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Treasury proposes new rules governing research credits for software development expenses

Nearly three decades ago (as part of the Tax Reform Act of 1986), Congress added a special statutory rule intended to restrict, but not eliminate, taxpayers' ability to claim research tax credits for so-called "internal use software." *See* IRC § 41(d)(4)(E). In the intervening years, the Treasury Department and IRS issued several sets of proposed regulations to implement § 41(d)(4)(E), but these regulations were withdrawn following objections that they did not adequately reflect the technological advances of the internet and the increasingly important role of computer software in virtually all aspects of business activity.

Several days ago, the IRS released a new set of proposed regulations defining "internal use software" and clarifying the additional credit requirements that apply to such software. *See* attached Proposed Regulations [REG-153656-03, released on 1/16/15]. These proposed regulations address most of the concerns raised by commentators with respect to software development activities and, as specifically acknowledged in the Preamble, are intended to expand the opportunities for taxpayers to claim research credits for software-related expenses.[1] The new proposed regulations differ significantly from prior versions in the following respects:

The proposed regulations provide a new definition of "internal use software" (IUS)

"Internal use software" is limited under the proposed regulations to software developed by (or on behalf of) the taxpayer for use in "general and administrative functions that facilitate or support the conduct of the taxpayer's trade or business." In this regard, "general and administrative functions" are defined as: (1) financial management and supporting recordkeeping, such as accounts payable and receivable, inventory management, budgeting, cost and fixed-asset accounting, economic forecasting,

financial reporting, internal audit, risk management, and tax; (2) human resource management of the taxpayer's workforce, including hiring, training, personnel records, payroll, and benefits; and (3) support services that support the day-to-day operations of the taxpayer, such as data processing, facility services, marketing, government compliance services, and security services.[2] As explained in the Preamble, this new regulatory definition "is intended to target the back-office functions of a taxpayer that most taxpayers would have regardless of the taxpayer's industry."[3] By now focusing on the function served by the software within the taxpayer's own business, the proposed regulations eliminate the distinction attempted in the prior proposals between software developed to deliver "computer" versus "non-computer" services — a distinction that essentially no longer exists given the computer-enabled features of virtually all businesses that provide goods and services to the general public.[4]

The new definition of "internal use software" requires not only an examination of the functional use of the software at issue, but a related inquiry into the purpose(s) underlying the software's development, which depends on the intent of the taxpayer and the facts and circumstances as of the beginning of the software development project. However,

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1 As indicated by the Treasury Department and IRS on page 24 of the Preamble: "The objective of these proposed regulations is to provide a narrower exclusion of software from qualified research than provided in prior regulatory guidance. . . . Because these proposed regulations provide a narrower definition of internal use software, the research credit will be available to a greater number of small entities than was previously available under prior guidance."

2 When determining whether general and administrative functions facilitate or support the conduct of the taxpayer's own trade or business (rather than being developed to be commercially sold or licensed to third parties), the "single taxpayer" concept of § 41(f)(1) applies, so that software developed by the taxpayer for the internal use of another company that is a member of the same controlled group (generally determined by applying a more-than 50% ownership test) is treated as developed for the taxpayer's own internal use. *See* Prop. Treas. Reg. § 1.41-4(c)(6)(iii)(A).

3 Referring to the economic rationale underlying the research credit regime in general, the Preamble goes on to state: "The benefits of software developed by the taxpayer for use in general and administrative functions are likely to be captured only by the taxpayer developing it and therefore exclusion from credit eligibility is more consistent with the purposes for which Congress created the credit." Preamble at p. 10.

4 In this regard, the Preamble states (on p. 9): "Today, computer software is used in all aspects of business activity, especially in providing goods and services to third parties, and such software has played a vital role in increasing the productivity of the U.S. economy and in making the U.S. more competitive globally."

if a taxpayer originally develops software primarily for use in its own general and administrative functions, but later makes improvements to the software with the intent to sell or license it to third parties or the intent that the improved software be used by the taxpayer for non-internal use functions (as explained below), then the improvements will be considered separate from the existing software and will not be considered as for internal use. Conversely, if a taxpayer originally develops software for the purpose of selling or licensing it to third parties or for the purpose of using it in non-internal use functions, but later makes improvements to the software with the intent to use it in general and administrative functions, the improvements will be considered separate from the existing software and as developed primarily for internal use.[5]

The proposed regulations also expressly clarify what is not regarded as internal use software

The new regulations expressly provide that — consistent with the 1986 Act legislative history and as implicit in the notion of "internal use" — software is not developed primarily for the taxpayer's internal use if "developed to be commercially sold, leased, licensed, or otherwise marketed to third parties."[6] Moreover, consistent with the statute and prior regulatory guidance, the new regulations provide that research with respect to computer software is eligible for the credit if the research meets the general requirements of § 41(d) — including the "process of experimentation" standard discussed below — and the software is developed for use in an activity that constitutes qualified research (such as software used to evaluate research data or resolve technological design uncertainties) or in a production process to which the requirements of qualified research are met (such as robotics used in manufacturing).[7] The new regulations also provide (as did the 1986 Act legislative history and prior regulatory proposals) that the special rules governing internal use software do not apply to the development costs of a new or improved package of computer software and hardware developed together as a single product of which the software is an integral part, that is used directly by the taxpayer in providing services in its trade or business (e.g., telecommunications switching equipment).[8]

Importantly, in recognition of the increasing use of computer software in all aspects of business (see footnote 4 *supra*) and the revolutionary changes in e-commerce since § 41(d)(4)(E) was first enacted, the proposed regulations contain a specific rule deeming software to not be for internal use if "[t]he software is developed to enable

a taxpayer to interact with third parties or to allow third parties to initiate functions or review data on the taxpayer's system."[9] Demonstrating the far-reaching implications of this regulatory provision, the Preamble to the proposed regulations states: "Examples of software developed to enable a taxpayer to interact with third parties or to allow third parties to initiate functions or review data include software developed for third parties to execute banking transactions, track the progress of a delivery of goods, search a taxpayer's inventory for goods, store and retrieve a third party's digital files, purchase tickets for transportation or entertainment, and receive services over the internet."[10] Because this special rule refers to "third parties," it not only includes customer-interface software, but also could apply to software that enables taxpayers to interact with non-customers and vendors.[11]

The proposed regulations also provide rules for "dual function software" that is developed for both internal use and to enable interaction with third parties.

Software developed by the taxpayer both for use in its own general and administrative functions and to enable interaction with third parties is initially presumed to be internal use software.[12] However, a shrink-back concept applies, so that if a taxpayer can identify a subset of elements of dual function software that enables a taxpayer to interact with third parties or allows third parties to initiate functions or review data on the taxpayer's system, then that subset is not treated as internal use software. The Treasury Department and IRS recognized, however, that it may be challenging to identify the specific expenditures allocable to such a third-party subset that is developed as part of a larger project that modifies back-office software functions. Accordingly, a safe-harbor rule provides that, to the extent that a taxpayer cannot determine costs allocable only to a third-party subset, then 25% of the remaining costs incurred to develop dual function software may be treated as not subject to § 41(d)(4)(E), provided that use by third parties or by the taxpayer to interact with third parties was reasonably anticipated to constitute at least 10% of the dual function subset's use.[13] The proposed regulations

5 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(iv)(B).

6 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(iv)(A)(1). The proposed regulations eliminate the requirement in a prior version of the regulations that such commercial software be treated as not for internal use only if offered "for separately stated consideration to unrelated third parties." *See* Preamble at p. 7.

7 *See* § 41(d)(4)(E)(i) and (ii); Prop. Treas. Reg. 1.41-4(c)(6)(i)(C)(1) and (2).

8 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(ii). In these cases, eligibility for the credit is determined by examining the combined hardware-software product as a single product. *Id*.

9 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(iv)(A)(2).

10 *See* Preamble at p. 12. Again referring to the economic rationale underlying the research credit regime (see footnote 3 supra), the Treasury Department and IRS state with respect to this special rule: "Similarly, software that enables a taxpayer to interact with third parties or allows third parties to initiate functions or review data on the taxpayer's system does not solely benefit the taxpayer developing the software, and therefore it is appropriate to exclude such software from the definition of internal use software." *Id*. at p. 11.

11 However, apparently to avoid creating an incentive under § 41 for taxpayers to out-source some of their "back-office" functions to independent contractors, the proposed regulations clarify that the special exception for software enabling interactions with third parties does not apply when the software is used by the third party to support the general and administrative functions of the taxpayer. *See* Prop. Treas. Reg. § 1.41-4(c)(6)(iv)(D); Preamble at p. 12; and Example 5 of Prop. Treas. Reg. § 1.41-4(c)(6)(vi).

12 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(iv)(C)(1) and (2).

13 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(iv)(C)(3). This safe-harbor cost allocation rule provides: "An objective, reasonable method must be

contain 4 new examples illustrating the application of this safe-harbor rule.

High threshold of innovation test

With respect to computer software that is properly characterized as "internal use software," the proposed regulations provide that such software nonetheless may be eligible for the research credit if (consistent with the 1986 Act legislative history) an additional 3-part "high threshold of innovation test" is satisfied.[14] The proposed regulations modify the prior versions of this 3-part test as follows:

Innovation requirement: The proposed regulations abandon the requirement in prior regulatory guidance that innovative software must be "unique or novel." Instead, the proposed regulations indicate: "Software is innovative if the software would result in a reduction in cost or improvement in speed or other measurable improvement that is substantial and economically significant, if the development is or would have been successful. This is a measurable objective standard, not a determination of the unique or novel nature of the software or the software development process."[15]

Significant economic risk test: Under this test, software development involves significant economic risk "if the taxpayer commits substantial resources to the development and if there is substantial uncertainty, because of technical risk, that such resources would be recovered within a reasonable period."[16] For this purpose, "substantial uncertainty" exists if, at the beginning of the taxpayer's activities, the information available to the taxpayer does not establish the "capability or method" for developing or improving the software. Mere uncertainty about the "appropriate design" of the software is insufficient to satisfy this test.[17]

Commercial availability test: As with prior versions of the proposed regulations, internal use software may satisfy the high threshold of innovation test only if it is not commercially available, meaning: "Software is not commercially available for use by the taxpayer in that the software cannot be purchased, leased, or licensed and used for the intended purpose without modifications [that satisfy the innovation requirement and significant economic risk test, as described above]."[18]

To reinforce that internal use software expenses may be credit eligible, the proposed regulations specifically provide with respect to the high threshold of innovation test:

"It is not always necessary to have a revolutionary discovery or creation of new technologies such as a new programming language, operating system, architecture, or algorithm to satisfy the high threshold of innovation test. Although the implementation of existing technology, no matter how complex, is not evidence, by itself, of innovation, the use of existing technologies in new ways could be evidence of a high threshold of innovation if it resolves substantial uncertainty [relating to the capability or methodology for developing the intended software]."[19]

For a summary of the 13 examples contained in Prop. Treas. Reg. § 1.41-4(c)(6)(vi) illustrating the definition of internal use software and application of the high threshold of innovation test, see Appendix A (attached).

Application of the process of experimentation requirement

In addition to the provisions defining internal use software and clarifying the high threshold of innovation test, the proposed regulations also include 6 new examples illustrating the application of the "process of experimentation" requirement to software development in general (regardless of whether the software is also subject to the additional rules applicable to internal use software). *See* § 41(d)(1)(C); Prop. Treas. Reg. §1.41-4(a)(8)(adding examples 5 – 10). Currently, there are no examples in the final § 41 regulations (published in 2004) illustrating how the process of experimentation test applies to software development efforts. In this regard, the Preamble (at p. 20) indicates that the new examples "also illustrate that certain types of web design and the installation of enterprise resource planning software generally do not qualify as a process of experimentation." The new examples illustrate:

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used to estimate the dual function subset's use by third parties or by the taxpayer to interact with third parties and such use is estimated at the beginning of the computer software development." *Id.* In the Preamble (at p. 21), the Treasury Department and IRS specifically invite commentators to address the "administrability of measuring the reasonably anticipated use of software by taxpayers to interact with third parties and by third parties to initiate functions or review data based on reasonable methods, such as processing time, amount of data transfer, number of software user interface screens, and number of third party initiated functions, as well as other objective, reasonable methods . . . ."

14 The Preamble (at p. 16) indicates: "The high threshold of innovation test . . . is intended to limit credit eligibility of software developed primarily for internal use to software development that meets a higher standard than other business components. At the same time, it is clear that Congress intended that some software developed primarily for internal use would meet the high threshold of innovation test. Accordingly, the requirements should not be so restrictive as to make the test impossible to meet."

15 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(v)(B). The Preamble further indicates (at p. 17) that this measurable and objective approach "should reduce the potential for controversy."

16 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(v)(C), which also provides: "The standard does not require technical uncertainty regarding whether the final result can ever be achieved, but rather whether the final result can be achieved within a timeframe that will allow the substantial resources committed to the development to be recovered within a reasonable period."

17 *Id. See also* Preamble at p. 18-19 (noting that, for business

components other than internal use software, a lower "uncertainty" standard applies for § 41 purposes, so that the credit is available if information available to the taxpayer does not establish the capability or method for developing or improving the business component *"or the appropriate design of the business component"*).

18 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(v)(D).

19 *See* Prop. Treas. Reg. § 1.41-4(c)(6)(v)(D). *See also* footnote 14 *supra* (credit requirements for internal use software "should not be so restrictive as to make the test impossible to meet").

- Evaluating software products available from vendors to determine which product will best serve the taxpayer's technical requirements is not a qualifying process of experimentation. *Id.* at Example 5.

- Evaluating the functions included in a commercial software package of object-oriented functions acquired from a vendor for use in the taxpayer's web application is not a process of experimentation. *Id.* at Example 6.

- Examples 7 and 8 involve the development of software to balance the incoming processing requests across multiple web servers that run the same set of software applications. In example 7 the taxpayer simply decides to use a separate server to distribute the workload across each of the web servers and that a round robin workload distribution algorithm is appropriate for its needs. In contrast, in example 8 the taxpayer designs and systematically tests and evaluates several different algorithms that perform the load distribution functions. These examples illustrate the distinction between simply choosing a solution (example 7) and developing a solution by conducting activities that constitute elements of a process of experimentation (example 8).

- An ERP implementation typically involves choosing between available templates, reports, and other standard programs included with the ERP commercial package to configure the system; and also entails conducting a data transfer. Example 9 concludes that, because the taxpayer devoted the majority of its resources in implementing this ERP system to evaluating the available templates, reports, and other standard programs and choosing among these alternatives in configuring the acquired system to match its business processes (as well as performing data transfer involving routine programming), these activities are not elements of a process of experimentation.

- Example 10 provides an example where an ERP implementation may entail a qualifying process of experimentation. In this example, substantially all of the taxpayer's activities (as in Example 9) do not satisfy the requirements of a process of experimentation, but the taxpayer is uncertain as to how to create an interface that will keep the data synchronized between the legacy and ERP systems. To resolve this problem, the taxpayer engages in systematic trial and error testing of several newly designed data caching algorithms to eliminate synchronization problems. Applying a shrink-back approach, this example concludes that substantially all of activities undertaken to develop such algorithms constitute elements of a process of experimentation. [20]

Effective date

Formally, the provisions of the proposed regulations relating to internal use software will be applicable prospectively for taxable years ending on or after the date of publication of the Treasury decision adopting these rules as final regulations in the Federal Register. The IRS will not challenge return positions, however, that are consistent with these proposed regulations for taxable years ending on or after January 20, 2015, *i.e.*, the date the proposed regulations are published in the Federal Register. Consequently, for calendar-year taxpayers, the first taxable year for which the IRS has committed to not challenge return positions consistent with the proposed regulations is the 2015 year.

For taxable years ending before January 20, 2015, the proposed regulations indicate that taxpayers may choose to follow either **all of the internal use software provisions** of §1.41-4(c)(6) in TD 8930 (issued in January of 2001) or **all of the internal use software provisions** in the 2001 proposed regulations (issued in December of 2001).[21]

With respect to the 6 examples illustrating the application of the "process of experimentation" test to the development of software, these examples apparently can provide interpretive guidance for any open tax year ending on or after December 31, 2003.[22]

Base consistency

Because the research credit is an incremental credit, taxpayers must be consistent in their determination of qualified research expenses in the base years and in the credit years. This "consistency rule" applies regardless of whether the taxpayer elects the alternative simplified credit or the traditional credit. *See* §41(c)(6) and Treas. Reg. §1.41-9(c)(2). Consequently, taxpayers who identify software development expenses as credit eligible based on the new proposed regulations must apply the same legal standards to expenses incurred in the base-period

21 Along with the issuance of the new proposed regulations, the Treasury Department and IRS have now withdrawn the advance notice of proposed rulemaking ("ANPRM") issued in January of 2004. This ANPRM previously had provided that — in the absence of final regulations interpreting § 41(d)(4)(E) — taxpayers claiming credits for internal use software could continue to rely upon **all** of the provisions of TD 8930 (including the "discovery test" that otherwise was repudiated by the Treasury Department and IRS for § 41 purposes) or, alternatively, **all** of the provisions of the proposed regulations issued in December of 2001. *See* Preamble at pp. 3-4 and 26. In *FedEx Corp. v. United States*, 2009-1 USTC ¶50,435 (W.D. Tenn. 2009), reh'g denied,108 AFTR 2d 2011-5669 (W.D. Tenn. 2011), the court agreed with the taxpayer that, despite the ANPRM, it could elect to apply the 3-part test specifically applicable to internal use software in TD 8930 without also having to apply the onerous "discovery test" that had been eliminated as a general credit requirement when final regulations (which "reserved" rules governing internal use software in particular) were issued in January of 2004 (*see* TD 9104). Because the new proposed regulations allow taxpayers to choose to follow "all of the internal software provisions of § 1.41-4(c)(6) in TD 8930," rather than "**all of the provisions**" in TD 8930, it appears that the IRS has, in effect, acquiesced to the court's decision in *FedEx* (*i.e.*, the IRS apparently will not assert for tax years ending before January 20, 2015 that credit eligibility for internal use software is dependent upon the taxpayer satisfying the "discovery test.").

20 *See* Examples 5 through 10 of Prop. Treas. Reg. § 1.41-4(a)(8).

22 *See* first sentence of Prop. Treas. Reg. § 1.41-4(e) and footnote 20 *supra*.

years. This may be challenging for taxpayers who claim a traditional credit, because consistency must be achieved for the 1984-1988 base period (unless the taxpayer is a start-up company). Some taxpayers may have applied prior proposed guidance governing internal use software in a manner that generally achieves (for § 41 purposes) the same result as applying the new definitions in the proposed regulations. For example, an e-commence company may have treated all of the software developed for customer use as providing a "computer service" which under the prior proposed guidance was excluded from the scope of "internal use software." Similar software might no longer be considered internal use software under the new proposed regulations, because "[t]he software is developed to enable a taxpayer to interact with third parties or to allow third parties to initiate functions or review data on the taxpayer's system." In these situations, the "consistency rule" might not result in significant adjustments being required to the qualified research expenses previously determined by the taxpayer for base-period years, even though the taxpayer theoretically is applying a new regulatory definition governing internal use software.

Documentation

The proposed regulations do not impose any additional documentation or recordkeeping requirements — that is, only the general record keeping requirements under Treas. Reg. § 1.6001-1 that are applicable to all persons and all research credit claims are likewise applicable to credits attributable to software development expenses.

Next steps

Written comments to the Treasury Department and IRS on the proposed regulations are due on or before March 23, 2015. A public hearing on the proposed regulations is scheduled for April 17, 2015. Anyone wanting to present oral comments at the public hearing must submit to the IRS an outline of their presentation by March 23, 2015.

Questions or comments

If you have any questions or comments, please contact any one of the Partners, Principals or Directors in the Research & Development and Government Incentives Service Line:

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Appendix A — Examples included in Prop. Treas. Reg. §1.41-4(c)(6)(vi)

Example	Guidance relates to	Illustrates
Example 1	G&A software to administer self-insurance reserves	Illustrates what is regarded as software providing *financial management functions* for purposes of determining if software is IUS
Example 2	G&A software related to employee compensation	Illustrates what is regarded as software providing *human resource management functions* for purposes of determining if software is IUS
Example 3	G&A software merely providing marketing information without interactive features	Illustrates what is regarded as software providing *support services* for purposes of determining if software is IUS
Example 4	Website software for ordering taxpayer's products and tracking the status of orders online	Illustrates that this type of software is not IUS because it allows third parties to initiate functions or review data
Example 5	Inventory management software that enables vendors to initiate functions or review data	Clarifies that this type of software is IUS even though supply vendors can initiate functions or review data because the software is for a G&A function, i.e., inventory management
Example 6	Software is developed for a website offering free services and with paid advertisers	Illustrates the type of software that is not IUS because it allows third parties to initiate functions
Example 7	Development of software that transfers data from disparate systems to new ERP system	Illustrates that this type of software is for a G&A function and is regarded as IUS
Example 8	Development of a telecommunications switch	Provides an example of computer hardware and software developed as a single product that is not regarded as IUS
Example 9	Initial development of software for G&A functions, with subsequent enhancements	Provides an example of where enhancements to IUS that are developed for sale, lease or license are not IUS
Example 10	Software developed for a new HR mgt system entailed: (i) redesigning disparate software applications into one employee-centric HR management system and (ii) developing a new database architecture using the old technology	Illustrates the type of IUS development that meets the high threshold of innovation test
Example 11	Software project to rewrite a legacy mainframe application using an object-oriented programming language, and to move the new application off the mainframe to a client/server environment	Illustrates that the significant economic risk test is not satisfied where the taxpayer was certain that it would be able to overcome any technological uncertainties and implement the improvements within a reasonable period
Example 12	Taxpayer develops a solution to expand its internal computing power which is used for a G&A function	Illustrates the type of IUS development that meets the high threshold of innovation test
Example 13	Taxpayer develops an interface for implementing its new ERP system	Illustrates the type of IUS development that fails the high threshold of innovation test