Introduction to High Technology Industries

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What Does "High Technology" Mean?

The term "high technology" is used to describe various electronic and scientific industries. Some of the indicators of a high technology business also lead to the application of certain tax rules and the existence of certain tax issues and uncertainties. To best understand the significance of the term, "high technology," its importance is previewed and common traits of high technology businesses are described.

A. Unique Features

Many of the tax issues that face high technology businesses stem from some of the unique features of high technology businesses relative to other businesses. For example, the existence of intangibles, such as patents and know-how, create special issues for high technology companies. In addition, they bring certain rules into play such as §1235,[1] Sale or Exchange of Patents.

B. R&D Tax Rules

In addition, R&D (research and development) work, the key feature of high technology companies, requires that a tax adviser have a good working knowledge of §174, Research and Experimental Expenditures, and §41, Credit for Increasing Research Activities, in order to maximize a taxpayer's use of these favorable tax rules. Familiarity with state tax incentives and financial reporting rules for research expenditures is also important.

C. Lack of Guidance

High technology businesses involve cutting-edge technology that often has not been considered by taxing authorities which leads to confusion as to how some transactions are to be taxed. That is, sometimes, new transactions or types of "products" do not fit neatly into existing tax rules. For example, where should the transfer of software over the Internet be sourced for state income/franchise and sales tax purposes? Also, the application of many state tax rules depends on whether the property involved is tangible or intangible or a taxable service. This determination, particularly with respect to software obtained and used in various platforms including in the "cloud," continues to be a source of confusion under state law.

D. Tax Incentives

High technology businesses typically involve high-paying jobs. Countries, cities, counties and states often seek these types of enterprises to locate in their area. Thus, various tax incentives exist which business owners and their tax advisers should investigate, seek out and utilize, such as research tax credits.

E. Not All Issues Are Unique

Many issues faced by high technology businesses are the same ones that face all businesses, such as the issue of whether an expenditure should be expensed or capitalized. The uniqueness of issues also varies for different types of high technology businesses. For example, a high technology manufacturer of a computer component will

[1] All section references are to the Internal Revenue Code of 1986, as amended, unless otherwise noted.

face mostly the same tax issues and rules as any manufacturer. However, a software development business will have some difficult issues due to the confusion over whether it should be treated as selling goods, collecting royalties or earning service income, and whether or not its "product" is tangible or intangible (which raises various issues mostly under state law). In addition, many Internet-based businesses will face tax issues because the current tax system was not designed with this new business model in mind. For example, a business that consists of a web site operating as an exchange to match buyers and sellers of a certain commodity, will face issues as to where to source revenues, whether they have inventory, and the type of revenue.

Industries Represented by the Term "High Technology Businesses"

A. Broad Groupings

High technology businesses can be grouped into broad categories as follows:

Semiconductor

- Manufacturers of semiconductors
- Manufacturers of semiconductor manufacturing equipment
- Providers of raw materials and supplies
- Testers

Computers and Peripherals

- Computer hardware manufacturers (mainframe computers, workstations, personal computers (desktop), laptops, personal digital assistants (PDAs; handheld devices))
- Peripherals manufacturers (disk drives, storage devices, scanners, motherboards, sound devices, printers, etc.)

Software Development/Information Technology

- Operating systems - applications and tools – business and personal use
- Data base management systems
- Security and integrity systems
- Design automation
- Entertainment and other content
- "Edutainment"
- Consulting on design and support and hosting

Communications/Networking/Telecom/Datacom/Internet/Internet-based Businesses

- Telecommunications and network equipment
- Telecom and data networks
- Network systems, software and security products
- VoIP (voice over internet protocol) providers
- Internet service providers
- Content providers
- Internet services (from hosting to web design)
- Services and digital products offered over the Internet including on third party servers

Bioscience

- Drug development and delivery systems
- Diagnostic tools and procedures
- Medical devices
- Agricultural uses
- Food development
- Energy efficient processes
- Soil remediation techniques

Other

- Contract manufacturing
- Engineering/prototyping services
- Aerospace - aircraft, space exploration, satellites

B. Combined Groupings

High technology companies may span more than one group listed above. For example, some computer companies also manufacture and design their own semiconductor chips. Many hardware companies also develop and/or distribute software. Software companies may also be service-providers that can identify needs of their clients and develop software solutions to address their needs.

C. Internet Groupings

A data study conducted by the Center for Research on Electronic Commerce at the Graduate School of Business at the University of Texas at Austin, divided the "Internet Economy" into four sectors.[2]

1. Internet Infrastructure—telecom companies, ISPs, and networking equipment companies.
2. Internet Applications Infrastructure—software products and services that facilitate web transactions, as well as consultants that design and build all types of web sites.
3. Internet Intermediaries—web-based businesses that mostly generate revenue from advertising, membership fees and commissions, such as E-Trade, Yahoo, and DoubleClick.
4. Internet Commerce Companies—businesses that sell items via the internet, including airlines and professional service firms.

A report, *Internet Cluster Analysis 2000*, issued by Joint Venture: Silicon Valley Network, describes the "Internet Economy" as consisting of the following segments:[3]

1. Enabling Technologies (such as Oracle, Microsoft, Ariba)
2. Traditional Brick and Mortar Companies – B2B, B2C, B2E, B2G, C2C
3. Access Providers (such as AOL, MSN, Earthlink)
4. Infrastructure (such as Hewlett-Packard, Sun, Cisco)
5. Appliances (such as Palm, Handspring, Nokia, Sony)

Common Traits of High Technology Businesses

While there is no specific definition of high technology or of high technology companies, common usage of the term refers to advanced processes, products and equipment. There are a variety of common traits found in high technology companies. These traits include fairly rapid technological advancement in processes and products, the need for a highly-skilled workforce, and large R&D expenditures relative to other types of expenditures.

A. Common Characteristics

While the traits listed below do not all impact the tax treatment of high technology businesses, they are relevant to the tax adviser in better understanding the taxpayer's business, accounting issues, financing needs, long-term planning considerations, possible uses of capital, and the need for involvement of legal counsel.

- Quick obsolescence of products/short product life cycles.
- Product development time might be long and expensive.
- High R&D costs relative to sales.
- Often a low debt/equity ratio.
- Intangible assets represent a significant portion of the company's value.

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[2] "Measuring the Internet Economy," October 1999, University of Texas and Cisco Systems; report available at http://ai.kaist.ac.kr/~jkim/cs492a/internet_economy-UT.pdf.

[3] Available at http://www.jointventure.org/images/stories/pdf/2000internetcluster.pdf.

- World-wide markets and competition.
- Low distribution costs on many items (software, information, etc.)
- Potential for a fast growth rate.
- Knowledge-based focus rather than mostly a capital or manufacturing focus.
- Need for highly-skilled workforce.
- Often, wide stock ownership among employees.
- Need for legal protection of product design and ideas.
- Need for environment that fosters new ideas and change.
- Large, established companies often help new companies form.
- High risk investment.
- Government involvement in exporting restrictions, some funding opportunities, and product approval (primarily bioscience industry).
- Involves new frontiers that may bring about changes in how businesses operate and changes in people's lives.
- New legal issues often emerge from new technologies, such as whether a living organism can be patented and whether file sharing is legal.
- Ethical and societal issues.

B. Examples of How the Traits Impact Tax Considerations

Accumulated earnings tax. High technology corporations should have no problem proving that reasonable needs exist for accumulating earnings due to the high costs of R&D projects.[4]

Compensation issues. The need for a highly-skilled workforce and the need for cash for R&D projects often leads high technology companies to utilize non-cash compensation techniques, such as stock options, which also then leads to favoring a corporate form over a partnership form.

Treatment of costs to acquire and protect intellectual property. The existence and importance of patents, copyrights, trade secrets and trademarks in high technology companies can lead to a company incurring costs to protect or defend such property. Companies may also engage in various techniques, such as cross-licensing, joint ventures and acquisitions to acquire access to such property. All of this brings into play issues under §§162 and 263, amortization under §§197 and 167, and partnership considerations (for some joint ventures).

Tax uncertainty. As noted earlier, new technologies can lead to tax uncertainty. That is, a transaction might not fit neatly within existing tax rules leaving the tax adviser to analogize to areas of certainty or to seek rulings from taxing authorities. Taxing authorities are studying how new forms of technology should be taxed, such as transactions made over the Internet and on-line services. Input from interested parties may be appropriate to assist taxing authorities to understand the technology and how it should be taxed (or why it should not be taxed).

Non-traditional ways of thinking. With geographic borders becoming less relevant as transactions are conducted over the Internet, facilities becoming less important with the use of "virtual" companies, and old ways of doing business becoming outdated on a frequent basis, high technology industries can present exciting challenges for tax advisers. A high technology company might have very little in the way of tangible property, no inventory to count, and it may not even be clear exactly how their revenue should be categorized - as sale of goods, royalty income, or service income.

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[4] However, it is important that the corporation have "specific, definite, and feasible plans" for any accumulation and follow the guidelines of I.R.C. §§ 531 - 537. Treas. Reg. § 1.537-1(b)(1).

Location of High Technology Businesses[5]

High technology companies are located throughout the world. In the United States, many high technology companies have tended to cluster in certain areas. A common element of these cluster areas is the proximity of a major university, as shown in the chart below.[6] In recent years, another attraction to certain areas, such as Oregon, has been incentives offered by the particular state or city. For example, in Oregon, a Strategic Investments Program allowed counties to cap assessments on new facilities at $100 million for 15 years. Such an incentive is attractive to chip manufacturers because fabrication plants can easily cost over $1 billion. Such an incentive was expected to save Intel $52 million over 15 years.[7]

Popular Name	Location	Major university
Silicon Valley	Bay Area	Stanford UC Berkeley San Jose State
Route 128	Boston	Massachusetts Institute of Technology (MIT), Harvard
Research Triangle	North Carolina	University of NC, NC State, Duke University
Silicon Valley East	New York	Rennsalaer Polytechnic Institute, State University of NY at Albany
[no popular name]	Orange County, Calif.	UC Irvine
Silicon Forest	Oregon	-
Bionic Valley	Salt Lake City	University of Utah
Silicon Prairie	Dallas-Austin	University of Texas at Austin
Silicon Mountain	Colorado Springs	-
Forrestal Center	New Jersey	Princeton

"Silicon" names have spread outside the U.S. as well; for example, a high tech region in Scotland is referred to as "Silicon Glen."

Introduction to Tax Considerations of High Technology Companies

The chart below lists a sampling of the tax opportunities and cautions for various activities of a high technology company. Each of the opportunities and cautions noted in **bold** are further explained in the course materials.

Activity	Opportunities	Cautions
Choice of entity	See later charts on pros and cons of different **entity choices**.	
Raising capital for a high tech venture	• **IRC §1202** allows non-corporate shareholders to exclude 50% of gain from disposition of qualified small business stock (QSBS) held over 5 years. • **IRC §1045** allows for deferral if §1202 gain is rolled over.	• Have the shareholders (IRC §351) or partners (IRC §721) contributed property? (**What is property?**)

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5 Key high technology areas are Silicon Valley in northern California and Route 128 in Massachusetts. For a comparison of the development of these two areas, see Saxenian, *Regional Advantage - Culture and Competition in Silicon Valley and Route 128*, Harvard University Press (1994).

6 Rogers and Larsen, Silicon Valley Fever, Basic Books, Inc. (1984), Table 13.1 lists various areas and their popular name.

7 Richards, *For Oregon, the Boom In High Tech Brings Jobs and Handwringing*, *Wall Street Journal*, 8/4/95, pg. A1.

Start-up phase	• Need to distinguish between §195, §162, and **§174** expenditures.	• Potential for personal holding company tax under IRC §541, et. seq., if closely-held and start-up funds are generating interest income. • Potential to fail to meet the **IRC §1202** QSBS definition. • Special rules apply for calculating the federal research tax credit under **IRC §41**.
Location decisions	• Most states and some cities and counties offer a variety of **tax incentives**. These may include research tax credits, training credits, special tax breaks for locating in an enterprise zone, sales tax exemptions for manufacturing and R&D equipment and lower capital gains tax rates. • A physical location in a state typically results in sales and use tax collection obligations and income tax liabilities. Strategic location of sales, distribution, R&D, and training facilities can lower tax liabilities and compliance costs. In addition, attention must be paid to where employees (and perhaps agents) are located, number of days attendance at trade shows (many states specify a minimum number of days that is below the nexus threshold), and location of property (for example, software leased to a Texas customer creates a physical presence for the lessor).	• What constitutes a physical presence and what is the minimum allowable contact under P.L. 86-272 to avoid a taxable presence (or **nexus**) in a jurisdiction can vary from state to state and court decisions have not been consistent. It is important to carefully review the law in any state in which the company has employees, assets and/or operations or plans to have such factors, in order to determine tax obligations and liabilities. Failure to do this can result in significant retroactive assessments of taxes plus penalties.
R&D activities	• **IRC §174** allows for research and experimental expenditures to be expensed. Alternatively, taxpayer may elect to capitalize R&E and then amortize it when first realize benefits from the R&E. • Taxpayer may be entitled to federal (**IRC §41**) and state research tax credits.	• Not all expenditures or activities qualify for the **IRC §41** research tax credit. Federal research tax credit is not permanent. • If third parties used, need to distinguish between **IRC §174** expenditures and acquisition of assets.
Profiting from R&D	• Individual transferring patent may be able to obtain capital gain treatment under **IRC §1235**.	• Need to determine **type of income**: sale of goods, license, services, other, so can determine tax treatment/consequences. • **State nexus issues** for both income and sales/use tax purposes. Need to review rules in any state in which taxpayer has customers, licenses, employees, or property. • Law not clear as to whether the technology may qualify as a §1221 or §1231 asset.

Acquiring technology	• Need to consider application of **IRC §174, §41, §167(f), and §197.**	• If third party was hired, need to determine whether payments are deductible under **IRC §174** (and whether 65% (or more) are eligible for the **IRC §41** credit), or whether considered to have acquired an asset.
Engaging in electronic commerce	• Various opportunities and issues exist from this new form of doing business. See **Nellen article on e-commerce/Internet tax issues.**	
Dealing with emerging issues	• Involvement with industry associations can be beneficial.	• New issues continue to emerge as federal and state governments re-evaluate nexus, what goes into state apportionment formulas, definition of tangible property, how to deal with electronic commerce, and more. • Need to **keep up to date**.

Additional topics that could be included:

Hiring Workers

Expanding into new markets and in new countries

Recordkeeping

Choice of Entity Considerations for High Technology Businesses

Generally, the process of deciding on a business entity form for a high technology company is similar to that of other businesses. Thus, the basic advantages and disadvantages of corporations, subchapter S corporations, limited liability companies (LLCs), partnerships and sole proprietorships are pertinent to selecting the high technology company's form. Discussed here are specific considerations that may be unique to a high technology business.

A. The Corporate Form

Listed in the chart below are the advantages and disadvantages of a high technology business operating as a regular ("C") corporation. Advantages and disadvantages that are not unique to high technology businesses are not listed. Certain items mentioned in the chart are further explained afterwards.

Advantages	Disadvantages
• Corporate stock and stock options can be used as non-cash employee compensation.	• Where intangible property is contributed in exchange for stock, issues can arise under §351 as to whether the property qualifies for deferred gain or loss treatment.
• Corporate stock can be used for volume discounts and other purposes, thus saving cash.	• A closely-held corporation with R&D funds invested prior to use and prior to significant sales may meet the definition of a personal holding company (PHC) and be subject to the PHC tax.
• Preferable form for many types of financing.	• There is no flow through of losses and credits to owners which will likely be unusable to the corporation in its early years. Such losses may be larger for a high technology company relative to other companies.

• Stock issued by the entity should meet the definition of qualified small business stock under §1202 thus enabling non-corporate shareholders to exclude 50 percent of any gain from income if the stock is held over 5 years. In addition, §1045 allows for rollover of gain from QSBS for timely reinvestments in other QSBS.	• If the entity is the target of a takeover or acquisition, the resulting gain would be subject to double taxation and the loss and credit carryforward limitations of Sections 382 and 383 would apply.
• Stock issued by the entity may meet the definition of §1244 stock thus entitling individuals to treat up to $50,000 of their loss ($100,000 if filing a joint return) as ordinary, rather than as capital.	

B. Other Entity Forms

Listed in the chart below are the advantages and disadvantages of a high technology business operating as a subchapter S corporation, partnership, LLC, or sole proprietorship. Advantages and disadvantages that are not unique to high technology businesses are not listed.

Advantages	Disadvantages
• The PHC tax problem noted above for regular corporations is avoided.[8]	• The 50 percent gain exclusion rule of §1202 is only available to holders of stock in a C corporation.
• A partnership or sole proprietorship is less costly to form relative to a corporation. Thus, more cash is preserved for R&D in the start-up phase.	• The ordinary loss rule of §1244 is only available to individual shareholders of a C or S corporation.[9]
• Losses and credits, such as the research credit of §41, can pass through and be used by owners which may allow for an immediate tax benefit rather than being carried forward by a corporation.[10] However, owners of passthrough entities must consider loss and credit limitation rules, including the passive activity rules of §469.	• The possibilities of using S corporation stock in lieu of cash for expenses and of issuing additional stock as a financing technique are limited due to the restrictions for S corporations on the number and type of shareholders and by the requirement to have one class of stock.[11]
• The possibility that intangible property is really services only causes a tax effect to the partner contributing such property/services. Others contributing property will still get the tax-deferred benefits of §721.	• Interests in partnerships and LLCs are not convenient forms for compensating employees.

8 Passive investment income can be a problem for an S corporation that has subchapter C earnings and profits (see I.R.C. § 1362(d)(3)). However, this problem is not addressed in the discussion of choice of entity because the discussion focuses on new entities.

9 The ordinary loss treatment available under I.R.C. § 1244 is also available where stock is issued to a partnership, but only to partners who are individuals. I.R.C. §1244(a). See Treas. Reg. § 1.1244(d)-2(a) for guidance on determining how much of a shareholder's basis in S corporation stock qualifies for I.R.C. § 1244 treatment. Note that if an S corporation owns stock in a small business corporation and sells it at a loss, the loss is not considered an I.R.C. § 1244 loss when it flows through to the S corporation shareholders. TAM 91-30-003 (Mar. 25, 1991) and Rath v. Commissioner, 101 T.C. 196 (1993).

10 Limitations exist for owners of passthrough entities; see I.R.C. § 41(g) and later discussion in this article.

11 An S corporation could use stock appreciation rights or phantom stock plans, but they would not derive the same benefits as use of stock of a regular corporation. See Treas. Reg. § 1.1361-1(b)(3). Also see Treas. Reg. § 1.1361-1(l) (T.D. 8419, 1992) for circumstances where an S corporation could have classes of stock with differing voting rights, but still be considered as having one class of stock if all stock has identical rights to distribution and liquidation proceeds.

• If the entity is the target of a takeover or acquisition, the resulting gain would only be subject to a single layer of tax. In addition, the loss and credit carryforward limitations of Sections 382 and 383 would not apply; losses and credits are passed through to owners.	• Owners of a passthrough entity may not be viewed as entitled to §174 benefits.

C. Benefits To A Shareholder Under §1202

The Revenue Reconciliation Act of 1993 added §1202[12] which allows non-corporate taxpayers to exclude from gross income 50% of any gain from sale or exchange of qualified small business stock (QSBS) held over 5 years and acquired from the corporation after August 10, 1993. The aggregate amount of gain eligible for the exclusion for the tax year with respect to stock of a corporation is not to exceed the greater of, A) $10 million less the aggregate amount of eligible gain taken into account under §1202 in prior tax years for such corporation, or B) 10 times the aggregate adjusted bases of QSBS issued by the corporation and disposed of by the taxpayer during the tax year.

QSBS and AMT: 7% (previously 42%; changed by PL 108-27 (2003)) of the excluded gain from the sale of §1202 QSBS must be included in alternative minimum taxable income as a tax preference (prior to the TRA'97, 50% of the excluded gain was a preference item). Thus, for shareholders subject to AMT, 29% of the gain is excluded (rather than 25% as under pre-TRA'97 law). This change is effective for tax years ending after May 6, 1997. The IRS Restructuring and Reform Act of 1998 (P.L. 105-206; 7/22/98) changed §57(a)(7) to provide that where holding of QSBS begins after December 31, 2000, the tax preference is 28% of the excluded gain, rather than 42%.

Eligible stock must be originally issued after August 10, 1993 at a time when the corporation is a qualified small business. The shareholder must acquire the stock at original issue (with limited exceptions). The stock must be issued for money or other property (other than stock) or as compensation for services (other than services performed as an underwriter). Redemption rules exist which may prevent certain stock from being qualified.

A qualified small business is a domestic C corporation[13] where aggregate gross assets at all times after August 10, 1993 and immediately after the stock issuance does not exceed $50 million. Aggregate gross assets equals cash plus the aggregate adjusted bases of other property held by the corporation. Where property was contributed to the corporation in a transaction, such as §351, where the corporation's basis is determined with reference to the contributor's basis, the basis of the property will be treated as equaling its fair market value at the time of contribution in measuring the corporation's aggregate gross assets.[14]

All corporations which are members of the same parent-subsidiary controlled group (greater than 50% instead of 80% is to be used at §1563) are treated as a single corporation in measuring gross assets. The corporation must also agree to submit reports to the Internal Revenue Service (Service) and shareholders as required by the Service.

Under the active business requirement, stock is only QSBS if during substantially all of the taxpayer's holding period, the corporation met the active business requirement and was an eligible C corporation. The active business requirement is met where at least 80% (by value) of the corporation's assets (including intangible assets) are used in the active conduct of one or more qualified trades or businesses. If a corporation is engaged in start-up activities (per §195(c)(1)(A)), activities that result in incurring R&E expenditures under §174, or activities with respect to in-house research expenses (as defined at §41(b)(4)), the assets used are treated as used in the active conduct of a qualified trade or business. For purposes of this rule, it does not matter whether the corporation has gross income from the activities.

Assets held for the "reasonably required working capital needs" of a qualified trade or business are treated as used in the active conduct of a qualified trade or business. Assets held for investment that are reasonably expected to be used within two years to finance R&E in a qualified trade or business or increases in working capital needs of such a business are treated as used in the active conduct of a trade or business. After a corporation is over

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[12] Revenue Reconciliation Act of 1993, Pub. L. No. 103-66, § 13113(a), 107 Stat. 312 [hereinafter RRA 1993].

[13] DISCs, I.R.C. § 936 corporations, regulated investment companies, REITs, REMICs and cooperatives do not qualify as eligible corporations per I.R.C. § 1202(e)(4).

[14] I.R.C. § 1202(d)(2).

two years old, it may not have over 50% of its assets qualify as used in the active conduct of a qualified trade or business under the working capital or investment asset exceptions. Any rights to software that produces active business computer software royalties (as defined at §543(d)(1)) are treated as an asset used in the active conduct of a trade or business. If the corporation is an SSBIC (specialized small business investment company[15]), the active business requirement is waived.

The corporation fails the active business requirement if over 10% of the value of its assets consists of stock or securities in other corporations which are not subsidiaries. The corporation fails the active business requirement if over 10% of the total value of its assets is real property not used in the active conduct of a qualified trade or business.

A qualified trade or business is generally a manufacturing, sales or research operation. Ineligible businesses include services (for example, law, health, accounting), banking, insurance, financing, farming, extraction, hotels, and restaurants.

1. Cautions

The rules at §1202 are quite detailed and should be carefully reviewed before advising a corporation as to whether or not the stock it issues qualifies as QSBS. Shareholders investing in a QSBS should be warned that certain events could cause the stock to lose its character as such or for a corporation otherwise eligible, to not be able to issue §1202 stock. For example, stock will not be treated as §1202 stock "if, during the 2-year period beginning on the date 1 year before the issuance of such stock, such corporation made 1 or more purchases of its stock with an aggregate value (as of the time of the respective purchase) exceeding 5% of the aggregate value of all of its stock as of the beginning of such 2-year period."[16]

QSBS might also meet the definition of small business stock under §1244. Employees receiving stock options in a qualified small business will likely want some protection that they will be able to exercise their options when the corporation still qualifies as a qualified small business (assets do not yet exceed $50 million). This point is particularly relevant should the corporation plan an initial public offering prior to the employees being able to exercise their stock options.

2. R&E Method

A high technology corporation can slow down the pace at which it approaches the $50 million asset threshold by expensing its R&E under §174(a) rather than capitalizing it (discussed later).[17]

3. Rollover of QSBS Gain

Non-corporate taxpayers who sell QSBS that has been owned for over six months and purchase other QSBS within 60 days, may elect to defer recognition of any gain if the replacement stock meets the active business requirement under §1202 for the six months following the purchase. The cost of the new stock must be at least equal to the amount realized on the old stock in order to defer the entire realized gain. This rollover provision (§1045) was added by the Taxpayer Relief Act of 1997 (P.L. 105-34) effective for sales after August 5, 1997. The procedures for making a §1045 election are contained in Revenue Procedure 98-48, 1998-38 I.R.B. 7.

4. California

California adopted a rule similar to §1202 with these major differences: a) stock must be issued before January 1, 1999, b) at least 80% of payroll must be attributable to employment in California, c) at least 80% by value of the assets must be used in an active conduct of one or more qualified trades or businesses in California, and d) reports to the Franchise Tax Board and shareholders may be required.[18] A California qualified small business corporation must file form FTB 3565, *Small Business Stock Questionnaire*, by the original filing due date of Form 100. It is filed separately from Form 100 and due each year that a corporation issues stock that qualifies as QSBS. While the instructions to the 1995 Form 3565 stated that failure to file the form could disqualify shareholder

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[15] An SSBIC is an entity licensed to operate under Section 301(d) of the Small Business Investment Act of 1958 as in effect on May 13, 1993.

[16] Section 1202(c)(3)(B). Final regulations were issued at §1.202-2 to clarify and limit the redemption prohibitions to non-de minimis amounts. T.D. 8749, 12/31/97.

[17] However, other tax rules may lead to better results if the company capitalizes its R&E expenditures. For example, if the state in which the company operates in does not allow for a full net operating loss (NOL) carryover, Section 174(b) capitalization would be preferable. Also, if a ownership change is contemplated sometime in the future and NOLs are being generated, an I.R.C. § 174(b) capitalization method would be preferable to keep the NOL amount smaller.

from obtaining the 50% exclusion benefit, this threat was later relaxed. Under current Franchise Tax Board rules, a corporation's failure to file Form 3565 will not deny benefits to the shareholder as long as the shareholder can prove that the stock meets the statutory definition of small business stock. The corporation filing Form 3565 is also to provide a copy to each shareholder that acquired QSBS.[19] Other states, particularly those that generally conform to federal tax rules, likely have similar provisions. However, the exact provisions should be reviewed.

AB 1120 (Chapter 69; 7/6/99) makes California's version of the §1202 50% gain exclusion on qualified small business stock continue to apply. Prior to the change, R&T §18152.5 provided that QSBS had to be issued before January 1, 1999. The 1999 legislation removes the January 1 date.

D. Shareholder Benefits Under §1244

If the corporate stock meets the definition of "§1244 stock", an individual will be able to treat the loss from sale or exchange of the asset as an ordinary loss. The maximum amount treated as an ordinary loss for any tax year may not exceed $50,000 ($100,000 in case of a joint tax return). The §1244 stock must have been issued to an individual or to a partnership and must meet the definition of a capital asset.

1. Definition of §1244 Stock

Section 1244 stock is stock in a domestic corporation that met the §1244(d) definition of a small business corporation at the time the stock was issued. During the five most recent tax years ending before the stock loss is sustained, the corporation must have derived over 50 percent of its total gross receipts from non-passive sources.

2. Cautions

The rules for §1244 and its benefits are not unique to high technology corporations and thus are not discussed further. It is important to note that a start-up corporation should consider these rules in issuing stock due to the potential benefit should owners later sell the stock at a loss. See §1244 and the regulations thereunder for further details.

E. Intangible Property and §351[20]

Section 351 generally provides that a transferor will have no gain or loss upon contribution of property to a corporation in exchange for stock if immediately after the exchange, those contributing property are in control of the corporation.[21] High technology corporations may receive intangible property, such as know-how, in exchange for stock. Such contributions raise issues as to whether the item is property for §351 purposes or should instead be considered services, and what the value of the intangible item is because such items are usually more difficult to value than tangible property. The regulations provide an example where a patent right transferred to a corporation is considered property for §351 purposes.[22]

1. Intangible Property

Whether intangibles other than patent rights qualify as property is to be determined on a case-by-case basis. The Service has held that the term property includes "secret processes and formulas" per §§861(a)(4) and 862(a)(4) and other secret information as to devices or process, whether or not a patent has been applied for. The item should be something that is subject to legal protection against unauthorized disclosure and use. Recording the idea on paper does not alone make it property.[23]

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[18] Cal. Revenue & Taxation § 18152.5.

[19] See instructions to FTB Form 3565 and FTB Notice 96-2 (5/6/96).

[20] The issues that can arise when intangible property is contributed to a corporation in exchange for an interest in the corporation also exist when intangible property is contributed to a partnership in exchange for a partnership interest under I.R.C. § 721. However, I.R.C. § 721 does not include a control requirement as under I.R.C. § 351. In U.S. v. Stafford, 727 F.2d 1043 (11th Cir. 1984), fn. 9, the court implies that cases under I.R.C. § 351 can be used in resolving issues under I.R.C. § 721.

[21] "Control" for purposes of I.R.C. § 351(a) is defined at I.R.C. § 368(c) as ownership of stock with at least 80 percent of the total combined voting power and at least 80 percent of the total number of shares of corporate stock. For purposes of this definition, the total number of shares includes all classes of both voting and non-voting stock. Rev. Rul. 59-259, 1959-2 C.B. 115.

[22] Treas. Reg. § 1.351-1(a)(2) Example (1).

[23] Rev. Rul. 64-56, *supra*, at 134. If an item is not subject to protection from unauthorized use and rights to use under the law, it will likely not be viewed as property. See Rev. Rul. 79-288, 1979-2 C.B. 139.

2. How Much of A Property Interest Must Be Transferred?

Where a transfer involves all substantial rights in the property, it will likely be viewed as a transfer of property under §351.[24] The Service has ruled that to constitute a sale or exchange, all substantial rights to the patent must be granted to the corporation.[25] However, in a 1973 case,[26] the court held that a non-exclusive license under a patent to manufacture, use and sell a particular product was property for §351 purposes even though the transferor kept certain rights in the patent. The Service argued that a transaction must qualify as a "sale or exchange" in order to be considered a "transfer" of property "in exchange" for §351 purposes. The court pointed out, however, that §351 is not involved with "true severance of control and true flow of gain."[27] The sale or exchange language pertinent for capital gains transactions stresses a complete disposition by the taxpayer. On the other hand, §351 is "grounded in the taxpayer's continuance in control."[28] The court ruled that the concept of sale and exchange is not relevant under §351. After reaching this conclusion, the court ruled that a non-exclusive license of "substantial value" which was "commonly thought of in the commercial world as a positive business asset" constituted property under §351.[29] Similarly, in another case, the court stated that the term property "encompasses whatever may be transferred."[30]

Case law has also addressed whether the item transferred to an entity in exchange for an ownership interest in the entity must constitute an enforceable property right. For example, a letter of intent was held to constitute property even though it was not legally enforceable.[31] The court pointed out that unpatented know-how, even though not enforceable, could be considered to be property, as could an exclusive right to use a trade secret.[32] Generally, if the item transferred encompasses a "sufficient bundle of rights" it is likely to be viewed as constituting property.[33]

3. Services

If the item was developed solely for the corporation, the stock received may be viewed as provided for services. The Service provides an example where a taxpayer was viewed as receiving payment for services for a plan he developed for selling insurance. If services are to be performed in connection with a transfer of property, the services are merely ancillary to the transfer, and consideration is received for both, §351 treatment can still result for the property. Whether services are considered ancillary and subsidiary to a transfer of property is a question of fact.[34]

Also relevant in distinguishing a property contribution from the contribution of services is the content of any agreements related to the "transferor's" activities. For example, if the "transferor" is under an agreement with the transferee entity to perform services, the contribution of the results of such services in exchange for an interest in the entity will likely be viewed as given for payment for the services, and taxable to the recipient ("transferor"). If instead, the transferor works on his own behalf and then contributes the results of his activities to the entity, such contribution will likely not be viewed as for services.[35]

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[24] Rev. Rul. 64-56, 1964-1 (Part 1) C.B. 133, 135; *amplified by* Rev. Rul. 71-564, 1971-2 C.B. 179.

[25] Rev. Rul. 69-156, 1969-1 C.B. 101, the ruling makes reference to I.R.C. § 1235 to determine whether all substantial rights to the patent were transferred. Also see Rev. Proc. 83-59, 1983-2 C.B. 575.

[26] E.I. Du Pont de Nemours and Company v. U.S., 471 F.2d 1211 (Ct. Cl. 1973).

[27] *Id.* at 1214.

[28] *Id.* at 1216.

[29] *Id.* at 1218. Service reaction to the *Du Pont* case: Although in G.C.M. 36,922 (Nov. 16, 1976) the Chief Counsel recommended that Rev. Rul. 64-56, *supra*, be modified and Rev. Rul. 69-156, *supra*, be revoked, in light of the decision in the *Du Pont* case, such actions were never taken. Also see G.C.M. 37,178 (June 24, 1977) and 38,114 (Sep. 27, 1979).

[30] Stafford, *supra*, referring to Hempt Bros., Inc. v. U.S. 453 F.Supp. 1172, 1175 (M.D. Pa 1973), *aff'd*, 490 F.2d 1172 (3d Cir.), *cert. denied*, 419 U.S. 826 (1974).

[31] Stafford, *supra*.

[32] Id. at 1052, with reference to Rev. Rul. 64-56, *supra*, Rev. Rul. 71-564, 1971-2 C.B. 179, and Rev. Rul. 70-45, 1970-1 C.B. 17.

[33] Stafford, *supra*, at 1052.

[34] See Rev. Rul. 64-56, *supra*, and cases cited therein.

[35] See Stafford, *supra*, at 1050.

Finally, even if the transferor contributes property in exchange for an interest in a corporation or partnership entity, it must be established that the interest is transferred in exchange for the property, and not for services, or some combination of property and services.[36]

4. Valuation

While the transfer of intangibles may pose difficult valuation problems, this will not prevent §351 from applying.[37] In a situation where others are contributing cash or tangible property, the value of the intangible property or services may be "backed into." For example, if George contributes $100,000 of cash and Sam contributes rights in a patent that he developed and they become equal shareholders, assuming this is an arm's length transaction, Sam's patent rights have been valued by the parties as worth $100,000. More importantly in this fact pattern though, is the basis of the patent which Sam should be able to prove.

5. Advance Rulings

Procedures exist whereby taxpayers may obtain advance rulings from the Service under §§367 and 351. Rulings may also be obtained as to whether a transfer of software is a transfer of property under §351.[38]

6. Example

Carol has been working on developing a new device to treat cancer patients. Abe and B Corporation are interested in this idea and want to enter into a corporate venture with Carol. Abe contributes equipment and facilities worth $350,000 with an adjusted basis of $80,000 and B Corporation contributes $350,000 of cash. Carol contributes all rights to her idea and her written plans (not yet patented). The three parties intend to become equal shareholders of the corporation. It is critical, particularly to Abe and Carol, that Carol be viewed as contributing property, rather than services. If Carol is viewed as really contributing her services of developing her idea, then she has not contributed property. Consequently, Abe and B Corporation, who contributed property, are not in control of the corporation immediately after their contributions because they do not have an 80 percent or greater interest. Abe would recognize a gain of $270,000 upon contribution of his appreciated property ($350,000 value of stock received less $80,000 basis of property contributed). In addition, Carol would have compensation income from the receipt of stock for her services.

Should Carol's contribution be viewed as services, the shareholders could still qualify for §351 tax-deferred treatment if Carol also contributes a sufficient amount of property that clearly meets the definition of property, such as tangible property or cash. The Service has indicated that if at least 10 percent of what Carol receives was matched by a contribution of property, she will count as one of the shareholders who contributed property and the 80 percent control requirement of §351 will be satisfied. For example, because Carol is to receive stock worth $350,000, if she gives cash or other property worth $35,000, she should be viewed as contributing sufficient property to be included in the group used to measure control to enable Abe and B to have tax-deferred treatment under §351(a).[39]

If there is any doubt as to whether or not Carol has contributed property, the parties should consider obtaining a ruling from the Service or having Carol contribute at least $35,000 of property for which no question exists that it qualifies as property (although the tax treatment for Carol might remain unclear).

It appears that the stock will be considered §1202 stock. Under §1202(d)(2), the corporation's aggregate gross assets to date total $1,050,000 because the adjusted basis of contributed property is to be determined as if the basis were equal to its fair market value at the time of the contribution. The corporation must track its

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[36] For example, in Stafford, *supra*, at 1054, after concluding that the letter of intent constituted property, the court noted that it must still determine whether the partnership issued Stafford an interest in the partnership as compensation for services to be rendered, or for contributing the letter of intent, or both.

[37] Dupont, *supra*, at 1220.

[38] Rev. Proc. 74-36, 1974-2 C.B. 491 and Rev. Proc. 69-19, 1969-1 C.B. 301. The procedures for obtaining rulings under I.R.C. § 351 are at Rev. Proc. 83-59, supra. This procedure specifies the documentation and representations needed by the Service when an I.R.C. § 351 ruling is desired and intangible property has been transferred to a corporation.

[39] "When a person transfers property to a corporation in exchange for stock or securities of such corporation and the primary purpose of the transfer is to qualify under section 351 of the Code the exchanges of property by other persons transferring property, the property transferred will not be considered to be of relatively small value, within the meaning of section 1.351-1(a)(1)(ii) of the regulations, if the fair market value of the property transferred is equal to, or in excess of, 10 percent of the fair market value of the stock and securities already owned (or to be received for services) by such person." Section 3.07 of Rev. Proc. 77-37, 1977-2 C.B. 568, 570, § 3.07, interpreting Reg. §1.351-1(a)(1)(ii).

aggregate gross assets for §1202 purposes separately from its tax basis in its assets for purposes of depreciation and gain or loss because the amounts will differ.

If the parties had instead formed a partnership, Abe would benefit from the tax-free (tax-deferred) rule of §721 which, unlike §351, does not have an 80 percent or more control requirement for those contributing property. Carol would still have compensation should she be deemed to have received an interest in the partnership for contribution of services.

Because one of the owners is a corporation, this entity could not form as an S corporation. However, if all three owners were individuals (not non-resident aliens), the §351 problem noted above would still apply because the rule also applies to S corporations.[40]

F. <u>Thin Capitalization</u>

The presence of significant intangible assets in a corporation, along with debt, might cause the Service, upon examination, to raise the issue of thin capitalization. That is, the Service may question whether the corporation was sufficiently capitalized and argue that all or part of the debt should be treated as capital. In such a situation, the tax advisor should be aware of case law which has held that intangible assets, such as goodwill, constitute investment in a corporation and may preclude the Service from winning a thin capitalization argument.[41] In addition, case law supports the position that the actual value of capital be considered, rather than par or book value.[42]

G. <u>An R&D Start-up Company as a PHC</u>

Section 541 imposes an additional tax on any personal holding company, equal to 15% of its undistributed personal holding company income. Three things must exist for this tax to apply. First, the corporation must meet the definition of a personal holding company (PHC) and secondly, it must have undistributed personal holding company income. This penalty tax can be avoided either by a corporation failing to meet the definition of a PHC, by not having undistributed PHC income, or by timely distributing a sufficient amount of its PHC income to its shareholders. In addition, because the undistributed PHC income is computed based on taxable income, if the corporation has no positive taxable income, it may avoid the PHC tax.[43]

1. <u>PHC Definition</u>

Section 542 defines a personal holding company as a corporation that meets both a gross income requirement and a stock ownership requirement. Failing to meet either part of this definition means that the corporation is not a PHC and does not have to be concerned with the PHC tax. The adjusted ordinary gross income requirement is met if at least 60% of the corporation's adjusted ordinary gross income[44] for the tax year is PHC income.[45] PHC income includes passive types of income such as dividends, interest, certain royalties, and certain rents.[46] The stock ownership requirement is met if at any time during the last half of the corporation's tax year, over 50% in value of the outstanding stock is owned, directly or indirectly, by or for not more than five individuals. The PHC tax only applies to C corporation, not to S corporations.

2. <u>Relevance to a High Technology Corporation</u>

A high technology corporation in its start-up phase may meet the definition of a PHC, assuming it meets the stock ownership requirement. A start-up corporation may meet the adjusted ordinary gross income requirement in its early years because it may have its R&D funds invested such that they are earning PHC income (for example, interest or dividends). If at such time, the corporation has little or no gross receipts that are not PHC income, it will meet the definition of a PHC. The PHC would calculate its undistributed personal holding company income and likely owe PHC tax unless a timely distribution (dividend) of such income is made to the

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[40] I.R.C. § 1371(a).

[41] Perrault v. Commissioner, 25 T.C. 439 (1955), *acq*. 1956-1 C.B. 5. Also, Murphy Logging Co. v. U.S., 378 F.2d 222, 224 (9th Cir. 1967), but also see Plantation Patterns, Inc. v. Commissioner, 462 F.2d 712, 723 (5th Cir. 1972), *cert. denied*, 409 U.S. 1076 (1972).

[42] Miller's Estate v. Commissioner, 239 F.2d 729, 733 (9th Cir. 1956) and Murphy Logging Co. v. U.S., *supra*.

[43] In computing undistributed PHC income, certain adjustments are made to taxable income; see §545(b).

[44] Adjusted ordinary gross income is defined at §543(b)(2).

[45] PHC income is defined at §543(a).

[46] §543(a).

shareholders.[47] Because a start-up company is likely to be capitalizing its R&E expenditures, rather than currently expensing them (discussed later), and have few non-R&D expenditures, it is likely to have positive taxable income in computing its undistributed PHC income.

Certain software royalties are not considered rent for PHC purposes. These royalties are referred to at Section 543(d) as "active business computer software royalties." ABCS royalties are royalties received in connection with the licensing of software where the following four requirements are met:

i. The royalties are received by a corporation engaged in the active conduct of the trade or business of developing, manufacturing, or producing computer software, and are attributable to software which is developed, manufactured, or produced by the corporation in connection with such trade or business or are directly related to such trade or business.

ii. The royalties must constitute at least 50% of the ordinary gross income of the corporation for the tax year.

iii. Deductions under §§162, 174 and 195 relating to royalties must equal or exceed 25% of ordinary gross income for the corporation.

iv. Dividends must equal or exceed the excess of PHC income over 10% of ordinary gross income.

The actual operation of §543(d) is questionable. Given the confusion that exists in the tax law as to whether software is sold or licensed (particularly for domestic IRC provisions), and whether it is inventory or not, it is arguable that a closely-held corporation that does not satisfy the active business computer software royalties provision, could state that its income from its software does not constitute royalties at all. For example, based on the TAM 9231002 which held that off-the-shelf software was sold, not licensed, it would appear that such a corporation could also argue that it should not even be concerned with personal holding company rules (unless it has other significant personal holding company income) because it does not license software, it sells it. This is an area that needs some clarification and, even though §543(d) was added in 1986, might be outdated.

H. Using Corporate Stock as Money

High technology companies will have a great need for cash to continuously perform R&D work. Thus, such companies will often seek out ways to preserve cash. A commonly used technique is to use corporate stock to supplement cash compensation to employees, payments to advisers and to entice certain customers. Before any of these techniques is employed, it is best for the company to seek legal counsel to be sure that stock is properly registered, and that legal documentation is in order to describe the terms where stock, options or warrants are used as incentives to employees or customers.

1. Disadvantages

While the high technology company will view the use of stock in lieu of cash as helpful in preserving cash, there are some disadvantages. First is the loss of some control due to the addition of new owners. Also, when stock is issued by the exercise of an option or warrant, there is an opportunity cost. That is, the corporation could have received more money by selling the stock at market price, then it received by the option holder acquiring the stock at the lower exercise price. Finally, there are legal costs of instituting and maintaining employee stock purchase plans and other types of warrant and option arrangements.

2. Valuation

When stock is used in lieu of cash payments, a valuation of the stock is necessary. For a start-up company, this is not an easy task. However, to prevent unnecessary dilution of the stock, the tax adviser should work with the owners to establish a value.[48]

3. Tax Impact of Using Stock in Place of Money

Various rulings have held that the distribution of corporate stock to employees as compensation is deductible by the corporation under §162.[49] The amount of the deduction is equal to the fair market value of the stock at the date of the distribution. Under §1032(a), the corporation recognizes no gain or loss from the distribution of its stock. The rationale for this treatment is that if the payment would have been a deductible business expense if

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[47] Because the rules and calculations for PHCs operate for high technology companies in the same way they do for other companies, they are not discussed further in this article. See I.R.C. §§ 541 to 547 and 561 for the calculations and dividend procedures. The special rule for "active business computer software royalties" excepted from PHC income is discussed later in the article under "Special considerations for software businesses."

made with cash rather than stock, the result should be no different just because stock was used. If the corporation had instead issued the stock for cash and used the cash to pay the expenditure, a deduction would be allowable and the indirect use of cash should result in the same conclusion.[50] Although these rulings deal with employee compensation, the result should be no different where stock is used to pay other types of expenses that would be deductible if paid with cash.

4. Employee Stock Options and Other Arrangements

Generally, employee stock option plans are either non-qualified or incentive stock option (ISO) plans (§422). The advantage of a non-qualified plan is that less restrictions exist relative to an ISO plan and the employer will obtain a deduction for the compensation element upon exercise of the option by the employee. The compensation element is the excess of the market price (fair market value) upon exercise over the exercise price. This spread constitutes wages to the employee. With an ISO, if the employee holds onto the stock for two years from the grant date and one year from the exercise date, there is no compensation element and the entire gain upon eventual sale will be treated as a capital gain. However, upon exercise, the spread is a preference item for AMT purposes.[51] Unless there is a disqualifying disposition of stock received through an ISO plan (stock is not held for the required time periods after grant or exercise), there is no deduction to the employer. Other stock compensation plans include restricted stock, stock appreciation rights and phantom stock plans.[52]

5. Stock Used To Entice Customers

In the past few years, there have been two court decisions that have addressed the use of stock warrants as a volume discount for customers. Both cases held that the company was entitled to a deduction for the spread that existed in the stock warrant upon its eventual exercise by the customer (this spread would also constitute income to the customer). These cases, summarized below, are interesting examples of how a high technology company may consider using its stock to preserve cash, the tax issues raised, and the need for legal documentation for the transaction.

Sun Microsystems, Corp. and Subsidiaries:[53] In 1983, Sun Microsystems (SMS) entered into various agreements with Computervision Corporation (CV), an unrelated taxpayer. A 3-year purchase agreement gave CV a 40 percent discount on all purchase orders during the first six months and thereafter a maximum volume discount of 40 percent off the list price of workstations, as well as a 5 percent cash discount for prompt payment. The parties also entered into an investment agreement whereby SMS agreed to issue two stock warrants to CV as part of the overall agreement. The first stock warrant allowed CV to purchase 10,000 shares of Series F preferred stock at $120 per share, exercisable once CV purchased $20 million of products within 36 months of SMS's first shipment to CV. The second warrant allowed CV to purchase 10,000 shares of Series G preferred stock at $150 per share, exercisable when CV's purchases exceeded $30 million within the 36 month period. The purchases amount included royalties payable by CV to SMS pursuant to a joint development agreement. The parties also agreed that SMS would borrow from CV by way of $1.5 million convertible debenture and a $1 million note. The last part of the agreement was a technology exchange whereby the parties would contribute to the design of "superseding generations of intelligent workstation products which would be jointly owned by CV and SMS."

The goal of SMS in the agreements was to try to establish a relationship with a large company in order to increase sales and obtain the credibility SMS needed to become a major company in the computer industry. CV's goal in entering the agreements was to obtain workstations that it needed in selling its CAE/CAD/CAM products at a very low price. CV realized that the stock option could potentially result in a zero cost for acquiring the workstations.

In 1986, SMS made its initial public offering of common stock. Pursuant to the SMS and CV agreements, the preferred stock covered by the warrants was converted into 15 shares of SMS common stock. This

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48 Various resource materials exist on property valuations; this topic is not further discussed in this article.

49 See. Rev. Rul. 62-217, 1962-2 C.B. 59 and Rev. Rul. 69-75, 1969-1 C.B. 52. The conclusion that the distribution is deductible compensation assumes that the amount represented reasonable compensation. Treas. Reg. § 1.162-7.

50 Duncan Industries v. Commissioner, 73 T.C. 266, 283 (1979). Another rationale supporting expense treatment is that the recipient of the stock must report the receipt of income.

51 I.R.C. § 56(b)(3).

52 Note: A detailed discussion of stock option plans is beyond the scope of this article; consult tax services for detailed information. Employee stock option plans can be an important tool for high technology companies to help attract and keep highly-skilled executives and employees, and to preserve cash.

53 Sun Microsystems Corp. and Subs. v. Commissioner, 66 T.C.M. (CCH) 997 (1993).

changed the warrants from exercisable for 10,000 shares of preferred stock to 150,000 shares of common stock. The first warrant was exercised on November 24, 1986 (during SMS's June 30, 1987 tax year) when the exercise price was $8 per share and the fair market value was $19.375 per share. The warrant was exercised by an underwriter to whom CV sold its rights. CV also sold its rights in the second option to an underwriter; at the date of exercise (during SMS's same tax year), the exercise price was $10 per share and the fair market value was $31.375 per share.

On its tax return for the year ended June 30, 1987, SMS deducted $4,912,500 representing the difference between the fair market value and the exercise price for the two warrants exercised during that tax year. This amount was not treated as an expense on SMS's financial statements. Upon audit, the Service disallowed the deduction.

SMS's position was that the excess of the fair market value of the stock over the exercise price was a sales discount because that was the purpose of issuing the warrants to CV; therefore the amount should be excluded from gross income. Alternatively, SMS argued that the amount was deductible under §162. The Service, on the other hand, argued that issuance of the warrants was an investment opportunity for CV and should be capitalized by SMS. Both SMS and the Service did agreed though, that any tax consequence would fall into SMS's tax year ended June 30, 1987 because that was when all contingencies were settled. Also, the parties agreed that §1032[54] did not deny any tax benefit claimed by SMS.

The Tax Court stated that the treatment of the excess of the fair market value over the exercise price (i.e., the value of the warrants) depended upon the proper analysis of all the facts and circumstances surrounding the relationship of SMS and CV, including a determination of the intent of the parties. The court held that the $4,912,500 value of the warrants was a sales allowance or discount, rather than a §162 deduction or a capitalizable amount. The court stated that inclusion of the provision for the warrants in the "investment agreement" between the parties did not mean that the value of the warrants should be capitalized. The Service's form over substance approach was not valid based on the facts and circumstances that indicated that all of the agreements were a single agreement structured to deal with the requirements of federal and state securities laws. In addition, the court stated that it was not necessary to have a specified dollar amount at the outset in order to have a sales discount. Instead, it was sufficient if a mechanism existed to ultimately determine the amount of the discount. Also, the potentially large amount did not preclude treatment as a sales discount. The court also stated that the facts did not indicate that the issuance of the warrants was specifically related to either the joint technology agreement or to the favorable financial terms of the debenture and note. Thus, the existence of these parts of the total agreement did not require that the value of the warrants be capitalized. It is also important to note that the court did not find that an *Indopco* type argument[55] required capitalization of the value of the warrants. The court agreed with SMS that the potential long-term benefits to SMS from a relationship with CV were "softer" and speculative, relative to the immediate benefits to be derived by selling the workstations to CV. Finally, the court noted that testimony and other evidence of SMS indicated that the warrants were issued as an incentive for CV to buy workstations. CV also indicated that it did not intend to buy and hold SMS stock and the warrants were sold very shortly after they became exercisable.

Convergent Technologies, Inc.:[56] Convergent Technologies (CT), a manufacturer of workstations, entered into a purchase agreement with NCR with a stock warrant option, which was NCR's idea. The agreement did not state a minimum volume of workstations that NCR had to buy and did not preclude NCR from buying workstations from other companies. The purchase agreement gave NCR the right to buy 250,000 shares of CT common stock for $20 per share once NCR's purchases from CT exceeded $30 million and within four years of the agreement. CT had not yet become publicly-traded when the agreement was entered into. To help ensure that NCR would not reduce its purchases should the value of CT stock decline, the agreement also included the following clause. "NCR understands and acknowledges that CT's willingness to grant NCR a warrant under the Agreement hereinafter set forth and to sell its common stock to NCR upon the exercise of the warrant does not constitute additional consideration by CT for NCR's purchase of CT's products under the OEM Agreement, and that this

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[54] I.R.C. § 1032 provides that no gain or loss is to be recognized to a corporation when it receives money or other property in exchange for its stock.

[55] Indopco v. Commissioner, 503 U.S. 79, 87 (1992). The holding of the *Indopco* case is that an expenditure need not create or enhance a separate and distinct additional asset to be capitalizable; other characteristics of an expenditure may indicate that it is a capital expenditure. "Although the mere presence of an incidental future benefit - "*some* future aspect" - may not warrant capitalization, a taxpayer's realization of benefits beyond the year in which the expenditure is incurred is undeniably important in determining whether the appropriate tax treatment is immediate deduction or capitalization."

[56] Convergent Technologies, Inc. v. Commissioner, 70 T.C.M. (CCH) 87 (1995).

Agreement is entirely separate and independent from the OEM Agreement."[57] CT also entered into a similar arrangement with Burroughs. The stock warrant agreements did not involve any exchange for technological information. Both sets of warrants were exercised in 1983.

In 1986, CT filed amended returns to reduce its gross income by $31,374,804, which was the spread, or value, of the NCR and Burroughs warrants exercised in 1983. The Service disallowed the reductions, arguing that the value of the warrants should have been capitalized, rather than treated as a reduction to gross income (sales discount) or as a §162 deduction.

The Tax Court held for CT, in part, based on its similar holding in *Sun Microsystems, Inc.*, *supra*. The court found that the two "critical findings" from the *Sun Microsystems, Inc.* case, "that the warrants were an incentive for the purchase of workstations and that the warrant holder did not intend to hold the underlying stock," were both present in the *Convergent Technologies* case.[58] For example, neither NCR nor Burroughs held onto the stock after exercising the warrants.

In deciding when CT was entitled to a deduction for the spread on the warrants, the court held that the first part of the all events test was met when the warrants became exercisable because it was unlikely that they would not be exercised, based on the size of the spread and the actual exercise was a ministerial act. However, the court held that the amount was not determinable with reasonable accuracy until the exercise date and noted that, unlike the situation in the *Sun* case, the value of the CT warrants declined in value between the exercisable date and the exercise date.

I. Financing Vehicles and §174

There have been numerous court cases involving partnerships created to fund R&D projects of others. The partners treated the funds they provided for the R&D project as an expenditure qualifying for current expense treatment under §174. The Service and the courts have usually treated the expenditures as not qualifying under §174 under the theory that the trade or business requirements of §174 had not been met. While the fact patterns in the cases have dealt with partnerships because of their ability to pass through the §174 tax benefits to the owners, the trade or business requirement of §174 would be relevant to any entity claiming an R&E deduction. Examples of an entity funding R&E activities of another business on behalf of the funding entity are discussed next. Further discussion of the operation of §174 is included later under "Distinguishing between I.R.C. Sections 195, 162, 174, and 41 expenditures."

1. Example[59]

A limited partnership (P) entered into an R&E agreement and technology transfer agreement with a company (T) in need of financing to develop a fiberboard product. P paid T over $2 million to perform R&E services. Research results were to be the sole property of P who had no expertise in the R&E. T was granted an option at a price of $100 to buy an exclusive worldwide license to the research results, with royalties to be paid to P. T was unable to market the product due to financial difficulties and did not exercise its option. P never considered marketing the product itself and sought out and found a replacement for T.

In this situation, P will be treated as managing an investment, rather than being in a trade or business for §174 purposes. Even the remote possibility that T will not exercise its option does not put P in a business role. The limited partners are not obligated to put in any additional funds and such funds would be needed to market the product. In addition, the general partners have no expertise in the technology and no plans to hire employees that do have such expertise. P intended to be in a passive investor role and make its profit from royalties. Thus, P and its partners would not be entitled to a deduction under §174.

2. Example[60]

Two individuals formed and owned 75 percent of a corporation (C) to provide R&E services on a contract basis. The same individuals also formed a partnership (P) "to engage in the business, research, and

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57 *Id*. at 89. OEM stands for original equipment manufacturer.

58 *Id*. at 93.

59 This example is based on United Fibertech, Ltd. v. Commissioner, 62 T.C.M. (CCH) 699 (1991), *aff'd,* 976 F.2d 445 (8th Cir. 1992). The Tax Court relied on Green v. Commissioner, 83 T.C. 667 (1984), Spellman v. Commissioner, 845 F.2d 148 (7th Cir. 1988), Levin v. Commissioner, 832 F.2d 404 (7th Cir. 1987), Everett v. Commissioner, 58 T.C.M. (CCH) 1366 (1990) and Diamond v. Commissioner, 92 T.C. 423 (1989), *aff'd*, 930 F.2d 372 (4th Cir. 1991), as well as other cases.

60 Example is based on Scoggins v. Commissioner, 46 F.3d 950 (9th Cir. 1995). The Ninth Circuit Court relied in part on Kantor v. Commissioner, 998 F.2d 1514 (9th Cir. 1993).

development of semiconductor equipment and to do all things related to, incidental to, or in furtherance of such purposes."[61] P and C entered into a contract whereby C would perform certain R&E work for P to develop a new epitaxial reactor for use in making silicon wafers. P paid C $500,000 and granted C a 15-month non-exclusive license for a 20 percent royalty and option to purchase the rights to the technology for $5 million. P deducted the $500,000 as a §174 R&E expenditure which was passed through to the two individual partners.

The partners are entitled to an R&E deduction because there is "a 'realistic prospect' of subsequently entering its own business in connection with the fruits of the research, assuming that the research is successful."[62] Such a prospect could be shown by "manifesting both the objective intent to enter such a business and the capability of doing so."[63] The partners of P are the type of taxpayers whom Congress intended to encourage and reward by enacting §174. Factors relevant in reaching this conclusion include, (i) the partners have the technical expertise and experience to pursue the business aspect of the new technology; (ii) P had the right for 18 months to market the product before C's purchase option became effective; and (iii) C made no commitment to market the product. The fact that P has no equipment or phones is not important because it is in a start-up phase. Also, the fact that P has no employees is not a problem because its two partners are the technical experts behind the entire project. Finally, P is not made up entirely of investors, and the partners of P directed and guided the research.

3. Summary

The determination as to whether an entity is engaged in a trade or business to the extent to be entitled to the benefits of §174 or whether it is instead a "vehicle for injecting risk capital into the development and commercialization of a particular technology" is based on facts and circumstances.[64] Such facts and circumstances include the contractual arrangements between the parties, the business activities of the entity and the financial ability and incentives of the partnership to use the product in its own trade or business. For the entity that is providing the R&E funding to be entitled to a deduction under §174, there must be "a realistic prospect that the technology to be developed will be exploited in a trade or business of the entity in question. ... The entity must reasonably anticipate availing itself of the privileges it possesses on paper."[65]

J. Additional Choice of Entity Comments

While an advantage of partnerships and LLCs over S corporations is that partners may increase their basis by their share of entity debt, while S corporation shareholders cannot, this is not often relevant for high technology companies because they tend not to have significant levels of debt.

Financing options for a high technology company may involve foreign parties, corporations, partnerships, investment funds and other types of entities that would terminate an S election if they were to become owners of an S corporation. Thus, the partnership or LLC form is generally preferable.

1. Additional Comments Regarding Pass-Through Entities

With the addition of the passive activity loss and credit limitations rules with the Tax Reform Act of 1986 (§469), individual partners and S corporation shareholders will only be able to currently deduct R&E expenditures and utilize credits if they have sufficient passive activity income (unusable deductions and credits will carryforward), or are a material participant in the activity generating the deductions and credits.[66] Limited partners are generally not considered to be material participants, thus, the expenditures by the partnership are passive activity deductions.[67] Owners must also be concerned with the at-risk limitations of §465 and the basis limitations of §704(d) or §1366(d).

An additional limitation rule relevant to partners and S corporation shareholders involves utilization of the §41 research tax credit (discussed in more detail later). Per §41(g), the owner's credit amount for a

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61 Scoggins, *supra*, at 951.

62 *Id*. at 956.

63 *Id*. at 951.

64 Software 16 v. Commissioner, 63 T.C.M. (CCH) 2876, 2881 (1992), quoting from Green v. Commissioner, *supra*.

65 *Id*, quoting from Diamond v. Commissioner, *supra*, and Levin v. Commissioner, *supra*.

66 The passive activity loss limitation rules apply to individuals, estates, trusts, closely-held C corporations and personal service corporations; I.R.C. § 469(a)(2).

67 I.R.C. § 469(h)(2). Under certain tests, a limited partner might satisfy the material participation standard under I.R.C. § 469; see Treas. Reg. § 1.469-5T(e).

tax year may not exceed the tax attributable to the portion of the owner's taxable income allocable or apportionable to his interest in the trade or business or entity.[68]

2. State Considerations

State tax incentives applicable to a high technology company should be reviewed to determine if any are only available to certain types of entities. For example, California has an incentive to entice capital into small businesses, but it is only available to non-corporate shareholders of C corporations. This rule is a modified adoption of the federal rule at §1202, discussed earlier.

If an LLC form is desired, the tax advisor should verify any restrictions under state law that may prohibit that form for the company. For example, in California, businesses that require a license, certification or registration under state law may not operate as an LLC. Some high technology companies may involve areas for which licensing is required, such as certain engineers, which would prohibit use of an LLC form in California.

3. Change in Form

As with choice of entity considerations for non-high technology businesses, initial planning may involve beginning as a passthrough entity and later converting to a C corporation when necessary or appropriate. In addition to the situation where the business changes from producing losses to producing income that would warrant converting from a passthrough entity form, another situation relevant to a high technology business's choice of entity is where income is produced, but cash is invested in R&D projects rather than being distributed to owners.

4. Capital Gains Rates and Innovation and Growth

A 1/28/99 Congressional Research Service report, "Capital Gains Taxes, Innovation and Growth" includes the following summary:

> The belief on the part of many venture capital advocates that the capital gains tax plays an important role developed because the slump and recovery in the venture capital market in the seventies and early eighties was associated with a rise and fall in the capital gains tax. More recent evidence, however, indicates that there is no apparent relationship between venture capital investments and the capital gains tax.
>
> There are several reasons why the effect of capital gains taxes on growth through investment in firms would be expected to be small. First, most capital gains accrue to mature firms and real estate; only a small share is associated with small and new firms. Most formal venture capital is provided by institutional investors not subject to the capital gains tax. Secondly, a capital gains tax cut will not specifically favor this type of investment, but will benefit a wide range of investment opportunities. Indeed, it could actually discourage such investment by reducing the present differential tax benefit for new stock issues. Nor is the capital gains tax likely to be an efficient mechanism to encourage acquisition of skilled executives through stock options, since these stock options are often not subject to the capital gains tax and since only a tiny fraction of gains is associated with stock options.
>
> It might be possible to devise more targeted provisions, although such provisions tend to be complex and may, themselves, be relatively unsuccessful in stimulating investment.

The report also notes that data indicates that the increase in the capital gains tax in 1986 was not associated with a decline in venture capital. The CRS authors speculate that this may be due to investments by institutional investors that are not subject to tax (in 1994, about 70% of venture capital came from pensions, foundations, endowments and foreign investors). In addition, the authors note that most capital gains arise from assets that are not associated with venture capital. Thus, a capital gains tax cut is unlikely to do much to spur venture capital investments.

[68] Also see §41(f)(2) and §1.41-9.

Selecting a Place of Business

General business considerations will dictate where a high technology company locates its operations. If owners are flexible as to location, they may want to review and compare tax incentives offered by each state and city under consideration. Businesses also need to determine whether any additional local registration or licensing is required, particularly if their business will involve the use of hazardous materials.

Internet Clusters—A report issued by Joint Venture: Silicon Valley Network in July 1999 analyzes the how and why of where Internet companies tend to locate. One finding of the study is that the most cited reason for a particular location choice is availability of employee talent (75%), location of the company founder (63%), proximity to core (non-Internet) businesses (52%), established infrastructure (45%), proximity to customers (37%), access to venture capital (26%), and closeness of educational and research institutions (25%).[69]

A. Incubators

High technology companies may want to seek out "incubators" in which to operate during their start-up years. Incubators provide a facility for start-up businesses in the same general industry. These facilities provide their tenants with access to expertise, such as accounting, legal and financial guidance, shared office staff and equipment, and often low cost rent. Business guidance is often provided by volunteers and through seminars. Tenants may also find benefits from access to other start-up companies in their industry that may turn out to be suitable partners for certain projects. Often, cities or states that are seeking out high technology companies have set up incubators in their area with the assistance of non-profit organizations.

B. Networks

A high technology start-up company may also want to consider the availability of opportunities to network in order to find sources of financing and business advisement. Some cities or states may have non-profit or government sponsored organizations that link start-up companies to business experts who provide advice on a volunteer basis, as well as links to potential financing sources.

The local or state Chamber of Commerce and economic development corporations or groups can be helpful sources of information on tax incentives and start-up company resources available in a particular area. In addition, the Small Business Administration (SBA) should be contacted for information and advice.

C. Examples of Tax Incentives

Examples of possible state and local tax incentives available to a high technology start-up company include, a research tax credit, sales tax exemption on manufacturing and R&D equipment, investment tax credit on manufacturing and R&D equipment and possibly special use facilities, special tax benefits for locating in an empowerment or enterprise zone, property tax abatements, and special rules for utilizing net operating losses.

[69] *Joint Venture's Internet Cluster Analysis*, July 1999.