the sale of know-how was not a "nonroutine liquidation," it constituted a sale in the ordinary course of business. The court, however, refused to apply *International Shoe Machine* without offering any explanation. *Id.* (dismissing possible application by referring to case with introductory signal "*cf.* "). With respect to the R & D limited partnership arrangement, however, it may be argued that the sale of the software developed would not be a sale in the ordinary course of business even under *International Shoe Machine* because the sale of the partnership's only asset represents a complete and therefore nonroutine liquidation.

The taxpayer in *International Shoe Machine* argued that it was in the business of leasing machinery, and that selling machinery was not an accepted or predictable part of its business. Arguably, selling a patent totally unrelated to one's trade or business would not constitute an accepted or predictable part of the business. Patent cases involving taxpayers who have been involved in licensing inventions prior to selling them, however, present a more difficult case. Under the "factor" test these inventors are not in the business of selling patents or inventions because the consideration received for licensing can be different than that received in a sale. *See infra* note 57. Such a distinction probably could not be maintained under *International Shoe Machine* where the distinction between selling and leasing was immaterial.

variety of inventions sold; (3) the number of customers; (4) the nature and extent of efforts to sell; (5) the consideration received; and (6) details of the taxpayer's employment and business ventures.[57] Although no one factor is determinative,[58] a single isolated sale of an invention usually does not constitute a trade or business of selling inventions.[59]

The R & D limited partnership's sale of software meets the literal requirements of the "factor" test. If the company exercises its option, the partnership will be involved in only one sale, involving only one software package, one customer, and no effort to sell beyond the secur-

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57 *See* Beach v. Shaughnessy, 126 F. Supp. 771, 774 (N.D.N.Y. 1954); *cf.* Ross v. United States, 75-1 U.S. Tax Cas. (CCH) ¶ 9183, at 86,266 (W.D. Wash. 1974); C.A. Norgren Co. v. United States, 268 F. Supp. 816, 824 (D. Colo. 1967); Armco Steel Co. v. United States, 263 F. Supp. 749, 756 (S.D. Ohio 1966); Allied Chem. Corp. v. Commissioner, 66-1 U.S. Tax Cas. (CCH) ¶ 9212, at 88,373 (S.D.N.Y. 1966), *aff'd on other grounds,* 370 F.2d 697 (2d Cir. 1967). *See generally* Annot., 46 A.L.R.2d 615, 738-45 (1956).

Regarding the type of consideration received, if the partnership's other business ventures only involve licensing and not the sale of patents or inventions, a court will regard such consideration as indicating that the taxpayer is not engaged in the trade or business of selling patents or inventions. *E.g.,* C.A. Norgren Co. v. United States, 268 F. Supp. 816, 824 (D. Colo. 1967) (that type of consideration was royalty percentage of transferee's lent support to conclusion that patents were not held primarily for sale to customers in the ordinary course of business); Barlow v. Commissioner, 2 T.C.M. (CCH) 133, 139 (1943) ("[I]t is not permissible to exclude patents or inventions which are not held for sale to customers, but only licensed, by one who is in business as an inventor and derives gain from giving licenses on his inventions."). Although this factor may not seem immediately relevant to the R & D limited partnership formed solely to develop one product, courts may, in some instances, look beyond the single venture to other transactions in which the individual partners have participated. *See infra* notes 63-65 and accompanying text.

58 Tidwell v. Commissioner, 298 F.2d 864 (4th Cir. 1962); Allied Chem. Corp. v. Commissioner, 66-1 U.S. Tax Cas. (CCH) ¶ 9212, at 85,373 (S.D.N.Y. 1966), *aff'd on other grounds,* 370 F.2d 697 (2d Cir. 1967).

59 Beach v. Shaughnessy, 126 F. Supp. 771, 775 (N.D.N.Y. 1954) ("[T]he weight of authority and the trend of decisions is to require that a single non-recurrent sale of a patent does not establish a trade or business . . . ."); *see also* Ross v. United States, 75-1 U.S. Tax Cas. (CCH) ¶ 9183, at 86,266 (W.D. Wash. 1974) ("Since plaintiffs . . . have produced only one invention and have not engaged in the business of selling patent rights, the transfer of their patent was not 'in the ordinary course of business.' "); Cubic Corp. v. United States, 72-1 U.S. Tax Cas. (CCH) ¶ 9165, at 83,683 (S.D. Cal. 1972):

> I find from the general nature of the plaintiff's business, from the infrequency of the transfers of manufacturing and selling rights, and from the relatively small percentage of income received from such transfers that the design and patent rights and the manufacturing "know how" were . . . [not] held primarily for sale to customers in the ordinary course of trade or business.

C.A. Norgren Co. v. United States, 268 F. Supp. 816, 824 (D. Colo. 1967) ("The infrequency of such sales, the small number of 'customers', and the type of consideration . . . all lend support to our conclusion: The patents were *not* held primarily for sale to customers in the ordinary course of business.") (emphasis in original); Armco Steel Co. v. United States, 263 F. Supp. 749, 756 (S.D. Ohio 1966) ("[T]he infrequency of the few isolated transactions also militates against a determination that they were entered into in the ordinary course of taxpayer's trade or business."); Allied Chem. Corp. v. Commissioner, 66-1 U.S. Tax Cas. (CCH) ¶ 9212, at 85,373 (S.D.N.Y. 1966) ("Isolated sales do not show a holding for sale in the ordinary course of business . . . ."), *aff'd on other grounds,* 370 F.2d 697 (2d Cir. 1967).

ing of the initial option agreement.[60] Under the reasoning of cases involving single, nonrecurrent sales of inventions, the partnership is not engaged in a trade of business.[61]

Even if the partnership is not conducting a sale as part of a trade or business within the literal meaning of section 1221(1), it may still be within the intent of the section. One could argue, for example, that the single nonrecurrent sale cases should involve only "casual inventors"—basement tinkerers or weekend hobbiests—and that the R & D limited partnership, being a sophisticated, well-planned effort to develop new software, should be taxed as a trade or business. This argument fails for three reasons. First, the cases in which the test has been applied do not draw such a distinction.[62] Second, there is no reason to assume that the "casual inventor" has not proceeded to invent based upon a well-planned effort to develop and sell his invention. Finally, to assume that the presence of the limited partnership raises the level of sophistication of the venture to that of a trade or business overlooks the limited partnership's principal functions: to pool funds and spread the risk of loss—not to market and sell the software. If an individual investor possessing no means or expertise with which to market the software were willing and able to finance the development himself, he could probably do so under the same arrangements as the limited partnership without even raising this issue.

Courts may consider the activities of partners in determining whether a partnership is engaged in a trade or business under section 1221.[63] Indeed, because one element of the "factor" test is the details of

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60 If the partnership is unable to sell the software to the developing company, it may have to engage in a marketing effort of magnitude sufficient to bring it within § 1221(1). Courts have held that a single, nonrecurrent venture accompanied by substantial sales activity may constitute a trade or business. *E.g.,* Hollis v. United States, 121 F. Supp. 191, 194 (N.D. Ohio 1954) (syndicate to purchase and resell Japanese art objects held not an "investment," but a trade or business); Zack v. Commissioner, 25 T.C. 676, 681 (1955), *aff'd per curiam,* 245 F.2d 235 (6th Cir. 1957) (joint venture in war surplus involving general public offering and sales, not an "investment"). *But cf.* Currie v. Commissioner, 53 T.C. 185, 201 (1969), *acq.,* 1970-2 C.B. xix (syndicate organized to buy and resell stock realized long-term capital gain on sale).

Note that if the company rejects the software because it is of little value, and the sale to a third party ultimately results in a loss, the partnership would benefit from the denial of capital asset status because it could then take an ordinary loss on the sale.

61 The selling stage is only one of three stages through which the partnership evolves. The other stages are the research stage and the interim license stage. For a discussion of these stages, see *infra* notes 102-04 and accompanying text.

62 *Compare* Lamar v. Granger, 99 F. Supp. 17 (W.D. Pa. 1951) (individual taxpayer received capital gain treatment on sale of invention produced in spare time) *with* Ofria v. Commissioner, 77 T.C. 524, 545 (1981) (engineering company received capital gain treatment on sale of improvements in fuse bomb coupler).

63 *See, e.g.,* Blackburn v. Phinney, 61-2 U.S. Tax Cas. (CCH) ¶ 9599, at 81,460 (W.D. Tex. 1961) (In determining whether property was held primarily for sale in ordinary course of business, court considered fact that plaintiff-partners had "never been active in any real estate

the taxpayer's employment and business ventures[64] a court may look beyond the R & D limited partnership to determine whether the general partner or one or all of the limited partners has been involved previously in similar R & D arrangements.[65] Because the partners benefit from capital gain treatment, a court might consider their outside activities relevant in determining the trade or business issue. Once this avenue is open, a host of questions emerges, including: Should only the offending partners lose the benefit of capital gain treatment? Should a general partner's repeated involvement be a concern if he does not invest? Should investments in R & D limited partnerships involving technology other than software be considered? To help ensure that a court will not find that the partnership is engaged in a trade or business, investors should avoid repeated involvement in such ventures.

One danger in arguing that the partnership is not engaged in a trade or business connected with the sale of the software is possible denial of the current R & D expense deduction under section 174 or Revenue Procedure 69-21. Section 174 conditions deductibility of the expenses incurred for research and development on their "connection with [the taxpayer's] trade or business."[66] Revenue Procedure 69-21 requires only that such expenditures be incurred "in developing software, either for [the taxpayer's] own use or to be held by him for sale or lease to others . . . ."[67] If to avoid exclusion under section 1221(1), the partnership claims that it is not in the trade or business of selling software, it may lose its favored status under section 174 or Revenue Procedure 69-21.[68]

The broad language of Revenue Procedure 69-21 should allow the partnership to qualify for the current expense deduction and avoid exclusion from capital asset status under section 1221(1). The partnership can hold the particular software "for sale or lease to others," without being engaged in the trade or business of selling software[69] and without holding the software primarily for sale to customers.[70] However, if Rev-

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venture"); Kimes v. Commissioner, 20 T.C.M. (CCH) 1561, 1564 (1961) (court considered past activities performed in individual capacity).

64 *See supra* note 57 and accompanying text.

65 *Cf.* Blackburn v. Phinney, 61-2 U.S. Tax Cas. (CCH) ¶ 9599 (W.D. Tex. 1961) (court considered prior individual real estate experience of partners in real estate *general* partnership); Kimes v. Commissioner, 20 T.C.M. (CCH) 1561 (1961) (prior individual experience of partner in *general* partnership).

66 *See* I.R.C. § 174(a) (1976); *supra* note 11.

67 Rev. Proc. 69-21, 1969-2 C.B. § 3.01, at 303.

68 Recent letter rulings suggest that qualification of software expenditures under § 174, as opposed to Revenue Procedure 69-21, is a question of fact. *See* Ltr. Ruls. 8130089, 8136024, 8145077, 8211039.

69 The partnership could argue that it is investing in, rather than selling, software. Although it holds its investment for eventual sale, it is not holding it primarily for sale in the "ordinary course of business."

70 "[F]or sale or lease to others" is arguably much broader than "primarily for sale to

enue Procedure 69-21 is held to be a special application of section 174, its broad languge may be confined by the "in connection with his trade or business" language of section 174.[71]

The Supreme Court has construed the language "in connection with his trade or business" of section 174 as being less restrictive than the "carrying on any trade or business" language of section 162.[72] Further, section 174 does not appear to require that the partnership actually manufacture or market the software,[73] or even that it ever engage in a trade or business.[74] Thus, the partnership should be able to qualify for current expensing under either Revenue Procedure 69-21 or section 174, even though it is not engaged in a trade or business within the meaning of section 1221(a).[75]

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customers." The partnership could thus argue that because it is merely investing in software development for the first time, it lacks customers for whom it holds the software primarily for sale. *See also supra* note 56 and accompanying text.

71 Revenue Procedure 69-21, 1969-2 C.B. 303, states that "[t]he costs of developing software . . . so closely resemble the kind of research and experimental expenditures that fall within the purview of section 174 . . . as to warrant accounting treatment similar to that accorded such costs under that section." *Id.* § 3.01. This could mean either that all the requirements of § 174 should be read into the Revenue Procedure, including the "in connection with" requirement, or, alternatively, that only the accounting treatment should be carried over.

72 Snow v. Commissioner, 416 U.S. 500 (1974). In *Snow,* the Court explained that "[s]ection 174 was enacted . . . to dilute some of the conception of 'ordinary and necessary' business expenses under § 162(a)" and noted that "§ 162(a) is more narrowly written than is § 174 . . . ." *Id.* at 502-03. *But see supra* note 12.

73 Louw v. Commissioner, 30 T.C.M. (CCH) 1421, 1423 (1971) (taxpayer entitled to § 174 treatment though he "never had an expectation of manufacturing or producing" his invention).

In Snow v. Commissioner, 416 U.S. 500 (1974), a corporate successor produced and marketed the technology that the partnership developed. *Id.* at 502 n.3. This fact could lead to a different conclusion than that reached in the text, i.e., that the corporate successor was so closely allied with the partnership that the partnership in substance did actually engage in a trade or business. *See* Battaglia & Herskovitz, *supra* note 7, at 92.

74 The legislative history of the Economic Recovery Tax Act of 1981 indicates that failure to ever engage in business may not preclude the § 174 deduction:

> For example, under the trade or business test of new section 44F, the credit generally is not available with regard to a taxpayer's expenditures for "outside" or contract research intended to be transferred by the taxpayer to another in return for license or royalty payments. (Receipt of royalties does not constitute a trade or business under present law, even though expenses attributable to those royalties are deductible from gross income in arriving at adjusted gross income.) In such a case, the nexus between the research and the transferee's activities generally would be insufficient to support a finding that the taxpayer had incurred the research expenditures in carrying on a trade or business. *(Under appropriate circumstances, nevertheless, the nexus might be deemed adequate for purposes of the section 174 deduction elections.)*

HOUSE REPORT, *supra* note 9, at 113 (emphasis added).

75 The partnership could argue, in the alternative that because it qualifies for the § 174 deduction it is engaged in the business of licensing software. However, to be in the trade or business of licensing software the partnership would have to engage in some minimal activity beyond the receipt of royalties. *See infra* notes 103-05 and accompanying text. If the partnership were in such a business, it would be excluded from capital asset status under § 1221(2),

Although the partnership may not be engaged in a trade or business in the "busyness" sense examined under the "factor" test, a court may still find a trade or business if the company expressly agrees to purchase the software. Courts have held that development of a single asset followed closely by a prearranged sale may constitute a trade or business.[76] By assuring the seller of recouping his costs, the preexisting arrangements remove the speculative nature of the venture,[77] undermining the long-term appreciation in value rationale behind capital gain treatment.[78] These cases involve prearrangements such as a contractual obligation to purchase and a letter agreement ensuring the exercise of an option. The partnership can avoid this problem by ensuring that the company does not obligate itself to purchase the software or otherwise guarantee that the partnership will recover its costs.[79] Even in the ab-

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but would still be able to qualify under § 1231, *see infra* note 106 and accompanying text. However, to qualify under § 1231(b)(1)(B), it would have to show that it was not holding the software primarily for sale in the ordinary course of business. *See infra* notes 106-08 and accompanying text. Because the partnership would be in the business of licensing, rather than selling software, and the eventual sale of the software would be in the nature of a liquidation, it would not qualify as holding the software "primarily for sale." *See supra* note 56. Thus, it could qualify for the § 174 deduction and capital gain treatment under § 1231. *See* Battaglia & Herskovitz, *supra* note 7, at 95.

76 DeMars v. United States, 71-1 U.S. Tax Cas. (CCH) ¶ 9288, at 86,117 (S.D. Ind. 1968) ("[P]roperty acquired [in a single venture] for the purpose of sale to a specific party pursuant to a pre-existing arrangement [a letter agreement ensuring exercise of option] constitutes property held for sale in the ordinary course of a trade or business."); S & H, Inc. v. Commissioner, 78 T.C. 234, 244 (1982) (where purchaser contractually obligated to buy, single venture constituted trade or business for purposes of § 1221(1)).

77 S & H, Inc. v. Commissioner, 78 T.C. 234, 245 (1982).

78 *Id.* at 242. In support of the long-term-appreciation rationale, the court cites Malat v. Riddell, 383 U.S. 569 (1966) which states:

> The purpose of [§ 1221(1)] is to differentiate between the "profits and losses arising from the everyday operation of a business" on the one hand (*Corn Products Co. v. Commissioner,* 350 U.S. 46, 52) and "the realization of appreciation in value accrued over a substantial period of time" on the other. (*Commissioner v. Gillette Motor Co.,* 346 U.S. 130, 134.)

Id. at 572.

In Corn Prods. Refining Co. v. Commissioner, 350 U.S. 46, 52 (1955), the Supreme Court held that Congress's intent was for profits and losses arising from the everyday operation of a business to be treated as ordinary gains. No court has yet applied this doctrine to sales of know-how—probably beeause its applieation requires that the taxpayer be engaged in a trade or business or that the sale of know-how be related to its trade or business. Thus, where an individual is not engaged in the business of selling know-how, the doctrine does not apply because the individual has no everyday business operations. Similarly, where a company casually sells know-how unrelated to the everyday operation of its business, the doctrine does not apply. *But see supra* note 56. Moreover, in a leading case holding that know-how is property for purposes of § 1221, the court did not apply the *Corn Products* doctrine to the sale of know-how, even though it had before it a separate issue involving the doctrine. E.I. Du Pont De Nemours & Co. v. United States, 288 F.2d 904 (Ct. Cl. 1961). *See generally All About Know-How—The Tax Treatment of Unpatented Technology,* [1974] 9 STAND. FED. TAX REP. (CCH) ¶ 8613.

79 The Financial Accounting Standards Board suggests that the following arrangements under which the company would be obligated to repay the partnership would be conclusive of the company's bearing the risk:

sence of an express agreement, however, the arrangement may come within this prearranged-sale theory if the surrounding circumstances suggest an implied promise to purchase.

The implied-promise theory raises an additional problem that threatens both capital gain treatment and the research and development deduction; whether the arrangement constitutes a disguised borrowing. One could argue that if the circumstances indicate that the partnership is certain to be repaid, it has really loaned money to the company to develop software. Under this reasoning, because the partnership does not bear the risk of the project's failing, it will not qualify for the research and development deduction.[80] Furthermore, if the arrangement is a disguised borrowing, the partnership never acquires title to the software or any rights to sell, and therefore will not satisfy the sale or exchange requirement either.[81]

Whether the arrangement constitutes a disguised borrowing will depend on the facts of each case. For example, the company may have used preliminary research indicating a high probability of successful software development to attract investors. Standing alone, such evidence would be inconclusive because, under normal circumstances, no rational investor seeking a profit would finance research and development if the prospects for success were low. However, in conjunction with other facts and circumstances such evidence may warrant the conclusion that the company has obligated itself to repay the partnership.

Such circumstances may include certain provisions in the agreements that indicate the company's intent to repay the partnership regardless of the outcome of the project. When the company's option to purchase the software contains a minimum royalty guarantee, then the time it takes for the minimum payments alone to exceed the value of the entire amount invested plus interest would be significant to indicate the company's intent to guarantee repayment within a specified period. The circumstances may also indicate that the company will suffer a significant loss unless it exercises its option, regardless of the success of the project. For example, the company may have transferred to the part-

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(a) The [company] guarantees, or has a contractual commitment that assures, repayment of the funds provided by the other parties regardless of the outcome of the research and development.

(b) The other parties can require the [company] to purchase their interest in the research and development regardless of the outcome.

(c) The other parties automatically will receive debt or equity securities of the [company] upon termination or completion of the research and development regardless of the outcome.

FASB STATEMENT NO. 68, *supra* note 20, at ¶ 6.

[80] A finding of disguised borrowing would indicate that the company, not the partnership, was bearing the risk. The partnership would lose its deduction for research and development payments made to the company to develop the software. *See supra* note 14.

[81] *See infra* notes 121-37 and accompanying text.

nership certain base technology or other results of preliminary research that are not only necessary for the research project, but also for the overall operations of the company. If the arrangement provides no way for the company to regain use of the technology except by repurchasing it from the partnership, the company probably intended to repay from the beginning. In addition, if the company acts as general partner, a conflict of interest may arise on the basis of which the limited partners could reasonably be expected to litigate successfully if the company did not buy-out the partnership's interests. Finally, if the company has essentially completed the project before entering into the arrangement, one can presume that it fully intended to repay the partnership.[82]

Once the company has exercised its option it is easy to overlook the risks that both parties have undertaken, and therefore, courts should not readily presume that a disguised borrowing exists. In the absence of evidence of intent to repay, a court should keep in mind that the partnership bears the risk of failure of the project and loss of capital gain treatment, and the company bears the risk of foregone opportunities in a fast-paced, highly competitive market. Nevertheless, an investor presented with an R & D limited partnership opportunity should be wary if, for any of the above reasons, the arrangement seems to guarantee a return on his investment. If the partnership's risk is not genuine and substantial, the transaction may be treated as a disguised borrowing resulting in the partnership losing both the research and development deduction and capital gain treatment.

The Service may also try to characterize the R & D limited partnership arrangement as a purchase of a net-profits interest in the software developed. Indeed, the Tax Court recently accepted this theory in *Estate of Helliwell v. Commissioner*,[83] a case involving a movie "production service partnership." Although the production service partnership differs fundamentally from the R & D limited partnership,[84] the net-profits-

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82 *See generally* FASB STATEMENT NO. 68, *supra* note 20, at ¶¶ 5-8.

83 77 T.C. 964 (1981).

84 The production service partnership developed in the motion picture industry to provide "financing for the large 'up front' costs of producing a film . . . ." *Id.* at 983. The partnership would provide not only capital, but also services for producing films. Because the partnership was in the trade or business of providing production services it could deduct its "up front" investment as a § 162 business expense. Frequently the partnership would receive a fee "which, at least in part, would be contingent on the commercial success of the film." *Id.* If in reality, the partnership provided no services of its own, but hired others to perform those services, the Service could deny the § 162 deduction because the partnership was not engaged in a trade or business.

The R & D limited partnership, however, derives its current expense deduction from Revenue Procedure 69-21, 1969-2 C.B. 303, rather than from § 162. Under Revenue Procedure 69-21, the partnership can deduct the costs of developing software even if it is not engaged in a trade or business, *see supra* note 13 and accompanying text, and even if it contracts with a third party to have the software developed, *see supra* note 14 and accompanying text. Despite these safeguards, however, the Service may be able to deny the partnership's claim to

interest theory may still apply. Unfortunately, in *Estate of Helliwell,* the Tax Court did not explain why it had adopted the theory.[85] Nevertheless, the rationale underlying the theory as applied to the R & D limited partnership is fairly apparent. If the company is certain to exercise the purchase option, then the partnership's ownership and sale of the software to the company is a sham.[86] The partnership's payments to the company for development services are really payments to the company for the right to share in the net profits of the project.

The partnership can avoid this characterization by ensuring that both the documentation of, and circumstances surrounding, the arrangement do not indicate that the company is certain to exercise the purchase option. This same issue arises and is considered thoroughly in analyzing whether the interim license, which allows the partnership to satisfy the statutory holding period requirement, is a sham.[87]

b. *Section 1221(2).* Section 1221(2) excludes from capital asset status property depreciable under section 167 and used in the taxpayer's trade or business.[88] Section 167 allows a reasonable deduction for depreciation of property used in a trade or business or held for the production of income.[89] It covers both tangible[90] and intangible[91] property, provided the intangible property has a determinable useful life.[92] Know-how generally does not have a determinable useful life, and therefore is not depreciable. The Service's position in Revenue Procedure 69-21,[93] however, is that software is an intangible asset that may be amortized over five years (or less if the taxpayer proves a shorter useful

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the current expense deduction under Revenue Procedure 69-21 by attacking the entire transaction as a sham. *See infra* text accompanying notes 86-87.

85 The court devoted the body of its opinion to determining that the partnership was not entitled to the § 162 business expense deduction. It then concluded that "as a result of the capital furnished by [the partnership], it acquired a right to share in the profits . . . ." 77 T.C. at 991. It appears that the court reached this conclusion simply because the partnership's trade or business was a sham and the production agreement provided that the partnership would receive part of its fee in the form of "additional payments . . . if the proceeds from the distribution of the films exceeded certain limits . . . ." *Id.*

86 *See infra* notes 149, 157-61 and accompanying text.

87 *See infra* notes 157-61 and accompanying text.

88 I.R.C. § 1221(2) (1976) excludes from capital asset status "property, used in [the taxpayer's] trade or business, of a character which is subject to the allowance for depreciation provided in section 167, or real property used in his trade or business."

89 I.R.C. § 167(a) (Supp. V 1981): "There shall be allowed as a depreciation deduction a reasonable allowance for the exhaustion, wear and tear (including a reasonable allowance for obsolescence)—(1) of property used in the trade or business, or (2) of property held for the production of income."

90 *See* Treas. Reg. § 1.167(a)-2 (1956).

91 *See* Treas. Reg. § 1.167(a)-3 (1956).

92 An intangible asset has a determinable life, if "experience or other factors" indicate that it will have a limited use. The unsupported opinion of the taxpayer in this regard is insufficient evidence. *See id.*

93 1969-2 C.B. 303.

life).[94] Further, amortizable items are generally held to be of a character subject to depreciation under section 167.[95]

Software may also qualify for section 167 depreciation independent of the Service's positon in Revenue Procedure 69-21. Obsolescence is a primary factor used in determining the useful life of an asset[96] provided the experience of the taxpayer or of the industry as a whole supports a finding of obsolescence.[97] Rapid technological developments that cause software to be replaced frequently may provide the necessary evidence to prove a determinable useful life.[98]

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94 *Id.* § 4.01(2), at 303.

95 Estate of Shea v. Commissioner, 57 T.C. 15, 23 (1971) ("It has long been established that an amortizable item is 'of a character subject to depreciation' as required under section 1231(b)."); Baker v. Commissioner, 38 T.C. 9, 11-14 (1962) (amortizable leasehold was "property of a character which is subject to the allowance for depreciation" within meaning of § 1239(b)); Fackler v. Commissioner, 45 B.T.A. 708, 712-16 (1941) (amortizable lease was "property of a character which is subject to the allowance for depreciation" under predecessor to § 1221(2)), *aff'd,* 133 F.2d 509 (6th Cir. 1943).

96 *See* I.R.C. § 167(a) (Supp. V 1981); *supra* note 89; Treas. Reg. § 1.167(a)-9 (1956) ("The depreciation allowance includes an allowance for normal obsolescence which should be taken into account to the extent that the expected useful life of property will be shortened by reason thereof."); Treas. Reg. § 1.167(a)-1(b) (1956) ("Some of the factors to be considered in determining [the useful life] are . . . (2) the normal progress of the art, economic changes, inventions, and current developments within the industry and the taxpayer's trade or business . . . and (4) the taxpayer's policy as to repairs, renewals, and replacements."); *see also* Wolfe v. Commissioner, 12 T.C.M. (CCH) 519 (1953) (where it was reasonable to believe that patents held by taxpayer would be obsolete within a few years, expected rate of obsolescence fixed proper deduction rather than remaining life of patent).

97 Treas. Reg. § 1.167(a)-1(b) (1956) ("If the taxpayer's experience is inadequate, the general experience in the industry may be used until such time as the taxpayer's own experience forms an adequate basis for making the determination."); *see* Treas. Reg. § 1.167(a)-9 (1956) ("No such change will be permitted merely because in the unsupported opinion of the taxpayer the property may become obsolete.").

98 The Service has stated that certain software "is subject to the allowance for depreciation." Ltr. Rul. 8226063. The ruling involved I.R.C. § 103(b)(6) (1976) which applies to "property of a character subject to the allowance for depreciation." The regulations explain that this language means "the allowance for depreciation under section 167." Treas. Reg. § 1.103-10(b)(1)(ii) (1972).

Although some courts have held that computer programming and servicing purchase costs are deductible by the purchaser under § 162, and need not be capitalized, the opinions do not mention Revenue Procedure 69-21 and make no distinction between the purchase of a computer program and the purchase of computer programming and servicing. *See* First Sec. Bank v. Commissioner, 592 F.2d 1050 (9th Cir. 1979); Colorado Springs Nat'l Bank v. United States, 505 F.2d 1185 (10th Cir. 1974).

In First Sec. Bank v. Commissioner, 592 F.2d 1050 (9th Cir. 1979), the court characterized computer software purchased by a bank in connection with a credit card service as "computer programming and servicing." The court stated that it was "unable to distinguish between the 'computer costs' involved in the *Colorado Springs* case [taxpayer paid a maintenance fee for computer operation by a credit card company] and the amounts paid for a 'computer program' in the case before us." *Id.* at 1052. In his dissent, Judge Duniway explains the distinction the majority is unable to make and states: "the computer program is . . . a capital asset which must be amortized over its useful life." *Id.* at 1053.

Even if one accepts the court's erroneous characterization, a further ground for distinguishing both the *First Security* and *Colorado Springs* cases may be that they involved banks:

Software that is depreciable under section 167 will not be excluded from capital asset status under section 1221(2) unless it is used in the taxpayer's trade or business. The "factor" test used under section 1221(1) to determine whether the taxpayer is engaged in a trade or business applies here as well.[99] Under that test, the partnership is not necessarily involved in the trade or business of *selling* software.[100] The selling stage, however, is only one of three stages through which the partnership evolves.[101] It is possible that one of the other stages—the research stage or the interim license stage—could involve a trade or business in which the partnership "uses" the software.

During the research stage, the partnership will have no trade or business because mere contracting for research services does not constitute a trade or business.[102] During the interim license stage, the partnership's only activity will be the receipt of royalties under the license. The legislative history of the Economic Recovery Tax Act of 1981 indicates that "receipt of royalties does not constitute a trade or business."[103] A court may find, however, that a trade or business does exist where there is even minimal management of property independent of the receipt of royalties.[104] The R & D limited partnership's only management involves keeping track of royalties, which is not an independent activity for purposes of finding a trade or business. Thus, the software, even if depreciable under section 167, will not be used in a trade or business and will therefore not be within section 1221(2).

If the partnership were engaged in the trade or business of licensing

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> The Comptroller of the Currency who is charged by Congress with supervision and regulation of national banks has ruled that expenditures by commercial banks for the development and implementation of credit card programs must be charged to expense rather that [sic] capital . . . .
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> . . . Although the action of the Comptroller is not determinative, it is a factor for consideration.

Colorado Springs Nat'l Bank, 505 F.2d at 1188.

99 *See supra* notes 55-59 and accompanying text. Whether or not the software is used in a trade or business does not imply actual utilization. It "means 'devoted to the trade or business' and includes property purchased with a view to its future use in the business even though this purpose is later thwarted by circumstances beyond the taxpayer's control." Alamo Broadcasting Co. v. Commissioner, 15 T.C. 534, 541 (1950), *acq.,* 1951-52 C.B. 1.

100 *See supra* note 60 and accompanying text.

101 *See supra* note 61.

102 *See* Koons v. Commissioner, 35 T.C. 1092, 1100-01 (1961) (taxpayer who merely entered into development contract with research specialist was not engaged in trade or business).

103 HOUSE REPORT, *supra* note 9, at 113. *See also* Union Nat'l Bank v. United States, 195 F. Supp. 382 (N.D.N.Y. 1961) (ownership of net lease property not trade or business); Grier v. United States, 120 F. Supp. 395 (D. Conn. 1954), *aff'd per curiam,* 218 F.2d 603 (2d Cir. 1955) (receipt of rental income from property requiring minimal services not trade or business); Rev. Rul. 73-522, 1973-2 C.B. 228 (ownership of net lease property in U.S. did not cause nonresident alien to become engaged in trade or business in U.S.).

104 *See* Fackler v. Commissioner, 113 F.2d 509 (6th Cir. 1943) (receipt of rents from property requiring minimal management held trade or business).

software,[105] and the software was depreciable under section 167, the sale could still qualify for capital gain treatment under section 1231(b).[106] To qualify as section 1231(b) property, however, software must avoid exclusions identical to the remaining four in section 1221.[107] Thus, the only advantage gained by qualifying under section 1231(b) is avoiding exclusion under section 1221(2).[108]

c. *Section 1221(3).* Section 1221(3) excludes from capital asset status property such as a copyright, or a literary, musical, or artistic composition for certain classes of taxpayers.[109] The regulations define "property" for purposes of section 1221(3) to include "any other property eligible for copyright protection (whether under statute or common law)."[110] Congress recently enacted the Computer Software Copyright

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105 Battaglia and Herskovitz argue that the R & D limited partnership will be deemed to be engaged in the trade or business of licensing the software and cite Louw v. Commissioner, 30 T.C.M. (CCH) 1421 (1971), for support. Battaglia & Herskovitz, *supra* note 7, at 95. The *Louw* case, however, does not deal with the issue of the trade or business of licensing inventions. The court held that it was the taxpayer's inventive activities involving "the making of inventions rather than putting them to commercial use," that constituted a trade or business. *Id.* at 1423. This was so even though the taxpayer had "not yet received any income from the inventions conceived by him." *Id.* The only direct reference the court made to licensing was that "[h]is purpose has been to sell, lease, or license the patent or design to others." *Id.* For a court to find that the partnership is engaged in the trade or business of licensing software the partnership must engage in some activity beyond mere receipt of royalties. *See* cases cited *supra* notes 103-04.

106 I.R.C. § 1231 (Supp. V 1981). Section 1231(b) (1976) provides:

> (1) General Rule.—The term "property used in the trade or business" means property used in the trade or business, of a character which is subject to the allowance for depreciation provided in section 167, held for more than 1 year, and real property used in the trade or business, held for more than 1 year, which is not—
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> (A) property of a kind which would properly be includible in the inventory of the taxpayer if on hand at the close of the taxable year,
>
> (B) property held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business,
>
> (C) a copyright, a literary, musical, or artistic composition, a letter or memorandum, or similar property, held by a taxpayer described in paragraph (3) of section 1221 . . . .

107 I.R.C. § 1221(1), (3), (4) (1976), (5) (Supp. V 1981); *supra* notes 25, 26.

108 *See generally* Battaglia & Herskovitz, *supra* note 7, at 95-96 (discussing whether sale of software qualifies under § 1231).

109 I.R.C. § 1221(3) (1976) excludes from capital asset status:

> a copyright, a literary, musieal, or artistic composition, a letter or memorandum, or similar property, held by—
>
> (A) a taxpayer whose personal efforts created such property,
>
> (B) in the case of a letter, memorandum, or similar property, a taxpayer for whom such property was prepared or produced, or
>
> (C) a taxpayer in whose hands the basis of such property is determined, for purposes of determining gain from a sale or exchange, in whole or part by reference to the basis of such property in the hands of the taxpayer described in subparagraph (A) or (B) . . . .

110 Treas. Reg. § 1.1221-1(c)(1) (1975).

Act of 1980.[111] The Act confirms that computer programs are appropriate material for copyright protection and specifies certain limitations on the rights of program copyright holders.[112] Software, therefore, may be excluded from capital asset status under section 1221(3) if the partnership, as holder, comes within the other requirements of the section.

Section 1221(3)(A) excludes copyright property that the taxpayer creates through his personal efforts.[113] A taxpayer uses personal effort when he "affirmatively contributes to the creation of the property, or . . . directs and guides others in the performance of such work."[114] Mere administrative control, however, does not constitute personal effort.[115] Software in the hands of the partnership will not be excluded under the "personal efforts" requirement because the partnership has merely contracted with the company to perform the research and development; the company creates the software and the partnership performs no directing and guiding function.[116]

Section 1221(3)(C) excludes copyright property having the same basis in the hands of the taxpayer that it had in the hands of its creator.[117] Thus, if the creator of a computer program gives his software to

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[111] Act of Dec. 12, 1980, Pub. L. No. 96-517, § 10(a), 94 Stat. 3028. For a history of the development of computer software copyright law, see Keplinger, *Computer Software—Its Nature and Its Protection,* 30 EMORY L.J. 483, 493-511 (1981).

[112] 17 U.S.C. § 101 (Supp. V 1981) provides: "A 'computer program' is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." The Act places limitations on the rights of the program copyright holder:

> Notwithstanding the provisions of section 106, it is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy or adaptation of that computer program provided:
>
> (1) that such a new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner, or
>
> (2) that such a new copy or adaptation is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.
>
> Any exact copies prepared in accordance with the provisions of this section may be leased, sold, or otherwise transferred, along with the copy from which such copies were prepared, only as part of the lease, sale, or other transfer of all rights in the program. Adaptations so prepared may be transferred only with the authorization of the copyright owner.

17 U.S.C. § 117 (Supp. V 1981).

[113] *See supra* note 109.

[114] Treas. Reg. § 1.1221-1(c)(3) (1975).

[115] "[A] taxpayer, such as [a] corporate executive, who merely has administrative control of writers, actors, or personnel and who does not substantially engage in the direction and guidance of such persons in the performance of their work, does not create property by his personal efforts." *Id.*

[116] By referring expressly to a corporate executive, the regulations imply that where the taxpayer is a corporation, the actions of its officers will be imputed to it. It is reasonable to assume the same will be true of partners in a partnership. *See* Battaglia & Herskovitz, *supra* note 7, at 96 (discussing potential problems arising from company being construed as acting as agent for partnership).

[117] *See supra* note 109.

the taxpayer,[118] or sells it to the taxpayer for an amount equal to his basis,[119] the software in the taxpayer's hands would not qualify as a capital asset. Software in the hands of the R & D limited partnership will not be excluded under the "same basis" requirement because the partnership has title to the software at all times. Prior to its sale, the software never has a basis in anyone's hands but the partnership's. Thus, although software qualifies as copyright property, it will not be excluded from capital asset status because the partnership, as holder, does not meet either the "personal efforts" or "same basis" requirements of section 1221(3).[120]

Because software in the hands of the partnership qualifies as section 1221 property and is not excluded under any of section 1221's subsections, it qualifies as a capital asset. To obtain long-term capital gain treatment, however, the partnership must also satisfy both the sale or exchange and the holding period requirements.

B. Sale or Exchange

Long-term capital gain treatment requires a "sale or exchange of a capital asset held for more than 1 year."[121] The courts and the Service treat the sale or exchange of trade secrets, know-how, and similar intangibles under the "all substantial rights" requirement of section 1235.[122] To meet this requirement a sale must transfer all "substantial

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118 I.R.C. § 1015(a) (1976) ("If the property was acquired by gift . . . the basis shall be the same as it would be in the hands of the donor . . . .").

119 *Id.* § 1012 ("basis of property shall be the cost of such property").

120 Section 1221(3)(B) excludes from capital asset status a letter, memorandum, or similar property. *See supra* note 109. This category does not include support documentation accompanying the software such as flow charts, usage instructions, and operation manuals. The copyright laws provide protection for manuals of all sorts, 17 U.S.C. § 102(a) (Supp. V 1981).

> Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include the following categories:
>
> (1) literary works . . . .

Id. In the House Report on the Copyright Act, Pub. L. No. 94-553, 90 Stat. 2541 (1976), the Committee on the Judiciary stated: "The term 'literary works' does not connote any criterion of literary merit or qualitative value: it includes catalogs, directories, and similar factual, reference, or instructional works and compilations of data." H.R. REP. NO. 1476, 94th Cong., 2d Sess. 54 (1976). Thus, the support documentation would be "other property eligible for copyright protection," Treas. Reg. § 1.1221-1(c)(1) (1975), and the regulations dealing with a letter or memorandum would not apply, Treas. Reg. § 1.1221-1(c)(2) (1975) (providing that "[t]his subparagraph does not apply to . . . any property to which subparagraph (1) of this paragraph applies" [subparagraph (1) deals with *a copyright,* a literary, musical, or artistic composition and similar property]").

121 I.R.C. § 1222(3) (Supp. V 1981).

122 *Id.* § 1235(a) ("A transfer (other than by gift, inheritance, or devise) of property consisting of all substantial rights to a patent, or an undivided interest therein which includes a part of all such rights, by any holder shall be considered the sale or exchange of a capital asset . . . ."); *see* Kaczmarek v. Commissioner, 43 T.C.M. (CCH) 501, 504-05 (1982) ("It is settled,

rights" of value at the time of transfer.[123] Although some of these rights *must* be transferred, others may be retained depending upon the circumstances.

In general, to transfer all substantial rights the partnership must not:

(1) limit the transfer geographically within the country of issuance;[124]
(2) limit the duration of the transfer to less than the software's remaining life;[125]
(3) limit the transfer to a particular field of use;[126]
(4) limit access to any of the software;[127]
(5) retain the right to prevent unauthorized disclosure;[128] or

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however, that transfers of unpatented technology are treated for tax purposes in a manner akin to that afforded transfers of patents."); Ofria v. Commissioner, 77 T.C. 524, 535 (1981) ("[W]e will be guided by the principles developed in cases involving the transfer of patents, which are equally applicable to payments for commercially valuable trade secrets or know-how or data similar to patents."); Taylor-Winfield Corp. v. Commissioner, 57 T.C. 205, 213 (1971) ("It is settled, however, that unpatented technology such as know-how can be the subject of a sale and that technical data is treated for tax purposes in a manner similar to patents."), *aff'd,* 467 F.2d 483 (6th Cir. 1972); PPG Indus., Inc. v. Commissioner, 55 T.C. 928, 1012 (1970) ("In determining whether a transfer of rights in unpatented technology constitutes a sale within the meaning of sections 1221 and 1231 the courts have applied the tests developed in the cases involving transfers of patent rights.").

123 Treas. Reg. § 1.1235-2(b)(1) (1965). Courts, in determining whether a taxpayer transferred all substantial rights look at what the taxpayer gave up and what he retained. Mros v. Commissioner, 493 F.2d 813, 816 (9th Cir. 1974). Because giving and retaining are both aspects of the same process, the distinction may be of little analytical value except where the transferor gives up all substantial rights divided among more than one transferee. Where a company assigned patent rights to two companies, one receiving the right to sell and the other receiving the right to manufacture and use, even though the taxpayer had not "given" all substantial rights to either company, the court held that it had not "retained" any substantial rights. C.A. Norgren Co. v. United States, 268 F. Supp. 816, 821-22 (D. Colo. 1967). A more productive approach would be to address the elements that must be transferred and then to analyze the elements that may be retained depending upon the circumstances.

124 Treas. Reg. § 1.1235-2(b)(1)(i) (1965) (" '[A]ll substantial rights' . . . does not include a grant . . . [w]hich is limited geographically within the country of issuance . . . .").

125 Treas. Reg. § 1.1235-2(b)(1)(ii) (1965) (" '[A]ll substantial rights' . . . does not include a grant . . . [w]hich is limited in duration by the terms of the agreement to a period less than the remaining life of the patent . . . .").

126 Treas. Reg. § 1.1235(b)(1)(iii) (1965) (" '[A]ll substantial rights' . . . does not include a grant . . . [w]hich grants rights to the grantee, in fields of use within trades or industries, which are less than all the rights covered by the patent, which exist and have value at the time of the grant . . . .").

127 Treas. Reg. § 1.1235-2(b)(1)(iv) (1965) (" '[A]ll substantial rights' . . . does not include a grant . . . [w]hich grants to the grantee less than all the claims or inventions covered by the patent which exist and have value at the time of the grant.").

128 Graham v. United States, 79-1 U.S. Tax Cas. (CCH) ¶ 9274, at 86,584 (N.D. Tex. 1979) ("In the context of trade secrets, the dividing line between a sale and a mere license has been drawn by some courts according to whether the buyer is restrained from disclosing the secret."); E.I. Du Pont De Nemours & Co. v. United States, 288 F.2d 904 (Ct. Cl. 1961):

> It follows that the essential element of a trade secret which permits of ownership and which distinguishes it from other forms of ideas is the right in the discoverer to prevent unauthorized disclosure of the secret. No disposition

(6) retain the right to terminate the agreement at will.[129]

Rights and interests that the partnership may retain depending upon the circumstances include:

(1) the right to make, use, or sell;[130]

> of a trade secret is complete without some transfer of this right to prevent unauthorized disclosure.

Id. at 911; Glen O'Brien Movable Partition Co. v. Commissioner, 70 T.C. 492, 504 (1978) ("[R]estriction on [transferee's] right to dislcose . . . the know-how . . . indicate[d] that [the transferor] retained a substantial right of value in such know-how."); Taylor-Winfield Corp. v. Commissioner, 57 T.C. 205, 218 (1971) ("[W]e note that [the transferee] could not disclose any of the technical data obtained from [the transferor] without first securing the latter's consent. Such a proscription has been considered a substantial right."), *aff'd,* 467 F.2d 483 (6th Cir. 1972); Commercial Solvents Corp. v. Commissioner, 42 T.C. 455, 469 (1964) (no sale or exchange because "[i]n the instant case we do not think that [the transferor], under the agreement, transferred to [the transferee] any right to prevent unauthorized disclosure.").

129 Treas. Reg. § 1.1235-2(b)(4) (1960); *see also* Taylor-Winfield Corp. v. Commissioner, 57 T.C. 205, 215 (1971) (no sale or exchange where transferor "retained the right to terminate the 1965 know-how agreement at will at the end of the 10-year period"), *aff'd,* 467 F.2d 483 (6th Cir. 1972); Young v. Commissioner, 29 T.C. 850, 858 (1958) (no sale or exchange where transferor "retained the right to terminate the agreement at any time following 6 months' notice to Bell"), *aff'd,* 269 F.2d 89 (2d Cir. 1959). *But cf.* Bell Intercontinental Corp. v. United States, 381 F.2d 1004, 1021 (Ct. Cl. 1967) (no sale or exchange where either party could terminate the agreement at the end of 10 years although "[i]n some cases . . . the grantor's reservation of the right to cancel at his own discretion will not preclude a sale where it appears from all the circumstances that the right so reserved has no practical value").

130 Treas. Reg. § 1.1235-2(b)(3)(ii) (1960) provides that "[t]he failure to convey . . . the right to use or to sell may or may not be substantial, depending upon the circumstances." *Compare* Waterman v. Mackenzie, 138 U.S. 252, 256 (1891) ("[T]he grant of an exclusive right under the patent . . . which does not include the right to make, and the right to use, and the right to sell, is not a grant of a title in the whole patent right . . . and is therefore only a license.") *with* Rollman v. Commissioner, 244 F.2d 634, 637 (4th Cir. 1957) ("[N]either the Tax Court nor the other courts have felt obliged in every case to apply strictly the dicta of the Waterman decision without regard to the objective realities of the cases before them."). In *Rollman,* an exclusive right to make and sell shoes amounted to complete control because the omission of the right to use did not limit the transferee in its actual operations under the patent. *See also* Lawrence v. Commissioner, 242 F.2d 542, 544-45 (5th Cir. 1957) (transfer of exclusive right to manufacture, use, and lease, but not to sell patented tool held a conveyance of all substantial rights under patent because evidence showed such tools could only be used by trained operators and were withheld from sale to protect reputation of device); Parke, Davis & Co. v. Commissioner, 31 B.T.A. 427 (1934) (right to make and use, but not to sell, conveyed all substantial rights in patent covering machine designed to make and fill capsules), *acq.,* 14-1 C.B. 15 (1935).

The Senate Finance Committee Report on the Internal Revenue Code of 1954 discusses the purpose of § 1235 stating:

> Moreover, the Courts have recognized that an exclusive license agreement in some instances may constitute a sale for tax purposes even where the right to "use" the invention has not been conveyed to the licensee, if it is shown that such failure did not represent the retention of a substantial right under the patent by the licensor. It is the intention of your committee to continue this realistic test, whereby the entire transaction, regardless of formalities, should be examined in its factual context to determine whether or not substantially all rights of the owner in the patent property have been released to the transferee, rather than recognizing less relevant verbal touchstones.

S. REP. NO. 1622, 83d Cong., 2d Sess. 440 (1954). Thus, failure to transfer one of these rights where it is of little or no value will not negate the sale.

(2) the right to prohibit sublicensing or subassignment;[131]
(3) the right to terminate based on a condition subsequent;[132]
(4) legal title for the purpose of securing performance or payment;[133] and
(5) a security interest.[134]

The partnership may either sell the software for a lump sum or grant an exclusive license. The Code provides that a patent license may involve payments contingent upon productivity, use, or disposition of the property and yet still qualify as a sale or exchange.[135] The partnership can therefore transfer the software under a license,[136] with the transaction being treated as a sale, rather than a lease. Because the partnership's return under the license will depend on the company's efforts to exploit the software, however, it may want to retain additional rights to protect its investment. If the partnership retains too substantial a package of rights, the license will not constitute a sale or exchange. Rights and interests which the partnership can retain without disqualifying the sale include, the right to terminate based on a condition subse-

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131 Treas. Reg. § 1.1235-2(b)(3)(i) (1960) provides that whether the transferor's retention of an absolute right to prohibit sublicensing or subassignment by the transferee is a substantial right depends upon the circumstances. Courts, however, have generally not found such a right to be substantial. *Compare* Schmitt v. Commissioner, 271 F.2d 301, 307 (9th Cir. 1959) (no sale of all substantial rights where transferor retained an unlimited veto on approval of sublicenses) *with* Rollman v. Commissioner, 244 F.2d 634, 639-40 (4th Cir. 1957):

> The authorities do not support the view that the grant of exclusive rights under a patent does not amount to a transfer of a capital asset if the assignee cannot grant a sublicense without the assignor's consent. Such a limitation does not interfere with the full use of the patent by the assignee and it serves to protect both parties to the assignment in case the purchase price is paid in installments.

and Bell Intercontinental Corp. v. United States, 381 F.2d 1004, 1016-17 (Ct. Cl. 1967) (sale of all substantial rights where transferee could not sublicense) *and* Glen O'Brien Movable Partition Co. v. Commissioner, 70 T.C. 492, 501 (1978) (sale of all substantial rights where transferee could not assign its rights).

132 *See* Bell Intercontinental Corp. v. United States, 381 F.2d 1004, 1018-19 (Ct. Cl. 1967); *see also* First Nat'l Bank v. United States, 136 F. Supp. 818, 822-23 (D.N.J. 1955) (sale, not license, despite provision for cancelation of agreement upon issuance of cease and desist order by FTC that prevents or seriously curtails sale of invention); Lamar v. Granger, 99 F. Supp. 17, 37-38 (W.D. Pa. 1951) (sale, despite provision for termination of agreement upon transferee's insolvency); Kronner v. United States, 110 F. Supp. 730, 733-34 (Ct. Cl. 1953) (sale, despite provision for termination of agreement for failure to use reasonable or best efforts in promoting and marketing products produced with transferred know-how); Coplan v. Commissioner, 28 T.C. 1189 (1957), *acq.*, 1958-2 C.B. 4 (same as *Lamar*).

133 *See* Treas. Reg. § 1.1235-2(b)(2)(i) (1960).

134 *See* Treas. Reg. § 1.1235-2(b)(2)(ii) (1957).

135 The transfer will be treated as a sale or exchange "regardless of whether or not payments in consideration of such transfer are—(1) payable periodically over a period generally coterminous with the transferee's use of the patent, or (2) contingent on the productivity, use, or disposition of the property transferred." I.R.C. § 1235(a)(2) (Supp. V 1981); *see also* Treas. Reg. § 1.1235-1(a)(2) (1960).

136 Part of the royalty payments received under the license may be characterized as interest that will be taxable as ordinary income. I.R.C. § 483 (1976) (interest on certain deferred payments).

quent, legal title, and a security interest.[137] The partnership can thus satisfy the sale or exchange requirement regardless of whether it licenses the software or sells it outright.

C. The Holding Period

To obtain long-term capital gain treatment, the software must be held for more than one year before it is sold.[138] As with the sale or exchange requirement, courts have analogized know-how to patented inventions to determine when the holding period begins.[139] For patented inventions, the holding period begins when the invention is "reduced to practice."[140] An invention is reduced to practice when it has been tested and operated under operating conditions.[141] The tests need not demonstrate that the invention is ready to be manufactured commercially; they merely must establish that the invention works and is suitable for its intended purpose.[142] In some cases, software's reduction to practice can be delineated by completion of the final phase in its development[143]—the debugging process. Debugging is a process by

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137 *See supra* notes 132-34 and accompanying text.

138 I.R.C. § 1222(3) (Supp. V 1981).

139 *See, e.g.,* United States Mineral Prods. Co. v. Commissioner, 52 T.C. 177, 196-97 (1969) (holding period test for patents applied to industrial knowledge and secret processes).

140 I.R.C. § 1235(b)(2) (1976); *see* Simon v. Commissioner, 20 T.C.M. (CCH) 1309, 1312-13 (1961) (inventor has acquired no property rights when further application of others' "creative skill and knowledge" is necessary); Myers v. Commissioner, 6 T.C. 258, 265 (1946) (taxpayer proved completed conception of invention "by drawings made, signed, and dated by him, which drawings set forth the invention in sufficient detail to enable those skilled in the art to manufacture the invention . . . without further application of the inventive act"); *see also* Burde v. Commissioner, 43 T.C. 252, 269 (1964) ("[Because] [w]e have previously decided that the transfer . . . did not qualify under section 1235 . . . for long-term capital gains treatment . . . [the transferor] must have held property rights in the invention for [the statutory holding period] prior to its sale."), *aff'd,* 352 F.2d 995 (2d Cir. 1965).

141 Treas. Reg. § 1.1235-2(e) (1957).

142 Wiesner v. Weigert, 666 F.2d 582, 588 (C.C.P.A. 1981) ("It is well established that . . . an invention is not reduced to practice until its practicability or utility is demonstrated pursuant to its intended purpose, . . . though reduction to practice of a commercially saleable product is not required.") (citations omitted); Randolph v. Shoberg, 590 F.2d 923, 926 (C.C.P.A. 1979) ("To prove a reduction to practice, all that must be shown is that the invention is suitable for its intended purpose. There is no requirement for a reduction to practice that the invention, when tested, be in a commercially satisfactory stage of development.") (citations omitted) (quoting *In re* Dardick, 496 F.2d 1234, 1238 (C.C.P.A. 1974)); Steinberg v. Seitz, 517 F.2d 1359 (C.C.P.A. 1975) (same); Peeler v. Miller, 535 F.2d 647, 651 (C.C.P.A. 1976); Cochran v. Kresack, 530 F.2d 385, 391 (C.C.P.A. 1976).

143 The various stages of software development are as follows:

> (1) A systems analyst defines the needs of the user (current manual methods are examined).
>
> (2) The analyst details a description of the proposed computerized process.
>
> (3) The analyst or programmer outlines the proposed processes in a general computer program format (a flowchart may be drawn).
>
> (4) The programmer translates the general program steps into a high-level language such as FORTRAN or COBOL. When this translation is

which programmers test software for errors. If debugging reveals no, or only a few, significant errors, the partnership could record and later substantiate the event as the software's reduction to practice. Prior to that time, however, or if debugging exposes many significant errors, the partnership would not know whether the program could perform as intended.[144]

Another problem may arise if software is improved after it has been initially reduced to practice. In *Computer Sciences Corp. v. Commissioner,*[145] the court considered whether improvements made in a tax computation program were production of property within the meaning of section 341[146] and concluded that because "[i]t is customary for changes and improvements to be made continuously on any process . . . no process or patent developed by a taxpayer would be considered to have passed the stage of production at any time if we considered these improvements

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> keypunched or typed, it becomes machine readable "source" code. The code resides on magnetic disk, magnetic tape, or cards.
>
> (5) The central processing unit translates this code through the use of another piece of software—the compiler—into "object" code which more closely corresponds with the machine's architecture for efficient processing. This object code is stored and after extensive testing becomes the salable product.

Comment, *supra* note 27, at 860 n.4.

In Computer Sciences Corp. v. Commissioner, 63 T.C. 327 (1974), the court applied the "actual reduction to practice" test to determine whether a computer program had been "produced" within the meaning of § 341 (relating to collapsible corporations). *Id.* at 352-55. The court stated that

> [it is] not necessary that testing [proceed] to the point where the invention [is] actually ready to be put into commercial production without further testing for reduction to practice to have occurred, but rather—"that the tests should suffice to persuade practical men to take the *risk* of commercializing the invention . . . . In the nature of things, testing goes on throughout the process of 'commercializing' and often continues after a product is on the market where it usually receives its severest test."

Id. at 352-53 (emphasis in original) (quoting Goodrich v. Harmsen, 442 F.2d 377, 377-83 (C.C.P.A. 1971)).

The *Goodrich* case implies that the company would have to complete testing of the program before it could consider the program "reduced to practice." "Practical men" would not be likely "to take the risk of commercializing" a computer program that had not been shown to be free of significant errors.

144 The partnership could argue in certain cases, that sometime prior to or during actual debugging, the company had become reasonably certain that the program was viable and that any remaining errors could be corrected easily. In such a case, the program has actually been reduced to practice before debugging is complete and, thus, the holding period should begin earlier. *See generally* Battaglia & Herskovitz, *supra* note 7, at 96:

> When property, particularly software, has been "reduced to practice" has not been clearly defined and there is no clear cut line of demarcation as to when this point has been reached. Therefore, in structuring the software R&D program, the purchase option should provide that it cannot be exercised for at least 12 months after the property has been reduced to practice, and probably as much as 14 to 18 months after the property has been reduced to practice in order to provide a cushion for the holding period.

145 63 T.C. 327 (1974).

146 I.R.C. § 341 (1976, Supp. V 1981 & West Supp. 1983).

as part of the production of property."[147] The improvements made included updating the program to comply with current tax law.[148] Arguably, morc substantial changes could alter thc character of the software sufficiently to require the taxpayer to start the holding period over again.

The holding period of know-how ends when the know-how is sold or exchanged. Thus, in the R & D limited partnership arrangement, the interim license agreement is desigued to allow the partnership to satisfy the one-year holding period requirement and yet still allow the corporation to use the software. Although a taxpayer may deliberately set up a transaction so that disposition of his capital asset does not occur until after the statutory holding period, a transaction without substance, desigued merely to convert short-term into long-term gain, will be disregarded as a sham.[149] Thus, to determine whether the partnership has satisfied the holding period requirement, one must look beyond the form of the interim license and examine its economic substance. If the interim license lacks economic substance, the sale will be treated as having occurred on the date the license began and the partnership will not qualify for long-term capital gain treatment.

A transfer of software by the partnership under an interm license that expires before the end of the software's useful life normally will not constitute a sale or exchange.[150] When coupled with an option to purchase, however, the license may be interpreted as transferring all substantial rights and thus qualify as a sale.[151] To avoid such an interpretation, the partnership must retain substantial rights in the software beyond a reversionary interest.[152] Retaining a combination of the rights that normally must be transferred would sufficc. For example, the partnership could restrict the intcrim license to a specific geographic area or a specific field of use, and withhold the right to prevent unauthorized

147 63 T.C. at 349-50; *see also supra* note 143.

148 The evidence shows that additional schedules of the Federal returns and additional State returns have been added to the program yearly to the time of the trial of this case. However, in our view, this does not require a conclusion that the computer program, which is the property with which we are concerned here, had not been completely developed or produced prior to mid-April of 1965.

63 T.C. at 349.

149 *See, e.g.,* Martin v. Commissioner, 44 T.C. 731, 739-43 (1965) (lease-option agreement was in effect a sale terminating seller's holding period), *modified on other grounds,* 379 F.2d 282 (6th Cir. 1967); Merrill v. Commissioner, 40 T.C. 66, 75-77 (1963) (escrow agreement constituted sale terminating seller's holding period), *aff'd per curiam,* 336 F.2d 771 (9th Cir. 1964); Rev. Rul. 72-252, 1972-1 C.B. 193 (Service's position on effect of escrow agreements on holding period).

150 *See* Treas. Reg. § 1.1235-2(b)(1)(ii) (1957); *supra* note 125.

151 Treas. Reg. § 1.1235-2(b)(2) (1957) (retention of legal title by transferor may not always be considered retention of a substantial right). *See supra* notes 135-36 and accompanying text.

152 *See supra* notes 124-34 and accompanying text.

disclosure. The conflicting interests and particular needs of the partnership and company will dictate which rights the partnership retains.

Delaying transfer of title until the company exercises the option to purchase may not prevent the finding of an earlier sale.[153] Even if the partnership retains certain rights, a court may treat the license as a sale if it transfers to the company substantially all of the benefits and burdens of ownership and there is no logical or economic reason for the company not to exercise the option.[154] Whether substantially all the benefits and burdens of ownership pass under the interim license is a question of fact.[155] The regulations, however, specify that certain rights will be treated as substantial in all cases.[156] Retention of these rights should preclude a finding that the benefits and burdens of ownership pass during the license period.

On the other hand, there would be no logical or economic reason for the company not to exercise the option if, for example, the company makes substantial expenditures for production or marketing of the software before the partnership grants the interim license, the partnership requires no lump sum payment on exercise of the option, the partnership makes royalty payments contingent upon use without a minimum royalty requirement, or the partnership does not require the company to use "best efforts" to market or produce the software. Even

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153 Swigart v. Commissioner, 40 T.C.M. (CCH) 1215 (1980):

> It is well settled that whether an agreement is regarded as a sale or a lease for Federal tax purposes is determined by the substance of the transaction and not the terminology employed. The intent of the parties when the agreement was executed, as ascertained from the practical effect of the agreement and all the attendant facts and circumstances, is controlling.

Id. at 1218; *see also supra* note 149.

154 *See* Major Realty Corp. & Subsidiaries v. Commissioner, 42 T.C.M. (CCH) 373, 381 (1981) ("Among the factors to be considered in determining when a sale is complete are the transfer of legal title and the shift of the benefits and burdens of ownership of the property. Generally, a sale is completed upon the first of these events to occur.") (citations omitted); Kindsehi v. Commissioner, 39 T.C.M. (CCH) 638, 646 (1979) ("[W]here passage of title is delayed . . . sale will be complete upon the acquisition of the burdens and benefits of ownership by the purchaser."); Baird v. Commissioner, 68 T.C. 115, 126 (1977); Deyoe v. Commissioner, 66 T.C. 904, 910 (1976); Lisle v. Commissioner, 35 T.C.M. (CCH) 627, 635 (1976) ("[A] sale for tax purposes . . . occurs upon a passing of sufficient incidents of beneficial ownership . . . ."); Martin v. Commissioner, 44 T.C. 731, 742 (1965) (option to purchase constituted sale when granted because "[t]here was no logical or economic reason for the [optionee] not to exercise the option . . . ."), *modified on other grounds,* 379 F.2d 282 (6th Cir. 1967); Merrill v. Commissioner, 40 T.C. 66, 74 (1963) ("[T]he intent of the parties as to when the benefits and burdens of ownership of the property are to be transferred, as evidenced by factors other than passage of bare legal title, must control . . . ."), *aff'd per curiam,* 336 F.2d 771 (9th Cir. 1964).

155 *See* Major Realty Corp. & Subsidiaries v. Commissioner, 42 T.C.M. (CCH) 373, 381 (1981) ("The question of when a sale is complete for Federal income tax purposes is essentially a question of fact to be resolved by a consideration of all the surrounding facts and circumstances."); Kindschi v. Commissioner, 39 T.C.M. (CCH) 638, 646 (1979) ("The question of when a sale is complete is essentially a question of fact.").

156 *See supra* notes 124-29 and accompanying text.

if these factors do not exist when the partnership grants the option, if they arise at any time substantially before the exercise date, a sale may be deemed to occur at that time. Thus, if the company does not need a year to evaluate the software, the sale may be held to date from the time the company decides to purchase. After that time, the company arguably has no logical or economic reason not to exercise the option. This argument fails, however, for two reasons.

First, the company does have a logical and economic reason not to exercise before one year. The extra time allows the company to analyze the impact of competing products entering the market in deciding whether or not to exercise the option. Second, an optionee who accepts an option not exercisable until a fixed date may well want to exercise before the exercise date. The future date represents a trade-off between the competing interests of the two parties, not one party's ideal solution. To assume that the exercise date is the precise date that each party would choose on its own is unrealistic. To invalidate an option of this sort by looking at only one of the parties' interests iguores commercial reality. In the absence of evidence to the contrary, one should presume that the option reflects a balance of both parties' interests.

A problem may arise, however, if the only reason for making the interim license period one year is to allow the partnership to fulfill the holding period requirement. A court could disregard such a license as a sham.[157] The interim license, however, results from arm's length bargaining between the parties and not solely from the partnership's desire to obtain long-term capital gain treatment. The interim license, therefore, should not be disregarded.[158] The partnership bears the risk of failure of the development project and the potential loss of capital gain treatment[159] in exchange for a one-year interim license that ensures long-term capital gain treatment in the event the company exercises its

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157 *See supra* note 149 and accompanying text.

158 "[A] transaction, otherwise within an exception of the tax law, does not lose its immunity, because it is actuated by a desire to avoid . . . taxation." Gregory v. Helvering, 69 F.2d 809, 810-11 (2d Cir. 1934), *aff'd*, 293 U.S. 465 (1935).

In Frank Lyon Co. v. United States, 435 U.S. 561 (1978), a case involving a sale-leaseback arrangement the Court held:

> [W]here . . . there is a genuine multiple-parry transaction with economic substance which is compelled or encouraged by business or regulatory realities, is imbued with tax-independent considerations, and is not shaped solely by tax-avoidance features that have meaningless labels attached, the Government should honor the allocation of rights and duties effectuated by the parties.

Id. at 583-84. *But see* Gunn, *Tax Avoidance,* 76 MICH. L. REV. 733 (1978) (arguing that whether particular conduct was tax motivated should be irrelevant to whether conduct is taxed in certain way).

159 *See supra* note 60 and accompanying text.

option.[160] One could argue that the partnership could just as easily offset its risk by requiring a higher royalty percentage. This argument, however, assumes that the parties can negotiate a percentage that perfectly reflects the value that each assigns to its risk, independent of tax considerations. In fact, the company probably will not be willing to raise the percentage because it presumes that the partnership can offset part of its risk through possible capital gain treatment. As a result, the arm's length bargaining may force the partnership to structure the transaction to obtain long-term capital gain treatment to cover the value of its risk.

Nevertheless, a court may still iguore the interim license as a sham if it believes that Congress did not intend to allow taxpayers to use the holding period in this manner. The holding period requirement distinguishes between gains from investment and speculation.[161] This purpose is served fully by the one-year rule. Gains from investment and speculation are better distinguished on the basis of length of time held, than on the basis of motive.

One can argue, however, that a further purpose of the holding period requirement is to ensure that ordinary income-type items that "slip through the capital asset net" do not receive favorable capital gain treatment unless they are held long enough to generate income from appreciation in value. Assuming that software in the hands of the partnership is the type of property that has managed to "slip through," it can fulfill this purpose provided the terms of the purchase and sale option remain flexible enough to allow the parties to negotiate a lump-sum price or royalty percentage at the end of the interim license period. If the sale price is set at the time the parties enter into the research and development contract, the partnership cannot realize any appreciation during the one-year holding period. Further, if the anticipated appreciation is "built into" the price, the risk element associated with investment does not exist. A royalty percentage rate determined ahead of time, however, does reflect appreciation in value; the more valuable the software, the higher the payment the set percentage will produce. Nevertheless, the partnership would be well advised in this regard to keep the price term open until the purchase and sale option is exercised.

The interim license can satisfy both the formal requirement of the holding period and its underlying policy. In doing so, however, it may retard rather than promote software development. Similar products en-

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160 Of course, if the facts and circumstances indicate that the parties did not deal at arm's length, the results would be quite different.

161 *See* Chabrow, *Capital Gains: Should the Holding Period Be Extended,* 113 TR. & EST. 196, 199 (1974) ("It was the intent of Congress in establishing a holding period, as far back as the Revenue Act of 1921, to provide different tax treatment for capital gains resulting from investment as distinguished from those gains resulting from speculation.").

tering the market during the one-year interim license period could have the effect of reducing an investor's return. If the company decides not to purchase, the partnership would be forced to find another buyer in a competitive market and would probably be denied capital gain treatment.[162] If the company did decide to purchase the software, the partnership would receive smaller royalties based on the company's reduced market share. Further, it is possible that software marketed under a restricted license, if not developed by someone else, would deprive a part of society of a valuable resource for a time.

These arguments, however, overlook the flexibility of the sale or exchange requirement. The company can develop a significant market during the interim license period even though the partnership retains substantial rights in the software.[163] Few companies would expend time to develop software that they knew they would be unable to exploit sufficiently. Ultimately, it may be the free enterprise system that upholds the integrity of the arrangement. Faced with a potential loss of market share because of an overly restrictive interim license, the parties may agree to an earlier sale, sacrificing capital gain treatment for higher royalties at ordinary income rates.

CONCLUSION

A sale of computer software by an R & D limited partnership, if structured properly, should satisfy the requirements of the capital gain provisions. Software in the hands of the partnership qualifies as a capital asset and its sale by the partnership can satisfy both the sale or exchange and holding period requirements. The greatest barriers to capital gain treatment arise from the circumstances surrounding the arrangement. If the company obligates itself to purchase the software, or guarantees the partnership a return on investment from the start, the entire transaction may constitute a disguised borrowing or a purchase of a net-profits interest, or the interim license may be disregarded as a sham. Investors, alert to the issues raised in this Note, can avoid such pitfalls by carefully investigating the proposed deal before investing in the partnership.

The R & D limited partnership arrangement promotes the development of software. Companies can use it to attract software financing based on tax benefits afforded by Revenue Procedure 69-21 and the long-term capital gain provisions. Further, given our society's need to develop means for processing information quickly and efficiently, grant-

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162 The partnership's marketing activities could constitute a "trade or business" thereby excluding the software from capital asset status under § 1221. *See supra* note 60.

163 *See supra* notes 132-34 and accompanying text; text accompanying note 137.

ing tax advantages to those who invest in software development is a worthwhile price to pay for progress.

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