Managing Intellectual Property Costs Through Simultaneous Optimization of International Taxation and Patent Processing Fees

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ABSTRACT

While the United States is currently experiencing an unprecedented period of economic growth, the increase in patent and other intellectual property generation has experienced non-linear increases over the corresponding period. Q. Todd Dickinson, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks has indicated a link between these two events, noting that "[t]he ingenuity and creativity of American inventors has established the U.S. as the technological leader among nations, fueling this country's longest economic expansion…". While the link between the present economic growth in the United States and increased in intellectual property generation may be argued, the cost of IP generation is not debated. Traditional methods of protecting, maintaining, and licensing IP have experienced significantly increased costs in the past decade. The author[1] discusses a methodology involving the use of foreign hybrid overseas IP preparation, management, and exploitation entities to drastically reduce the cost and increase revenue of corporations subject to U.S. income taxation. While the techniques illustrated work best in situations where large amounts of IP assets are created, they may be equally applied to situations where startup companies

[1] Kevin Mark Klughart is licensed with the United States Patent and Trademark Office (USPTO) as a Registered Patent Attorney. His educational background includes a B.S. in Electrical Engineering from the Massachusetts Institute of Technology, M.S./Ph.D. degrees in Electrical Engineering from Texas A&M University, and joint Juris Doctor/Master of Intellectual Property Law degrees from Franklin Pierce Law Center. He is in solo practice in Concord, NH and concentrating in the fields of Intellectual Property Law and Taxation. The author may be reached via e-mail at PatentEngineer@mediaone.net.

wish to export the tax liabilities associated with their major IP assets that have yet to be created/invented.[2]

[2] Tax practitioners reading this document should also be aware of the IRS ethical guidelines required to be considered before making tax shelter opinions. *See generally*, Treasury Department Circular 230, and specifically "Tax Shelter Opinions", 31 CFR § 10.33.

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Introduction

Overview

While the United States is currently experiencing an unprecedented period of economic growth, the increase in patent and other intellectual property generation has experienced non-linear increases over the corresponding period. As illustrated by the statistics of Figure 1, growth in U.S. patent issues has been on a constant non-linear increase for over two decades. Q. Todd Dickinson, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks has recently noted the connection between current economic growth in the United States and patent application trends:

> "The ingenuity and creativity of American inventors has established the U.S. as the technological leader among nations, fueling this country's longest economic expansion…".[3]

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[3] Brigid Quinn and Kim Byars, "1999 Patent Statistics Announced", USPTO PRESS RELEASE #00-16, http://www.uspto.gov/web/offices/com/speeches/00-16.htm, (703-305-8341), March 2, 2000.

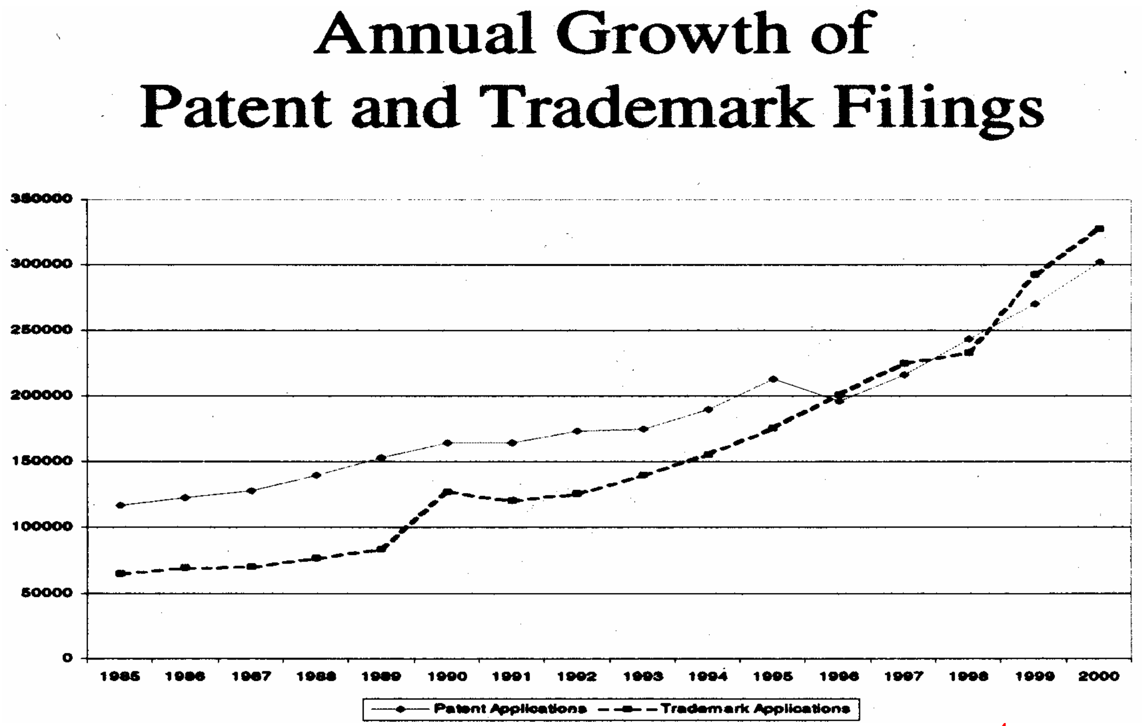

Figure 1: USPTO Patent and Trademark Issue Statistics[4]

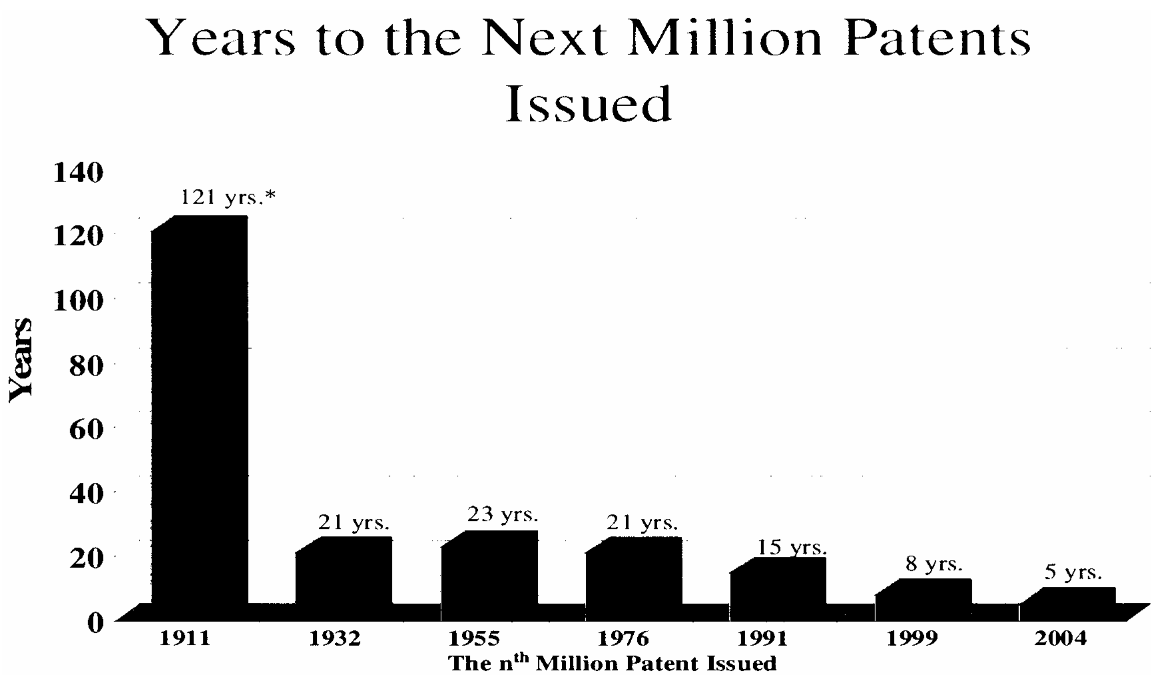

Figure 2: Trends in U.S. Patent Issues[5]

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4 Taken from PTO TODAY, The Magazine of the United States Patent & Trademark Office, February 2000, Volume 1, Number 2. Available only online at the USPTO web site at http://www.uspto.gov/ or by directly access using Adobe Acrobat reader (web address http://www.uspto.gov/web/offices/ac/ahrpa/opa/ptotoday/ptotoday02.pdf).

Furthermore, as illustrated in Figure 2, these growth trends are expected to continue for at least the next five years, as the rate of patent issues will increase from 125,000/year in 1999 to 200,000/year in 2004.

Economic Cost of Patenting

While the U.S. patenting system currently provides the best price-performance ratio of any patenting system in the world,[6] obtaining a United States patent is still a very expensive endeavor. As illustrated in Figure 3, the costs associated with U.S. patents are generally associated with preparation, filing, prosecution, issuance, and maintenance.

Referencing Figure 3, generally the patenting process begins with a U.S. corporation or other entity ⓪ that hires employees as inventors ①. These employees typically will generate one or more patent document disclosure(s) ② that describe in detail the technical aspects of the invention (specification) to a sufficient degree to permit

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5 Taken from PTO TODAY, The Magazine of the United States Patent & Trademark Office, February 2000, Volume 1, Number 2. Available only online at the USPTO web site at http://www.uspto.gov/ or by directly access using Adobe Acrobat reader (web address http://www.uspto.gov/web/offices/ac/ahrpa/opa/ptotoday/ptotoday02.pdf).

6 Statistics obtained from General Electric indicate that in 1994 the patent cost per million population was $362.10 for Europe, $243.98 for Japan, and $56.02 for the United States; with a corresponding patent cost per billion in Gross Domestic Product (GDP) of $21.33 for Europe, $13.26 for Japan, and $2.57 for the United States. Thus, both in terms of cost per population and cost per potential economic market, the United States patent outperforms the competition by a minimum factor of four.

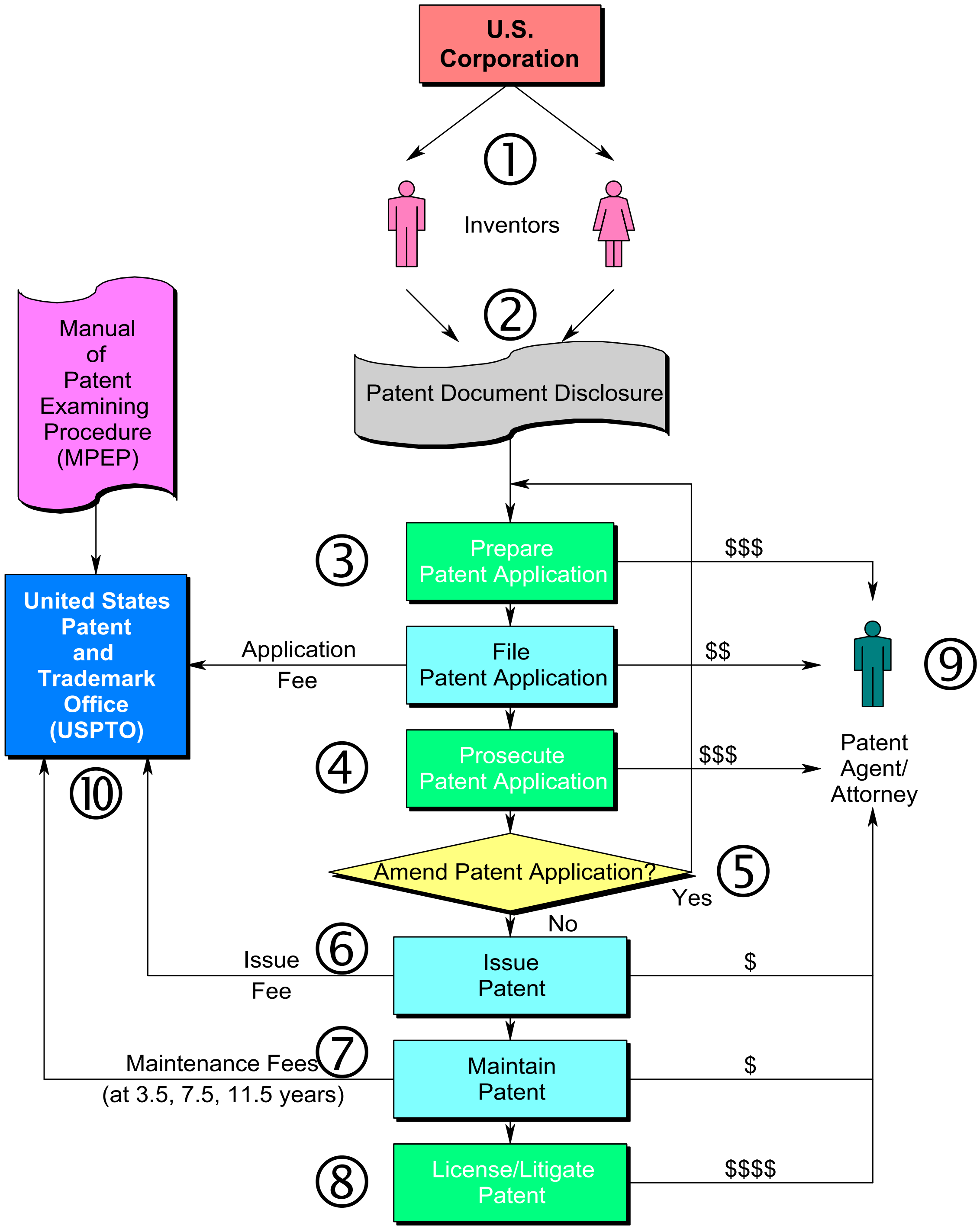

Figure 3: General Patenting Flow and Cost Structure

"one skilled in the art" to practice (make, use, etc.) the invention[7] and to some extent describe the scope of the invention coverage and what is claimed as the invention (claims).[8] Once the patent document disclosure has been generated, a patent application is prepared ③ by a patent agent/attorney or technical specialist paralegal ⑨. The patent application is then filed with the United States Patent and Trademark Office (USPTO) ⑩ by a registered patent agent/attorney.[9]

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7 35 U.S.C. § 112 ¶ 1 defines the requirements of the patent specification as follows:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8 35 U.S.C. § 112 ¶¶ 2-6 define the requirements of patent claims as follows:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
>
> A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form.
>
> Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.
>
> A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.
>
> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

9 37 CFR § 1.31. Applicants may be represented by a registered attorney or agent.

> An applicant for patent may file and prosecute his or her own case, or he or she may be represented by a registered attorney, registered agent, or other individual authorized to practice before the Patent and Trademark Office in patent cases. *See* 37 CFR §§ 10.6 and 10.9 of this subchapter. The Patent and Trademark Office cannot aid in the selection of a registered attorney or agent.

Subsequent to this, the patent application is administratively prosecuted ④ through the USPTO according to the U.S. patent statute,[10] regulations,[11] and the Manual of Patent Examining Procedure (MPEP),[12] and may be amended ⑤ as to claims or specification and resubmitted as a new patent application ③. If the invention is deemed patentable and the patent application is accepted[13] by the USPTO, the patent issues ⑥ and is at that time enforceable. Subsequent to the patent issuing, maintenance fees ⑦ must be paid to the USPTO to keep the patent in force, and there will be a variety of licensing and/or litigating costs associated with protecting and enforcing the patent right ⑧.

Potential Savings

The relative costs associated with the patenting process are indicated pictorially in Figure 3 as '$' indicators. Note that there is significant cost associated with both the preparation and prosecution of the patent application. Much of this overhead is

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10 Title 35 of the U.S. Code, often referred to as the "patent statute".

11 Title 37 of the Code of Federal Regulations, often referred to as the "patent rules".

12 The MPEP constitutes the administrative policies and procedures manual for the USPTO, and while it is not statutorily binding on applicants, may be used offensively against the USPTO in proceedings before this government agency.

13 A "Notice of Allowance" is issued to the patent applicant when the USPTO accepts one or more claims in a pending patent application. Payment of an "issue fee" is then required prior to issuance of the patent. 37 CFR § 1.311 Notice of Allowance states in part:

(a) If, on examination, it shall appear that the applicant is entitled to a patent under the law, a notice of allowance will be sent to applicant at the correspondence address indicated in 37 CFR § 1.33 calling for the payment of a specified sum constituting the issue fee (37 CFR § 1.18) which shall be paid within 3 months from the date of the mailing of the notice of allowance.

(b) An authorization to charge the issue fee (37 CFR § 1.18) to a deposit account may be filed in an individual application, either before or after mailing of the notice of allowance. Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of the associated with the patent agent/attorney in the preparation of the patent application and the iterative process necessary to actually prosecute the patent through the USPTO, although there is also significant cost associated with maintenance fees paid to the USPTO.

Table 1: Corporate Patent Issue Leaders

Rank in 1999	# Patents in 1999	Organization	Final Rank in 1998	Final # of Patents in 1998
1	2756	International Business Machines Corporation	(1)	(2,657)
2	1842	NEC Corporation	(3)	(1,627)
3	1795	Canon Kabushiki Kaisha	(2)	(1,928)
4	1545	Samsung Electronics Co., Ltd.	(6)	(1,304)
5	1409	Sony Corporation	(5)	(1,316)
6	1200	Toshiba Corporation	(8)	(1,170)
7	1193	Fujitsu Limited	(7)	(1,189)
8	1192	Motorola Inc.	(4)	(1,406)
9	1153	Lucent Technologies Inc.	(13)	(928)
10	1054	Mitsubishi Denki Kabushiki Kaisha	(11)	(1,080)

Currently, large corporations spend millions annually pursuing U.S. patent protection. As illustrated in Table 1 above,[14] the top ten patent grantees in 1999 generated well over 15,000 patents. This represents an enormous investment in capital and human resources, since the overall cost of maintenance alone for these patents is over

notice of allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance.

14 Brigid Quinn and Maria V. Hernandez, "IBM Repeats At Top Of PTO's Annual List Of 10 Organizations Receiving Most Patents", USPTO Press Release #00-03, 703-305-8341 (January 11, 2000). "For the seventh straight year, IBM received more utility patents than any other private sector organization. The ten organizations with the most patents in 1999 consist of three U.S. corporations, six Japanese corporations, and one corporation from the Republic of Korea."

$85 million.[15] This is in addition to approximately $75-$150 million in patent prosecution costs.[16] To make matters worse, these costs are capital in nature and must be amortized[17] over the life of the asset.

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15 Assuming current maintenance fees as of December 19, 1999 of $830 at 3.5 years (37 CFR § 1.20(e)), $1900 at 7.5 years (37 CFR § 1.20(f)), and $2910 at 11.5 years (37 CFR § 1.20(g)), with 15,139 patents yields a total lifetime maintenance cost of $85,383,960. Reference the USPTO current fee structure at http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm.

16 The range of patent prosecution costs for an 'average' patent ranges from approximately $5000 - $10000. *See* "Report of Economic Survey 1999", American Intellectual Property Association, 2001 Jefferson Davis Highway, Suite 203, Arlington, VA 22202 (703) 415-0780 (1999). More complex cases involving computer software or biotechnology can easily double these average fee estimates.

17 26 U.S.C. § 197. Amortization of goodwill and certain other intangibles

(a) General rule. – A taxpayer shall be entitled to an amortization deduction with respect to any amortizable section 197 intangible. The amount of such deduction shall be determined by amortizing the adjusted basis (for purposes of determining gain) of such intangible ratably over the 15-year period beginning with the month in which such intangible was acquired.

(b) No other depreciation or amortization deduction allowable. – Except as provided in subsection (a), no depreciation or amortization deduction shall be allowable with respect to any amortizable section 197 intangible.

…

(d) Section 197 intangible. – For purposes of this section –

(1) In general. – Except as otherwise provided in this section, the term "section 197 intangible" means –

(A) goodwill,

(B) going concern value,

(C) any of the following intangible items:

(i) workforce in place including its composition and terms and conditions (contractual or otherwise) of its employment,

(ii) business books and records, operating systems, or any other information base (including lists or other information with respect to current or prospective customers),

(iii) **any patent, copyright, formula, process, design, pattern, knowhow, format, or other similar item,**

(iv) any customer-based intangible,

(v) any supplier-based intangible, and

(vi) any other similar item,

(D) any license, permit, or other right granted by a governmental unit or an agency or instrumentality thereof,

(E) any covenant not to compete (or other arrangement to the extent such arrangement has substantially the same effect as a covenant not to compete) entered into in connection with an acquisition (directly or indirectly) of an interest in a trade or business or substantial portion thereof, and

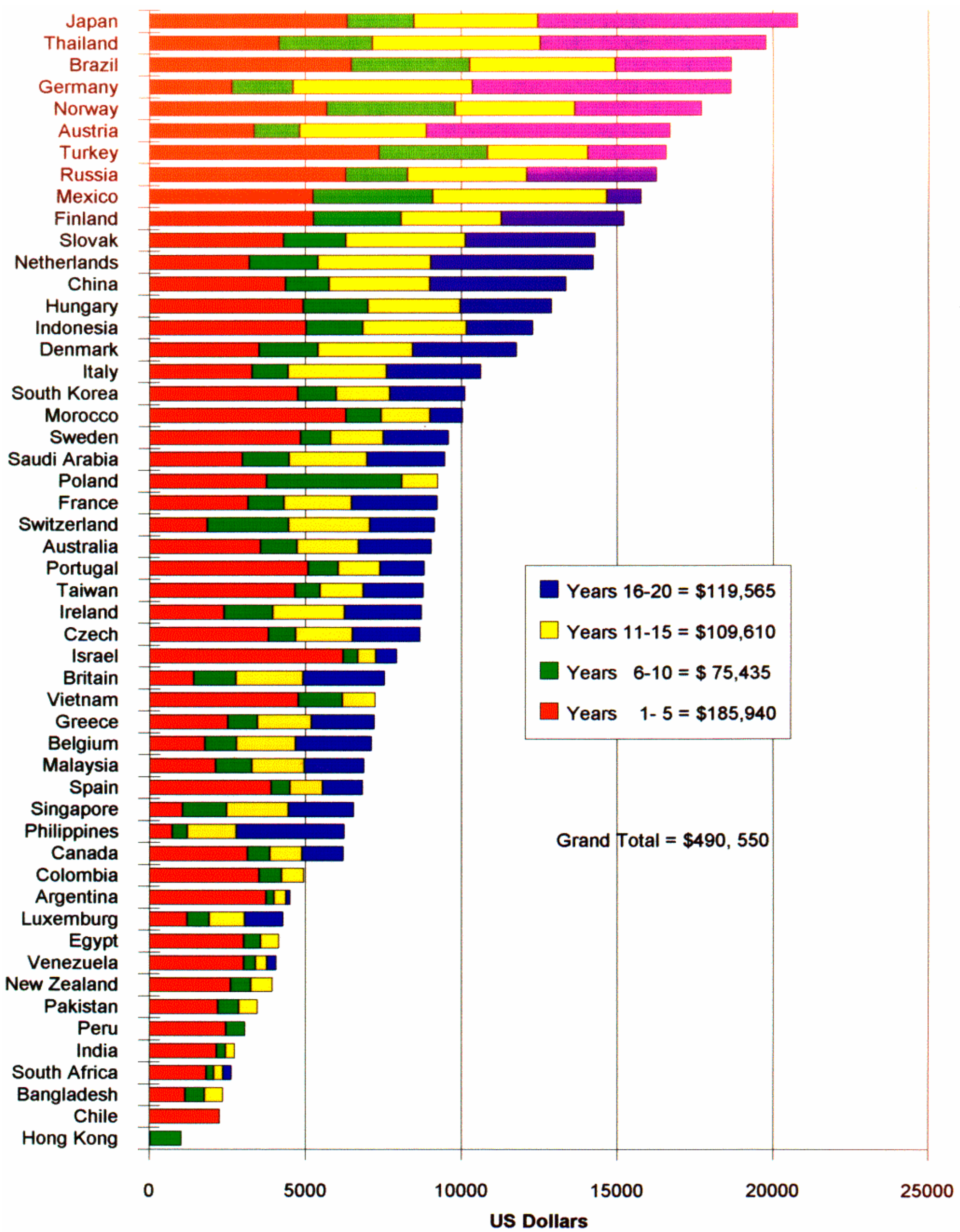

Figure 4: Worldwide Patenting Costs[18]

(F) any franchise, trademark, or trade name.

…

[18] 1996 data from Proctor & Gamble provided by their Associate General Counsel – Patents, Donald E. Hasse. Note that U.S. costs are not listed in this graph, but are estimated at $10,000 per patent.

While Table 1 provides some insight into the cost of U.S. patents, it should be recognized that this is but one part of a total overall "mesh" of patent protection that most U.S. companies having international sales pursue on a worldwide basis. As illustrated in Figure 4, the worldwide cost of patent protection for a given product can easily approach $500,000. Therefore, any methods available to reduce this burden on the cost of business will be welcome by U.S. corporations.

While it is clear that not all companies that have an international presence have this degree of exposure regarding their patent portfolios, it is clear that for many U.S. corporations there exists an unexploited opportunity to both reduce the cost of obtaining U.S. patents as well as maintaining them throughout their lives. This opportunity will be explored throughout this paper in both the tax and administrative/procedural contexts.

Summary

While the link between the present economic growth in the United States and increased in intellectual property generation may be questioned, the cost of IP generation is not in debate. Traditional methods of protecting, maintaining, and licensing IP have increased in cost significantly in the past decade. Given that the potential revenues from licensing these IP resources is staggering,[19] any techniques that reduce the overhead

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[19] *See* Fariba Rad, "The New Role of MBA in Licensing", INTELLECTUAL PROPERTY TODAY, Vol. 6. No. 2, at 16 (February, 1999). The author states that:

> "Based on a study conducted by BTG, a London based global technology transfer company, 35% of the patents of most U.S. companies are in technologies outside their primary area of focus. These technologies are the best candidates for licensing and are the treasures the companies typically ignore. The same study shows that these ignored technologies have the commercial potential of $115 billion and the companies are just beginning to notice them.

associated with this revenue generator (including taxation and processing costs) would be warmly welcomed by U.S. industry. The present paper discusses a methodology involving the use of overseas IP preparation, management, and exploitation entities to drastically reduce the cost and increase the revenue of corporations subject to U.S. income taxation.

> The companies that have not recognized these opportunities have started setting up specific divisions as profit centers to focus on intellectual property and licensing. These divisions perform as business units with revenue targets to be generated through the intellectual property assets. Companies such as IBM and Texas Instruments have been very successful in adopting aggressive licensing. IBM's revenue through technology licensing grew from $30 million in 1988 to $880 million in 1997 and Texas Instruments' licensing revenues grew from $30 million in 1986 to $700 million in 1995."

IP OWNERSHIP CLASSIFICATIONS

Of critical importance in the implementation of the proposed cost savings methodology is the **exploitation of differentials in legal treatment for patent ownership in the United States versus other countries**.

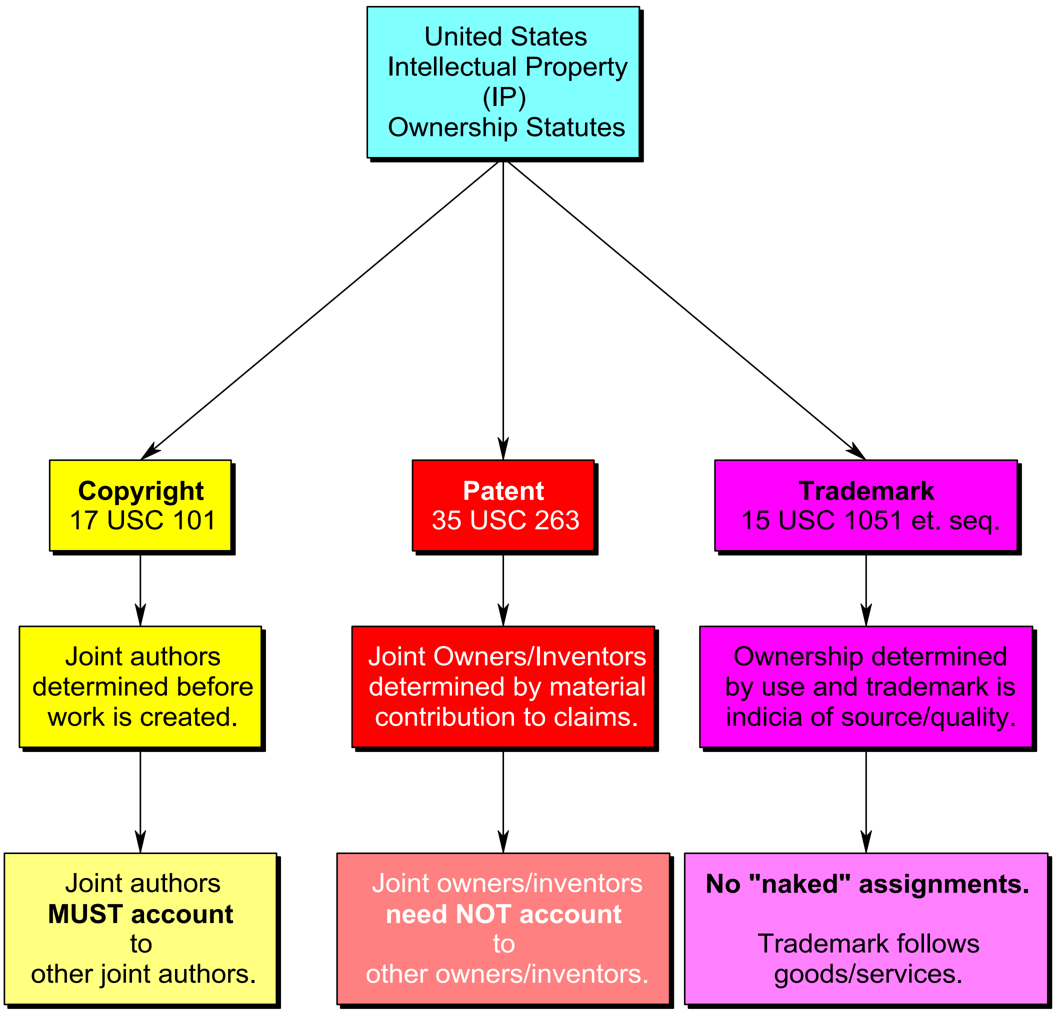

Figure 5: U.S. IP Ownership Characteristics

As illustrated in Figure 5, the United States treats ownership of various classes of intangibles (patents, copyrights, trademarks) differently. Thus, while in general all other personal and real property is subject to near identical treatment as far as issues of partitioning and contribution are concerned, there exists a different scheme for intangibles in the United States. These differences will now be discussed as they relate to copyrights, patents, and trademarks.

Copyrights

Referencing Figure 5, the U.S. Copyright statute[20] generally treats a "joint work" as one "prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole."[21] Courts have ruled that each part of the work contributed must be independently copyrightable and there must generally be a written agreement between the parties **before** the work is created to establish joint authorship.[22] Thus, legal ownership (in a tax sense) of a joint work must be established before the work is fixed in tangible form.[23]

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20 Title 17 of the U.S.C.

21 17 U.S.C. § 101 states in part:

> "A 'joint work' is a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole."

22 *See* James W. Morando and Stephanie P. Skaff, "Copyright Law – Joint Authorship", THE NATIONAL LAW JOURNAL, page B7 (Monday, April 3, 2000). The authors state in part:

> "The Copyright Act defines a joint work as 'a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole.' 17 U.S.C. § 101. Authors of a joint work are co-owners of the work and hold rights similar to tenants-in-common. Each author ahs an undivided right to exploit the work, may grant nonexclusive licenses without obtaining consent from the other co-authors(s) and may assign his or her rights in the work to a third party. Each one must also account to all other co-authors for any profits earned from exploiting the work; such profits are divided equally among co-authors."

23 17 U.S.C. § 101 defines the point of "creation" of a copyrighted work as follows:

> A work is "created" when it is fixed in a copy or phonorecord for the first time; where a work is prepared over a period of time, the portion of it that has been fixed at any particular time constitutes the work as of that time, and where the work has been prepared in different versions, each version constitutes a separate work.

Patents

Patents are a unique form of intellectual property in the United States in that it is possible to have jointly non-accountable ownership of the patent right.[24] Since joint owners may "make, use, offer to sell, or sell the patented invention within the United States, or import the patented invention into the United States, **without the consent of and without accounting to the other owners**"[25] the issue of joint ownership can be used to advantage in the international taxation context, as it permits bifurcation of the patent right without need for accounting of the result in terms of tax consequences to either inventor.

This unique form of co-tenancy is illustrated in Figure 6. Here it is seen that co-inventors ① may prior to their inventive efforts assign their patent rights to a corporation ⓪ or other entity under U.S. law. This assignment may be done regarding both patents and patent applications.[26]

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[24] 35 U.S.C. § 262. Joint owners

In the absence of any agreement to the contrary, each of the joint owners of a patent may make, use, offer to sell, or sell the patented invention within the United States, or import the patented invention into the United States, **without the consent of and without accounting to the other owners**.

[25] *Id.*

[26] 35 U.S.C. § 261. Ownership; assignment

Subject to the provisions of this title, patents shall have the attributes of personal property.

Applications for patent, patents, or any interest therein, shall be assignable in law by an instrument in writing.

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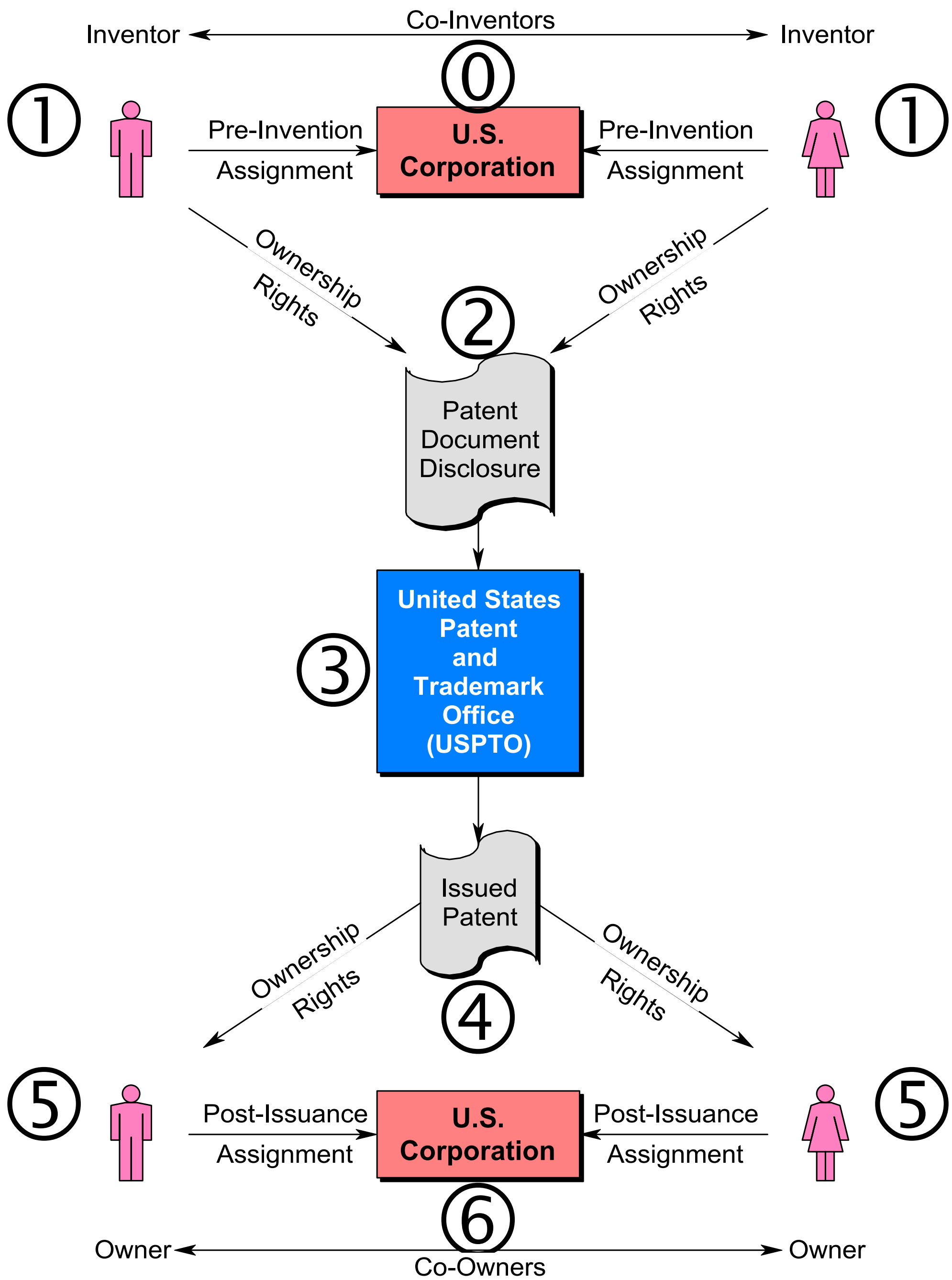

Figure 6: Distinction Between Patent Inventorship and Ownership

Note, however, that any patent application filed must be done on behalf of the true inventors, irrespective of any assignments made.[27] Once the patent application ② is filed

[27] 37 CFR § 1.46 Assigned inventions and patents.

with the USPTO ③ and issues as a patent ④, any co-inventor is also a co-owner ⑤ unless he/she has previously or contemporaneously assigned away their rights in the patent to a corporation or other assignee ⑥.

Note that this scheme significantly differs from other countries, which generally employ a tenant-in-common approach to patents and provide for accounting between the parties when royalties are received on a patent or patent-related right.[28] This generally dictates a prior agreement between the parties as to how the proceeds of the patent will be distributed.

Trademarks

Trademarks and service marks indicate the source and/or quality of goods and rights associated with them are generally obtained on **use** of the mark. Given the restrictions that no "naked" assignments of a mark are permitted,[29] this places a

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In case the whole or a part interest in the invention or in the patent to be issued is assigned, the application must still be made or authorized to be made, and an oath or declaration signed, by the inventor or one of the persons mentioned in 37 CFR §§ 1.42, 1.43, or 1.47. However, the patent may be issued to the assignee or jointly to the inventor and the assignee as provided in § 3.81.

[28] *See* Kenichi Nakano, "Patent Rights of Co-Owners in Japan", LES NOUVELLES (Journal of the Licensing Executives Society), Volume 35, No. 1, page 48 (March 2000).

[29] *Van Dyne-Crotty, Inc. v. Wear-Guard Corp.*, 926 F.2d 1156, 17 U.S.P.Q.2d 1866 (Fed.Cir. 1991); *Stock Pot Restaurant, Inc. v. Stockpot, Inc.*, 737 F.2d 1576, 222 U.S.P.Q. 665 (Fed.Cir. 1984); *Visa, U.S.A., Inc. v. Birmingham Trust Nat. Bank,* 696 F.2d 1371, 216 U.S.P.Q. 649 (Fed.Cir. 1982); *Marcon, Ltd. v. Helena Rubenstein, Inc.*, 694 F.2d 953, 217 U.S.P.Q. 310 (4th Cir.(Va.) 1982); *Sterling Brewers, Inc. v. Schenley Industries, Inc.,* 58 C.C.P.A. 1172, 441 F.2d 675, 169 U.S.P.Q. 590 (Cust. & Pat.App. 1971); *PepsiCo, Inc. v. Grapette Co*., 416 F.2d 285, 163 U.S.P.Q. 193 (8th Cir.(Ark.) 1969); *Hy-Cross Hatchery, Inc. v. Osborne,* 49 C.C.P.A. 1163, 303 F.2d 947, 133 U.S.P.Q. 687 (Cust. & Pat.App. 1962); *Dial-A-Mattress Operating Corp. v. Mattress Madness*, *Inc.,* 841 F.Supp. 1339, 33 U.S.P.Q.2d 1961 (E.D.N.Y. 1994); *J. Atkins Holdings Ltd. v. English Discounts, Inc.,* 729 F.Supp. 945, 14 U.S.P.Q.2d 1301 (S.D.N.Y. 1990); *Liquid Glass Enterprises, Inc. v. Liquid*

significant restriction on both the transferability of this IP right as well as the limitations on licensing this right to third party manufacturers.

Summary

From the above discussion, it is clear that there is a material difference between the treatment of joint owners of IP intangibles within the context of U.S. law. In general, it has been shown that patents are unique in that other forms of IP fix the legal ownership right before property is actually created (copyrights) or as the property is created through its use (trademarks). Patents, however, fix ownership in the intangible based on the actual or constructive reduction to practice in terms of how the invention is claimed in the patent application that later issues as a U.S. patent. While trade secret protection[30] may exist before the patent application actually issues as a U.S. patent, the only practical method of protecting many types of IP considered the "core resource" of many U.S. corporations dictates that patent protection be the primary protection method.

Glass Industries of Canada, Ltd., 1989 WL 222653, 14 U.S.P.Q.2d 1976 (E.D.Mich. 1989); *Bambu Sales, Inc. v. Sultana Crackers, Inc*., 683 F.Supp. 899, 7 U.S.P.Q.2d 1177 (E.D.N.Y. 1988); *Raufast S.A. v. Kicker's Pizzazz, Ltd*., 1980 WL 30295, 208 U.S.P.Q. 699 (E.D.N.Y. 1980); *General Mills, Inc. v. Frito-Lay, Inc.,* 1972 WL 17202, 176 U.S.P.Q. 148 (Trademark Tr. & App. Bd. 1972); *Schenley Industries, Inc. v. Sterling Brewers, Inc.,* 1968 WL 8141, 157 U.S.P.Q. 593 (Trademark Tr. & App. Bd. 1968); *Blanchard Importing & Distributing Co. Inc. v. David Sherman Corporation,* 1965 WL 7802, 146 U.S.P.Q. 139 (Trademark Tr. & App. Bd. 1965); *Elderkin v. Monn*, 248 Iowa 611, 80 N.W.2d 331, 112 U.S.P.Q. 303 (Iowa 1957).

30 The Economic Espionage Act of 1996, 18 U.S.C. § 1831-39 under federal law and the Uniform Trade Secrets Act (USTA) under state law generally cover trade secret protection in the United States. *See* Lawrence B. Ebert, "The Economic Espionage Act: A Very Mixed Blessing", INTELLECTUAL PROPERTY TODAY, Vol. 5. No. 2, at 8 (February, 1998); James D. Veltrop, "Trade Secret Misappropriation: A Federal Crime", INTELLECTUAL PROPERTY TODAY, Vol. 4. No. 6, at 6 (June, 1997); Stacey A. Barlow and Stasia L. Ogden, "After the Economic Espionage Act", INTELLECTUAL PROPERTY TODAY, Vol. 4. No. 3, at 5 (March, 1997).

INVENTORSHIP

Introduction

This section will discuss the important concept of **inventorship** as it relates to U.S. patents and patent applications. Since legal ownership of U.S. patents starts with the premise that the inventor(s) are the legal owners, the definition of inventorship has significant tax importance, since "tax" ownership is determined by "legal" ownership when an intangible is legally protected intangible property[31] such as patents, copyrights, and trademarks. This is in contrast to intangible property not legally protected, in which the primary "developer" is the owner for "tax" purposes.[32] In both cases, Treasury Regulations permit allocations in ownership based on assistance provided to the owner in

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[31] Treas. Reg. § 1.482-4 states in part:

(f) Special rules for transfers of intangible property

(3) Ownership of Intangible Property

(ii) Identification of owner—

(A) Legally protected intangible property. The legal owner of a right to exploit an intangible ordinarily will be considered the owner for purposes of this section. Legal ownership may be acquired by operation of law or by contract under which the legal owner transfers all or part of its rights to another. Further, the district director may impute an agreement to convey legal ownership if the conduct of the controlled taxpayers indicates the existence in substance of such an agreement. *See* § 1.482-1(d)(3)(ii)(B) (Identifying contractual terms).

[32] Treas. Reg. § 1.482-4 states in part:

(f) Special rules for transfers of intangible property

(3) Ownership of Intangible Property

(ii) Identification of owner—

(B) Intangible property that is not legally protected. In the case of intangible property that is not legally protected, the developer of the intangible will be considered the owner. Except as provided in § 1.482-7T, if two or more controlled taxpayers jointly develop an intangible, for purposes of section 482, only one of the controlled taxpayers will be regarded as the developer and owner of the intangible, and the other participating members will be regarded as assisters. Ordinarily, the developer is the controlled taxpayer that bore the largest portion of the direct and indirect costs of developing the intangible, including the provision, without adequate compensation, of property or services likely to contribute substantially to developing the intangible. A controlled taxpayer will be presumed not to have borne the costs of development if, pursuant to an agreement entered into before the success of the project is known, another person is obligated to reimburse the controlled taxpayer for its costs. If it cannot be determined which controlled taxpayer bore the largest portion of the costs of development, all other facts and circumstances will be taken into consideration, including the location of the development activities, the capability of each the development of the intangible.[33] While these allocations must "reflect an arm's length consideration for assistance provided to the owner of an intangible in connection with the development or enhancement of the intangible"[34] and may not "include expenditures of a routine nature that an unrelated party dealing at arm's length would be expected to incur under circumstances similar to those of the controlled taxpayer",[35] this nonetheless presents a tax opportunity to shift a great deal of the procedural and administrative expense of patent prosecution from a U.S.-based patent preparation/prosecution team to a foreign-based "patent preparation/prosecution engine" where labor costs are significantly lower than comparable U.S.-based law firms.

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controlled taxpayer to carry on the project independently, the extent to which each controlled taxpayer controls the project, and the conduct of the controlled taxpayers.

[33] Treas. Reg. § 1.482-4 states in part:

(f) Special rules for transfers of intangible property

(3) Ownership of Intangible Property

(iii) Allocations with respect to assistance provided to the owner. Allocations may be made to reflect an arm's length consideration for assistance provided to the owner of an intangible in connection with the development or enhancement of the intangible. Such assistance may include loans, services, or the use of tangible or intangible property. Assistance does not, however, include expenditures of a routine nature that an unrelated party dealing at arm's length would be expected to incur under circumstances similar to those of the controlled taxpayer. The amount of any allocation required with respect to that assistance must be determined in accordance with the applicable rules under section 482.

[34] *Id.*

[35] *Id.*

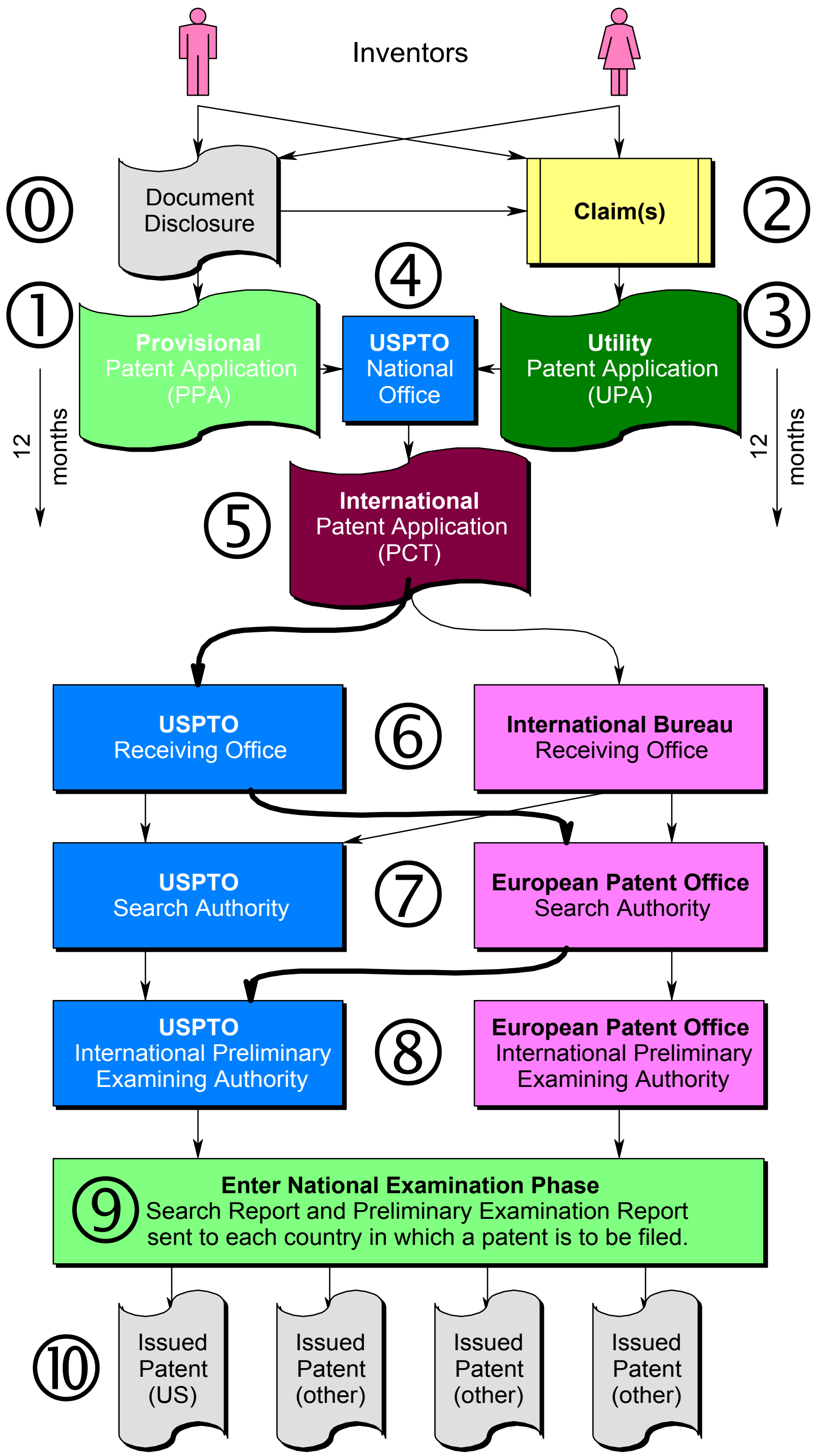

Figure 7: Generalized Patent Application Flow

Patent Application Flow

Before discussing the details of inventorship it is useful to review the administrative process flow of a patent application from concept to final issue as it relates to a typical U.S. corporation and the USPTO. Figure 7 details this sequence and will now be discussed in detail.

Referencing Figure 7, the patenting process generally begins with one or more inventors generating a document disclosure ⓪ that describes the invention in either general or specific terms. This document disclosure may form the basis of a Provisional Patent Application (PPA) ① and/or a Utility Patent Application (UPA).[36] ② The essential difference between these two types of patent applications is that a Utility Patent Application requires that one or more claims ③ be included in the specification.[37] Either a PPA or a UPA is submitted to the USPTO ④ and afforded a priority date according to the date of mailing or the date of receipt, depending on the method of transmittal that is used.[38]

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[36] A Utility Patent Application (UPA) is often referred to as a Non-Provisional Patent Application or a Regular Utility Patent Application.

[37] Technically, in the initial filing of either a Provisional or Non-Provisional Patent Application, the initial claims are considered part of the original specification.

[38] 37 CFR 1.10 Filing of papers and fees by "Express Mail."

(a) Any correspondence received by the Patent and Trademark Office (Office) that was delivered by the "Express Mail Post Office to Addressee" service of the United States Postal Service (USPS) will be considered filed in the Office on the date of deposit with the USPS. The date of deposit with the USPS is shown by the "date-in" on the "Express Mail" mailing label or other official USPS notation. If the USPS deposit date cannot be determined, the correspondence will be accorded the Office receipt date as the filing date. See § 1.6(a).

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A Provisional Patent Application ① is also distinctly different from a Utility Patent Application ② in that it is **not** examined by the USPTO.④ It serves merely as a "placeholder" with respect to the information and invention that it discloses. It may, however, be used as a priority date to toll the 1-year clock that starts on commercialization or disclosure of an invention by an inventor in the United States,[39] and as such may be used to indicate a priority date for a subsequent Utility Patent Application.④ It may also be used as a priority date in a subsequently filed international patent application under the Patent Cooperation Treaty (PCT).⑤ In both cases, the subsequent UPA or PCT must be filed within 12 months of the filing of the PPA in order to take advantage of the PPA priority date.

In many circumstances U.S. corporations will desire and file for patent protection only in the United States. As stated previously, the markets in the United States are rich and the patent cost is low for the economic benefit derived from this procedure as compared to other countries. However, with the globalization of the marketplace, multi-national companies are increasingly filing for patent protection in both the United States and foreign countries. The most efficient method to achieve this result is to file an

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[39] 35 U.S.C. § 119. Benefit of earlier filing date; right of priority

(a) An application for patent for an invention filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same invention in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for patent for an invention which had been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing.

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international application under the Patent Cooperation Treaty (PCT).⑤ [40] This patent application may be derived from either a prior PPA or UPA filed in the United States, or may be a wholly new patent application. In the PCT procedure, the PCT patent application is filed in a receiving office (RO)⑥ which may be the USPTO or another international bureau that subscribes to the PCT. The receiving office ⑥ will then direct that a patent search ⑦ be done at either the USPTO or the European Patent Office, as designated by the patent applicant. Once this process is complete a demand for examination will be made by the patent applicant and the search report ⑦ will be used by either the USPTO or the European Patent Office to make a preliminary patentability report.⑧ Once this report is complete, the various national stages of examination take place,⑨ in which the search report ⑦ and preliminary patentability report ⑧ are sent to the various nationalities that the patent applicant has designated as his/her targets for patent protection.⑨ The result of this is a number of individually issued patents from a variety of PCT subscriber countries.⑩

While there are a large number of potential paths through the PCT patent application process, the most common path that large U.S. corporations follow is indicates by the bold lines in Figure 7. Note that this common flow often includes the following sequence of events:

- Filing one or more PPAs to secure a priority date for future UPA or PCT applications. This process may span 1-11 months.

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[40] *See* Craig P. Opperman and Richard M. Goldman, "Using the PCT Process to Your Client's Advantage", INTELLECTUAL PROPERTY TODAY, Vol. 6. No. 12, at 10 (December 1999).

- Filing a UPA within 12 months of the PPA filing to secure a U.S. patent with and updated specification and claims that reflects improvements in the invention during the prior 12 months of development.

- Filing a PCT patent application citing the prior PPA and UPA for their priority dates within 12 months of the initial PPA application. This filing permits both the PPA and UPA priority dates to be utilized in the final PCT filing.

- Securing patent protection in the US and foreign countries as needed using the economies of scale possible with the PCT filing.[41]

From the above it has been evident to patent practitioners that this methodology provides a variety of advantages:

- Multiple PPAs can be filed at minimal cost[42] to secure priority dates.

- The PPA priority dates can be effectively used to prosecute both U.S. and international patent applications.

- Since the PPA process is inexpensive, it promotes disclosures and permits inventions that do not work or are abandoned to be pursued at an early stage with little economic penalty if they eventually turn out to be economic "duds".

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[41] The cost to designate each country in a PCT filing is $110, and is capped at 8 countries. Therefore, it costs no more to designate 100 target countries in a PCT filing than it does to designate 8 target countries. *See also* Carl Oppedahl, "Filing a PCT Application May Lead to a Faster, Cheaper US Patent", INTELLECTUAL PROPERTY TODAY, Vol. 6. No. 6, at 6 (June, 1999).

[42] Provisional Patent Application filing fees are currently $150 and half this amount for small entities. *See generally*, 37 CFR § 1.16.

- The formalities associated with PPAs are minimal in comparison to formal UPAs.[43] This has been done on purpose by Congress to promote disclosures by individual inventors, but has had the side benefit of providing additional incentive for large U.S. corporations and other entities to "file early, file often".

- PPAs may be converted to UPAs and visa versa if claims are included within the PPA.[44]

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[43] 37 CFR § 1.53 Application number, filing date, and completion of application.

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(c) Application filing requirements - Provisional application. The filing date of a provisional application is the date on which a specification as prescribed by the first paragraph of 35 U.S.C. § 112, and any drawing required by § 1.81(a) are filed in the Patent and Trademark Office. No amendment, other than to make the provisional application comply with the patent statute and all applicable regulations, may be made to the provisional application after the filing date of the provisional application.

(1) A provisional application must also include the cover sheet required by § 1.51(c)(1) or a cover letter identifying the application as a provisional application. Otherwise, the application will be treated as an application filed under paragraph (b) of this section.

(2) An application for patent filed under paragraph (b) of this section may be converted to a provisional application and be accorded the original filing date of the application filed under paragraph (b) of this section,

(i) Provided that a petition requesting the conversion, with the fee set forth in § 1.17(q), is filed prior to the earliest of:

(A) Abandonment of the application filed under paragraph (b) of this section;

(B) Payment of the issue fee on the application filed under paragraph (b) of this section;

(C) Expiration of twelve months after the filing date of the application filed under paragraph (b) of this section; or

(D) The filing of a request for a statutory invention registration under § 1.293 in the application filed under paragraph (b) of this section.

(ii) The grant of any such petition will not entitle applicant to a refund of the fees which were properly paid in the application filed under paragraph (b) of this section.

(3) A provisional application is not entitled to the right of priority under 35 U.S.C. § 119 or 365(a) or § 1.55, or to the benefit of an earlier filing date under 35 U.S.C. §§ 120, 121 or 365(c) or § 1.78 of any other application. No claim for priority under § 1.78(a)(3) may be made in a design application based on a provisional application. No request under § 1.293 for a statutory invention registration may be filed in a provisional application. The requirements of §§ 1.821 through 1.825 regarding application disclosures containing nucleotide and/or amino acid sequences are not mandatory for provisional applications.

[44] See generally, 37 CFR 1.53.

However, it should be noted that in the tax context the use of the PPA is even more important, **as it secures the legal rights required by Treasury Regulations in the inventors who file at the PPA filing date**. This has the advantage of transferring the IP when its value is highly speculative. As such, the assignment or sale of rights in a PPA would be very much below the market value for the subsequent UPA or PCT application, as much of the search results and other information that would determine the true scope of the allowed claims is unknown or at best speculative. Prudent tax planners will seize this opportunity in conjunction with other techniques described later to bifurcate ownership of patent rights before the PPA is filed, thus creating multiple owners where there were originally just those from the parent U.S. corporation.

Applicant vs. Inventor

Patent Applicants

In the United States, patents are applied for in the name or names of the **actual** inventor or inventors.[45] This contrasts with the practice in many other countries that

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[45] 37 CFR § 1.41 Applicant for patent.

(a) A patent is applied for in the name or names of the actual inventor or inventors.

(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(i) is filed supplying or changing the name or names of the inventor or inventors.

(2) The inventorship of a provisional application is that inventorship set forth in the cover sheet as prescribed by §1.51(c)(1). If a cover sheet as prescribed by § 1.51(c)(1) is not filed during the pendency of a provisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(c), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(q) is filed supplying or changing the name or names of the inventor or inventors.

permit the name of business entities (corporations, partnerships, etc.) to be named as the applicants for patent.[46] This requirement flows from the fact that in the United States, the human inventors are initially the owners of the patent rights both before and after the patent issues, unless an assignment to the contrary has been made and filed in the USPTO.[47]

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(3) In a nonprovisional application filed without an oath or declaration as prescribed by § 1.63 or a provisional application filed without a cover sheet as prescribed by § 1.51(c)(1), the name or names of person or persons believed to be the actual inventor or inventors should be provided for identification purposes when the application papers pursuant to § 1.53(b) or (c) are filed. If no name of a person believed to be an actual inventor is so provided, the application should include an applicant identifier consisting of alphanumeric characters.

(b) Unless the contrary is indicated the word "applicant" when used in these sections refers to the inventor or joint inventors who are applying for a patent, or to the person mentioned in §§ 1.42, 1.43, or § 1.47 who is applying for a patent in place of the inventor.

(c) Any person authorized by the applicant may file an application for patent on behalf of the inventor or inventors, but an oath or declaration for the application (§ 1.63) can only be made in accordance with § 1.64.

(d) A showing may be required from the person filing the application that the filing was authorized where such authorization comes into question.

46 For example, patent applications filed under provisions of the Patent Cooperation Treaty (PCT). *See generally*, International Bureau of the World Intellectual Property Organization, Materials on the Patent Cooperation Treaty (PCT), http://www.wipo.int/eng/main.htm (1999).

47 35 U.S.C. § 261. Ownership; assignment

Subject to the provisions of this title, patents shall have the attributes of personal property.

Applications for patent, patents, or any interest therein, shall be assignable in law by an instrument in writing. The applicant, patentee, or his assigns or legal representatives may in like manner grant and convey an exclusive right under his application for patent, or patents, to the whole or any specified part of the United States.

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An assignment, grant or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.

Joint Inventors

Joint inventors (co-inventors) must apply for a patent jointly,[48] each making the required oath or declaration[49] unless certain conditions are met. Inventors are considered "joint inventors" even though

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[48] 37 CFR § 1.45 Joint inventors.

(a) Joint inventors must apply for a patent jointly and each must make the required oath or declaration: neither of them alone, nor less than the entire number, can apply for a patent for an invention invented by them jointly, except as provided in § 1.47.

(b) Inventors may apply for a patent jointly even though

  (1) They did not physically work together or at the same time,

  (2) Each inventor did not make the same type or amount of contribution, or

  (3) Each inventor did not make a contribution to the subject matter of every claim of the application.

(c) If multiple inventors are named in a nonprovisional application, each named inventor must have made a contribution, individually or jointly, to the subject matter of at least one claim of the application and the application will be considered to be a joint application under 35 U.S.C. § 116. If multiple inventors are named in a provisional application, each named inventor must have made a contribution, individually or jointly, to the subject matter disclosed in the provisional application and the provisional application will be considered to be a joint application under 35 U.S.C. § 116.

[49] 37 CFR § 1.63 Oath or declaration.

(a) An oath or declaration filed under § 1.51(b)(2) as a part of an application must:

  (1) Be executed in accordance with either § 1.66 or § 1.68;

  (2) Identify the specification to which it is directed;

  (3) Identify each inventor by: full name, including the family name, and at least one given name without abbreviation together with any other given name or initial, and the residence, post office address and country of citizenship of each inventor; and

  (4) State whether the inventor is a sole or joint inventor of the invention claimed.

(b) In addition to meeting the requirements of paragraph (a), the oath or declaration must state that the person making the oath or declaration:

  (1) Has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration;

  (2) Believes the named inventor or inventors to be the original and first inventor or inventors of the subject matter which is claimed and for which a patent is sought; and

  (3) Acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in § 1.56.

(c) In addition to meeting the requirements of paragraphs (a) and (b) of this section, the oath or declaration in any application in which a claim for foreign priority is made pursuant to § 1.55 must identify the foreign application for patent or inventor's certificate on which priority is claimed, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing.

(d)

- They did not physically work together or at the same time,

- Each inventor did not make the same type or amount of contribution, or

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(1) A newly executed oath or declaration is not required under § 1.51(b)(2) and § 1.53(f) in a continuation or divisional application, provided that:

(i) The prior nonprovisional application contained an oath or declaration as prescribed by paragraphs (a) through (c) of this section;

(ii) The continuation or divisional application was filed by all or by fewer than all of the inventors named in the prior application;

(iii) The specification and drawings filed in the continuation or divisional application contain no matter that would have been new matter in the prior application; and

(iv) A copy of the executed oath or declaration filed in the prior application, showing the signature or an indication thereon that it was signed, is submitted for the continuation or divisional application.

(2) The copy of the executed oath or declaration submitted under this paragraph for a continuation or divisional application must be accompanied by a statement requesting the deletion of the name or names of the person or persons who are not inventors in the continuation or divisional application.

(3) Where the executed oath or declaration of which a copy is submitted for a continuation or divisional application was originally filed in a prior application accorded status under § 1.47, the copy of the executed oath or declaration for such prior application must be accompanied by:

(i) A copy of the decision granting a petition to accord § 1.47 status to the prior application, unless all inventors or legal representatives have filed an oath or declaration to join in an application accorded status under § 1.47 of which the continuation or divisional application claims a benefit under 35 U.S.C. §§ 120, 121, or 365(c); and

(ii) If one or more inventor(s) or legal representative(s) who refused to join in the prior application or could not be found or reached has subsequently joined in the prior application or another application of which the continuation or divisional application claims a benefit under 35 U.S.C. §§ 120, 121, or 365(c), a copy of the subsequently executed oath(s) or declaration(s) filed by the inventor or legal representative to join in the application.

(4) Where the power of attorney (or authorization of agent) or correspondence address was changed during the prosecution of the prior application, the change in power of attorney (or authorization of agent) or correspondence address must be identified in the continuation or divisional application. Otherwise, the Office may not recognize in the continuation or divisional application the change of power of attorney (or authorization of agent) or correspondence address during the prosecution of the prior application.

(5) A newly executed oath or declaration must be filed in a continuation or divisional application naming an inventor not named in the prior application.

(e) A newly executed oath or declaration must be filed in any continuation-in-part application, which application may name all, more, or fewer than all of the inventors named in the prior application. The oath or declaration in any continuation-in-part application must also state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

- Each inventor did not make a contribution to the subject matter of every claim of the application.[50]

In the case of a Provisional Patent Application, each inventor need only have made a contribution to the subject matter disclosed in the invention,[51] since Provisional Patent Applications generally are not required to have claims.[52]

Note that the courts have been quite stringent in their requirement that **all** potential inventors be incorporated and specified in the patent application. Thus, while it is generally permitted to correct misnaming as an inventor an actual non-inventor ("misjoinder") whether this occurred through an honest mistake or deception,[53]

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50 *See* MPEP § 605.07 – Joint Inventors, and 36 U.S.C. § 116.

51 MPEP § 605.07 – Joint Inventors.

Since provisional applications may be filed without claims, 37 CFR § 1.45(c) states that each inventor named in a joint provisional application must have made a contribution to the subject matter disclosed in the application:

37 CFR § 1.45 Joint inventors.

(a) Joint inventors must apply for a patent jointly and each must make the required oath or declaration: neither of them alone, nor less than the entire number, can apply for a patent for an invention invented by them jointly, except as provided in § 1.47.

(b) Inventors may apply for a patent jointly even though

(1) They did not physically work together or at the same time,

(2) Each inventor did not make the same type or amount of contribution, or

(3) Each inventor did not make a contribution to the subject matter of every claim of the application.

(c) If multiple inventors are named in a nonprovisional application, each named inventor must have made a contribution, individually or jointly, to the subject matter of at least one claim of the application and the application will be considered to be a joint application under 35 U.S.C. § 116. If multiple inventors are named in a provisional application, each named inventor must have made a contribution, individually or jointly, to the subject matter disclosed in the provisional application and the provisional application will be considered to be a joint application under 35 U.S.C. § 116.

52 *See generally*, 37 CFR 1.51.

53 If by deception, however, an inequitable conduct finding might result. *See* John L. Rogitz, "CAFC Happenings", INTELLECTUAL PROPERTY TODAY, Vol. 4, No. 9, page 31 (September 1997); Dale L. Carlson and James R. Barney, "Recent Developments In Correcting

correction of a failure to include all true inventors ("nonjoinder") can be done only if the nonjoined inventor is free of deceptive intent.[54] The courts have been consistent with this position, and have upheld patentee positions in which 16 or more inventors have been named in a patent application.[55]

Requirements for Inventorship

As illustrated in Figure 8, the definitional rules regarding qualifications of inventors are relatively straightforward and hinted at in the previous section. Basically, a patent inventor is **any** individual that contributes to **one or more claims** of the disclosed invention. **A patent co-inventor becomes a co-owner by virtue of this contribution to one or more claims requirement**.[56] As such, **without some written agreement to the**

Inventorship: *Stark, Ewen* and the New Final Rule Changes", INTELLECTUAL PROPERTY TODAY, Vol. 4. No. 11, at 9 (November, 1997).

54 *Stark v. Advanced Magnetics, Inc*., 119 F.3d 1551, 43 U.S.P.Q.2d 1321 (Fed. Cir. 1997)(term "error" in 35 U.S.C. § 256, which permits correction of named inventor whenever "through error a person is named in an issued patent as the inventor, or through error an inventor is not named in an issued patent and such error arose without any deceptive intention on his part," must be construed to extend to mistakes, whether deceptive and "dishonest" or merely uninformed and "honest"; Section 256 therefore allows deletion of misjoined inventor whether misjoinder occurred by deception or by innocent mistake, but allows addition of actual unnamed inventor only if that inventor is free of deceptive intent.).

55 *See Canon Computer Systems, Inc. v. Nu-Kote International, Inc*., 134 F.3d 1085, 45 U.S.P.Q.2d 1355 (Fed. Cir. 1998) (presence of 16 named inventors on patent in suit does not place burden on plaintiff to establish inventive contribution of each named inventor, since patent is presumed valid at every stage of litigation, since ultimately, at trial on merits, plaintiff need only submit sufficient evidence to rebut any proof of invalidity offered by defendant, and since very existence of patent thus satisfies patentee's burden on validity issue where challenger fails to identify any persuasive evidence of invalidity; sheer number of named inventors is not evidence of patent's invalidity, since improper inventorship is not presumed merely from large number of individual joint inventors, in that inventors named in issued patent are presumed to be correct).

56 *Ethicon Endo-Surgery Inc. v. United States Surgical Corp*., 149 F.3d 1309, 47 U.S.P.Q.2d 1272 (Fed. Cir. 1998) (each co-inventor of jointly-invented patent presumptively owns pro rata undivided interest in entire patent, regardless of their respective inventive contributions,

contrary, co-inventors who have contributed to any claim(s) within a given patent application are deemed co-owners of the patent and are free to commercialize the patent without accounting to other co-owners/inventors.[57] Note that a co-inventor is deemed a co-owner of the **entire** patent, not just the portion of the patent that relates to the claims to which he/she made a contribution.[58] This issue of co-inventorship is

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since 35 U.S.C. § 116, as amended in 1984, states that joint inventor need not make contribution "to the subject matter of every claim of the patent," since 35 U.S.C. § 261 provides that "patents shall have the attributes of personal property," which suggests that property rights, including ownership, attach to patents as whole rather than to individual claims, and since 35 U.S.C. § 262 speaks of "joint owners of patent" rather than joint owners of claim). *See also* Dale L. Carlson and James R. Barney, "Who Owns What's In Your Patent? Property Rights Among Joint Inventors After *Ethicon v. U.S. Surgical*", INTELLECTUAL PROPERTY TODAY, Vol. 5. No. 6, at 8 (June, 1998).

57 *Ethicon Endo-Surgery Inc. v. United States Surgical Corp*., 149 F.3d 1309, 47 U.S.P.Q.2d 1272 (Fed. Cir. 1998) (pursuant to 35 U.S.C. § 116, where inventors choose to cooperate in inventive process, their joint inventions may become joint property without some express agreement to contrary; in present case, defendant intervenor who has shown co-inventorship of two out of 55 claims of patent in suit had power to license rights in entire patent to co-defendant, since named inventor must effectively share with intervenor ownership of all claims, even those which named inventor invented by himself).

58 35 U.S.C. § 116. Inventors

When an invention is made by two or more persons jointly, they shall apply for patent jointly and each make the required oath, except as otherwise provided in this title. Inventors may apply for a patent jointly even though (1) they did not physically work together or at the same time, (2) each did not make the same type or amount of contribution, or (3) each did not make a contribution to the subject matter of every claim of the patent.

If a joint inventor refuses to join in an application for patent or cannot be found or reached after diligent effort, the application may be made by the other inventor on behalf of himself and the omitted inventor. The Director, on proof of the pertinent facts and after such notice to the omitted inventor as he prescribes, may grant a patent to the inventor making the application, subject to the same rights which the omitted inventor would have had if he had been joined. The omitted inventor may subsequently join in the application.

Whenever through error a person is named in an application for patent as the inventor, or through error an inventor is not named in an application, and such error arose without any deceptive intention on his part, the Director may permit the application to be amended accordingly, under such terms as he prescribes.

important not only in determining legal rights in the co-owners, but also for purposes of resolving interferences[59] and filing suit in federal court.[60]

Obviously, this definitional structure presents some unique tax opportunities, as it permits "new" inventors to ride the coattails of other contributors to the IP resource **before** the resource becomes a legally protectable entity by virtue of the filing of a patent application. Once the patent application is generated and **filed** the legal rights are fixed, and from a tax perspective the "new" inventor shares in the bounty of other inventors who preceded him/her.

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[59] *Schulze v. Green*, 136 F.3d 786, 45 U.S.P.Q.2d 1770 (Fed. Cir. 1998) (issue of inventorship raised in interference proceeding must be decided inter partes rather than in ex parte examination, since patent applicants filed motion to correct inventorship of application pursuant to 37 CFR § 1.634, and though motion was defective under 37 CFR § 1.48, it nevertheless placed inventorship of application in issue, since all facts necessary to support change in inventorship were already known to applicants, and issue was therefore capable of being fully presented on perfected motion, since patentability question fairly raised in interference and capable of being fully presented must be resolved inter partes, and since both opposing party and inventorship issue remained in interference, even after it became apparent that opposing party could not prevail on priority issue).

[60] *FilmTec Corp. v. Allied-Signal Inc.,* 939 F.2d 1568, 19 U.S.P.Q.2d 1508 (Fed. Cir. 1991) (preliminary injunction entered in patent infringement suit is vacated, since record indicates that inventor of patent in suit may have been subject to contract granting rights in invention to his former employer, and if subject matter of patent was invented during inventor's tenure with former employer, his subsequent assignment to plaintiff would have been nullity, and plaintiff would lack both title to patent and standing to bring suit; since record does not contain specific findings on these questions, it is unclear whether plaintiff could make sufficient legal showing to establish likelihood of success on merits of its claim).

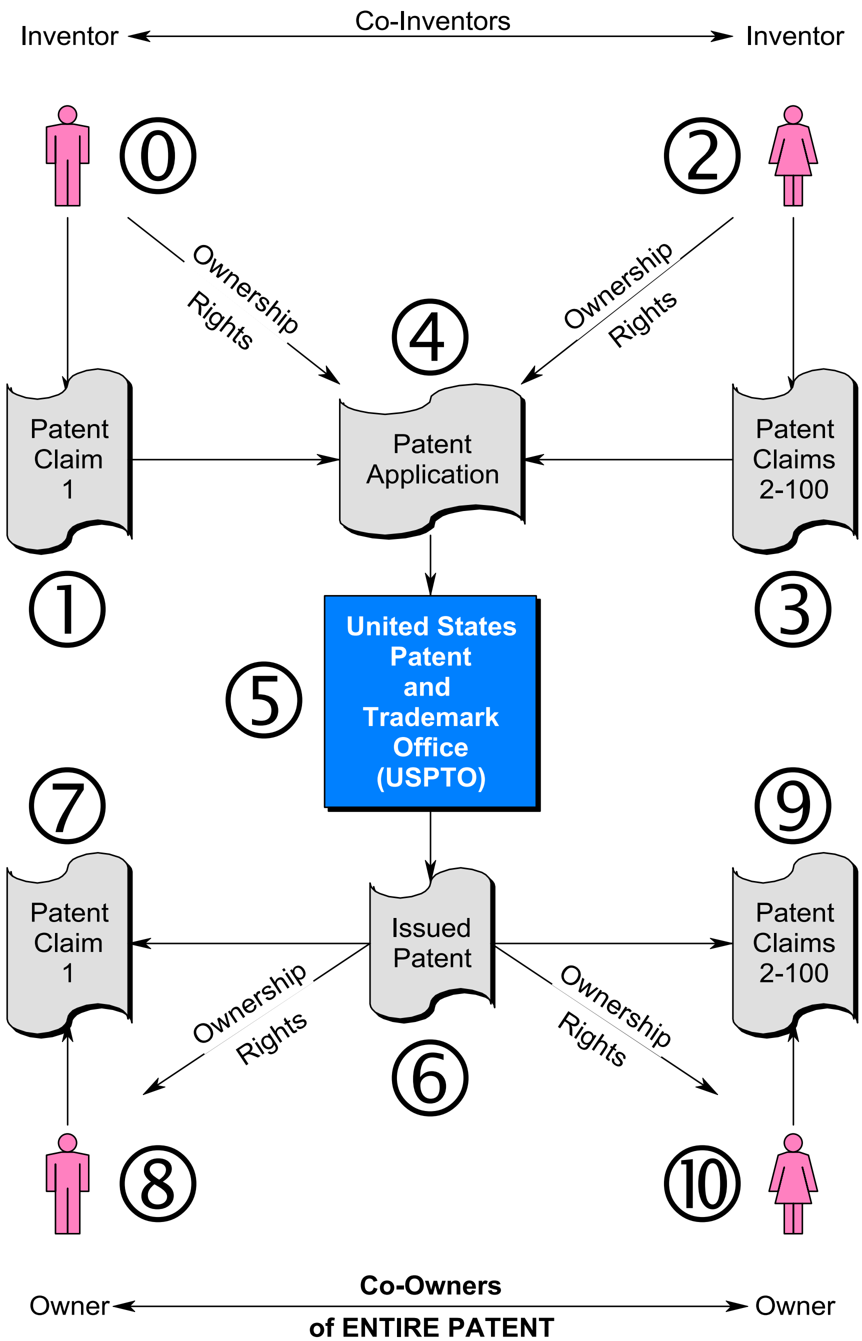

Figure 8: IP Resource Shifting Using Patent Inventorship Definitions

As an example, referencing Figure 8, if a first co-inventor ⓪ is responsible for a single patent claim ① and a second co-inventor ② is responsible for then remaining 99 claims ③ in a patent application ④ that is submitted to the USPTO ⑤ and subsequently issues as a patent ⑥, and if the claims in this issued patent are still present such that the Claim 1 ⑦ is still the work of the first co-inventor ⑧ and the remaining claims ⑨ are still associated with the second co-inventor ⑩, then the resulting patent ⑥ is the undivided property of **both** co-inventors (⓪⑧ & ②⑩), who have no duty of accounting to each other. Note in this scenario that while co-inventors may be "added" to the mix later in the process (after filing the patent application), it is questionable as to whether they had elements of legal ownership **at the time the patent application was initially filed**, as the disclosure of the patent application may not incorporate "new matter"[61] after its initial filing.[62]

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[61] 37 CFR § 1.53 Application number, filing date, and completion of application.

(a) Application number. Any papers received in the Patent and Trademark Office which purport to be an application for a patent will be assigned an application number for identification purposes.

(b) Application filing requirements - Nonprovisional application. The filing date of an application for patent filed under this section, except for a provisional application under paragraph (c) of this section or a continued prosecution application under paragraph (d) of this section, is the date on which a specification as prescribed by 35 U.S.C. § 112 containing a description pursuant to § 1.71 and at least one claim pursuant to § 1.75, and any drawing required by § 1.81(a) are filed in the Patent and Trademark Office. **No new matter may be introduced into an application after its filing date.**

…

[62] To get around this restriction it is often the practice to file "continuation-in-part" (CIP) patent applications that retain the priority date of an earlier application while permitting "new matter" to be added which is afforded a priority date of the later-filed CIP application. 37 CFR § 1.53 states in part:

(b) …

A continuing application, which may be a continuation, divisional, or continuation-in-part application, may be filed under the conditions specified in 35 U.S.C. § 120, 121 or 365(c) and § 1.78(a).

(1) A continuation or divisional application that names as inventors the same or fewer than all of the inventors named in the prior application may be filed under this paragraph or paragraph (d) of this section.

(2) A continuation-in-part application (which may disclose and claim subject matter not disclosed in the prior application) or a continuation or divisional application naming an inventor not named in the prior application must be filed under this paragraph.

Applicant Information Requirements

Applicants who are non-US citizens must in the case of non-Provisional (regular Utility) Patent Applications indicate their citizenship in patent applications,[63] provide residence[64] and post office address[65] information, as well as legal name and signature.[66]

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63 MPEP § 605.01 – Applicant's Citizenship.

35 U.S.C. § 115. Oath of applicant. The applicant shall make oath that he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent; **and shall state of what country he is a citizen**. Such oath may be made before any person within the United States authorized by law to administer oaths, or, when made in a foreign country, before any diplomatic or consular officer of the United States authorized to administer oaths, or before any officer having an official seal and authorized to administer oaths in the foreign country in which the applicant may be, whose authority is proved by certificate of a diplomatic or consular officer of the United States, or apostille of an official designated by a foreign country which, by treaty or convention, accords like effect to apostilles of designated officials in the United States, and such oath shall be valid if it complies with the laws of the state or country where made. When the application is made as provided in this title by a person other than the inventor, the oath may be so varied in form that it can be made by him. For purposes of this section, a consular officer shall include any United States citizen serving overseas, authorized to perform notarial functions pursuant to section 1750 of the Revised Statutes, as amended (22 U.S.C. § 4221).

64 MPEP § 605.02 – Applicant's Residence

Applicant's place of residence, that is, the city and either state or foreign country, is required to be included in the oath or declaration in a nonprovisional application for compliance with 37 CFR § 1.63. In the case of an applicant who is in one of the U.S. Armed Services, a statement to that effect is sufficient as to residence. For change of residence, see MPEP Section 719.02(b). Applicant's residence must be included on the cover sheet for a provisional application.

65 MPEP § 605.03 – Applicant's Post Office Address

For nonprovisional applications filed prior to December 1, 1997, each applicant's post office address was required by 37 CFR § 1.33(a) to be supplied on the oath or declaration, if not stated elsewhere in the application. Effective December 1, 1997, 37 CFR § 1.63 has been amended to require the post office address of each inventor to be stated in the oath or declaration. Applicant's post office address means that address at which he or she customarily receives his or her mail. Either applicant's home or business address is acceptable as the post office address. The post office address should include the ZIP Code designation.

The object of requiring each applicant's post office address is to enable the Office to communicate directly with the applicant if desired; hence, the address of the attorney with instruction to send communications to applicant in care of the attorney is not sufficient.

It is significant to note that the requirements for when[67] and how[68] the inventor's signature is generated are somewhat restrictive when filing U.S. patent applications, whether Provisional or non-Provisional.

In situations where an inventor does not execute the oath or declaration and the inventor is not deceased, such as in an application filed under 37 CFR § 1.47, the inventor's most recent home address must be given to enable the Office to communicate directly with the inventor as necessary.

Oaths or declarations filed on or after December 1, 1997 must include the post office address of each inventor. 37 CFR § 1.63(a)(3).

66 MPEP § 605.04(a) – Applicant's Signature and Name

37 CFR § 1.64 Person making oath or declaration.

(a) The oath or declaration must be made by all of the actual inventors except as provided for in Sections1.42, 1.43, or 1.47.

(b) If the person making the oath or declaration is not the inventor (Sections 1.42, 1.43, or 1.47), the oath or declaration shall state the relationship of the person to the inventor and, upon information and belief, the facts which the inventor is required to state.

67 MPEP § 605.04(a) – Applicant's Signature and Name

It is improper for an applicant to sign an oath or declaration which is not attached to or does not identify a specification and/or claims.

Attached does not necessarily mean that all the papers must be literally fastened. It is sufficient that the specification, including the claims, and the oath or declaration are physically located together at the time of execution. Physical connection is not required. Copies of declarations are accepted. *See* MPEP Section 502.01 and Section 502.02.

The provisions of 35 U.S.C. § 363 for filing an international application under the Patent Cooperation Treaty (PCT) which designates the United States and thereby has the effect of a regularly filed United States national application, except as provided in 35 U.S.C. § 102(e), are somewhat different than the provisions of 35 U.S.C. § 111. The oath or declaration requirements for an international application before the Patent and Trademark Office are set forth in 35 U.S.C. § 371(c)(4) and 37 CFR § 1.497.

37 CFR § 1.52(c) states that "[a]ny interlineation, erasure, cancellation or other alteration of the application papers filed should be made on or before the signing of any accompanying oath or declaration pursuant to Section 1.63 referring to those application papers and should be dated and initialed or signed by the applicant on the same sheet of paper. Application papers containing alterations made after the signing of an oath or declaration referring to those application papers must be supported by a supplemental oath or declaration under § 1.67(c). After the signing of the oath or declaration referring to the application papers, amendments may only be made in the manner provided by § 1.121."

In summary, it is emphasized that the application filed must be the application executed by the applicant and it is improper for anyone, including counsel, to alter, rewrite, or partly fill in any part of the application, including the oath or declaration, after execution of the oath or declaration by the applicant. This provision should particularly be brought to the attention

However, note that Provisional Patent Applications do not have these requirements, as they need not even fully disclose the list of true inventors.[69] Where no inventors are listed in Provisional Patent Applications, the USPTO permits an alphanumeric identifier to be used.[70] This is a significant advantage in filing patent

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of foreign applicants by their United States counsel since the United States law and practice in this area may differ from that in other countries.

Any changes made in ink in the application or oath prior to signing should be initialed and dated by the applicants prior to execution of the oath or declaration. The Office will not consider whether noninitialed and/or nondated alterations were made before or after signing of the oath or declaration but will require a new oath or declaration.

[68] MPEP § 605.04(b) – One Full Given Name Required

37 CFR § 1.63(a)(3) requires that each inventor be identified by full name, including the family name, and at least one given name without abbreviation together with any other given name or initial in the oath or declaration. For example, if the applicant's full name is "John Paul Doe," either "John P. Doe" or "J. Paul Doe" is acceptable.

[69] MPEP § 605 – Applicant

… "37 CFR § 1.41 and 37 CFR § 1.53 were amended effective December 1, 1997, to remove the requirement that the name(s) of the inventor(s) be identified in the application papers in order to accord the application a filing date. 37 CFR § 1.41(a)(1) now defines the inventorship of a nonprovisional application as that inventorship set forth in the oath or declaration filed to comply with the requirements of 37 CFR § 1.63, except as provided for in 37 CFR § 1.53(d)(3) and 37 CFR § 1.63(d). The oath or declaration may be filed on the filing date of the application or on a later date. If an oath or declaration is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to 37 CFR § 1.53(b), unless a petition under 37 CFR § 1.41(a) accompanied by the fee set forth in 37 CFR § 1.17(i) is filed supplying the name or names of the inventor or inventors." …

[70] MPEP § 605 – Applicant

… "Where no inventor(s) is named on filing, the Office requests that an alphanumeric identifier be submitted for the application. The use of very short identifiers should be avoided to prevent confusion. Without supplying at least a unique identifying name the Office may have no ability or only a delayed ability to match any papers submitted after filing of the application and before issuance of an identifying application number with the application file. Any identifier used that is not an inventor's name should be specific, alphanumeric characters of reasonable length, and should be presented in such a manner that it is clear to application processing personnel what the identifier is and where it is to be found. It is strongly suggested that applications filed without an executed oath or declaration under 37 CFR § 1.63 or 37 CFR § 1.175 include the name of the person(s) believed to be the inventor for identification purposes. Failure to apprise the Office of the application identifier being used may result in applicants having to resubmit papers that could not be matched with applications in an international context, where some of the inventors may be U.S. residents and others are located overseas.

the application and proof of the earlier receipt of such papers where submission was time dependent." …

REDUCTION TO PRACTICE

Generally

A key concept in the tax analysis of patents and related intellectual property is the definition of the term "reduction to practice".[71] As illustrated in Figure 9, the inventive process generally starts with a general concept or idea. However, to have an invention requires more under U.S. patent law. The date of invention is determined by either a reduction to practice or conception followed by diligence towards reduction to practice.[72] Reduction to practice may be an actual reduction (i.e., building a working prototype) or a constructive reduction to practice (i.e., filing of a patent application).[73] Thus, an inventor need not actually build a working model of his/her invention in order to obtain a patent

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71 "Reduction to practice" is a widely recognized factor for determining when an invention is completed under 35 U.S.C. § 102(b). *See Stewart-Warner Corp. v. City of Pontiac*, 717 F.2d 269, 273 (6th Cir.1983); *Digital Equip. Corp. v. Diamond*, 653 F.2d 701, 718 (1st Cir.1981); *CTS Corp. v. Piher Int'l Corp*., 527 F.2d 95, 103 (7th Cir.1975); *Timely Prod. Corp. v. Arron*, 523 F.2d 288, 302 (2d Cir.1975); *In Re Yarn Processing Litig*., 498 F.2d 271, 277 (5th Cir.1974).

72 *Nashef v. Pollock,* 4 U.S.P.Q.2d 1631, 1987 WL 123851 (Bd.Pat.App & Interf.) (1987) ("By 'date of invention' we of course mean the date on which the invention defined by the count was actually reduced to practice, or the date of conception if shown to have been coupled with diligence commencing just prior to an opponent's conception up to an actual or constructive reduction to practice.").

73 MPEP § 2138.05 "Reduction to Practice"

Reduction to practice may be an actual reduction or a constructive reduction to practice, i.e., filing of a patent application. *Dunn v. Ragin*, 50 U.S.P.Q. 472, 474 (Bd. Pat. Inter. 1941) (asexually reproduced plants require an actual reduction to practice). A reduction to practice can be done by another on behalf of the inventor. *De Solms v. Schoenwald*, 15 USPQ2d 1507, 1510 (Bd. Pat. App. & Inter. 1990). "While the filing of the original application theoretically constituted a constructive reduction to practice at the time, the subsequent abandonment of that application also resulted in an abandonment of the benefit of that filing as a constructive reduction to practice. The filing of the original application is, however, evidence of conception of the invention. *In re Costello*, 717 F.2d 1346, 1350, 219 U.S.P.Q. 389, 392 (Fed. Cir. 1983).

on the "fleshed-out" functional idea as embodied in the written description that is included in the patent application.

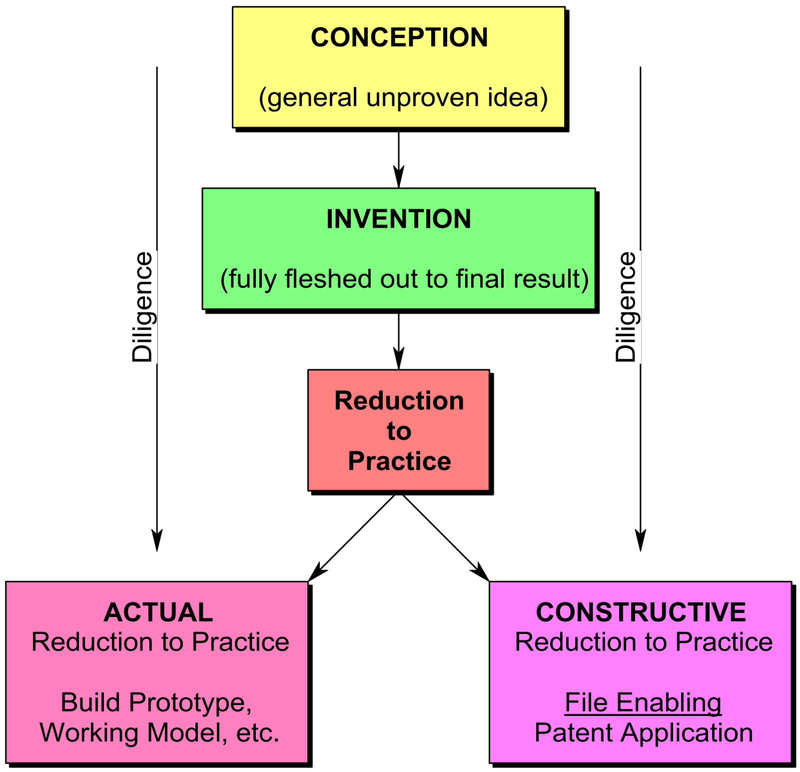

Figure 9: Inventive Process and Reduction to Practice

Requirements for Constructive Reduction to Practice

Note, however, that for constructive reduction to practice to be effective, the patent application must comply with the requirements of 35 U.S.C. § 112 ¶ 1, which mandates that "[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to *enable any person skilled in the art to which it pertains*, or with which it is most nearly connected, *to make and use the same*, and *shall set forth the best mode* contemplated by the inventor of carrying out his invention."[74] Thus, the requirements for "enablement" and "best mode"[75] must be incorporated in the patent specification for the invention to be afforded constructive reduction to practice based on the patent specification as filed.[76] In summary, the patent application must be "complete" to be afforded the protection of the statutory patent monopoly.[77]

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[74] MPEP § 2138.05 "Reduction to Practice" - CONSTRUCTIVE REDUCTION TO PRACTICE REQUIRES COMPLIANCE WITH 35 U.S.C. § 112, FIRST PARAGRAPH

Proof of a constructive reduction to practice requires sufficient disclosure under the "how to use" and "how to make" requirements of 35 U.S.C. § 112, first paragraph. *Kawai v. Metlesics*, 480 F.2d 880, 886, 178 U.S.P.Q. 158, 163 (CCPA 1973) (A constructive reduction to practice is not proven unless the specification discloses a practical utility where one would not be obvious. Prior art which disclosed an anticonvulsant compound which differed from the claimed compound only in the absence of a -CH2- group connecting two functional groups was not sufficient to establish utility of the claimed compound because the compounds were not so closely related that they could be presumed to have the same utility.). *See also Bigham v. Godtfredsen*, 857 F.2d 1415, 1417, 8 USPQ2d 1266, 1268 (Fed. Cir. 1988) ("[t]he generic term halogen comprehends a limited number of species, and ordinarily constitutes a sufficient written description of the common halogen species," except where the halogen species are patentably distinct).

The first conceiver may rely on earlier filed applications under 35 U.S.C. § 120 (*Ginos v. Nedelec,* 220 U.S.P.Q. 831, 833 (Bd. Pat. Inter. 1983)) provided the earlier application satisfies 35 U.S.C. § 112, first paragraph (*Suh v. Hoefle*, 23 USPQ2d 1321, 1325 (Bd. Pat. App. & Inter. 1992)).

[75] *See* J. Randall Beckers, "Best Mode and Software Related Inventions: Is Source Code Necessary?", INTELLECTUAL PROPERTY TODAY, Vol. 4. No. 5, at 11 (May, 1997).

[76] *Kawai v. Metlesics*, 480 F.2d 880, 178 U.S.P.Q. 158 (CCPA 1973) (holding constructive reduction to practice for priority under 35 U.S.C. § 119 requires meeting the requirements of 35 U.S.C. § 101 and 35 U.S.C § 112).

[77] *Weil v. Fritz, Evans, and Cooke*, 572 F.2d 856, 196 U.S.P.Q. 600, (CCPA 1978) (prior constructive reduction to practice is previously-filed complete and allowable application under view that defines constructive reduction to practice as filing of complete and allowable application; 35 U.S.C. § 112, first paragraph, requirements need only be met for embodiment within count, in special situation in which count is drawn to genus and previously-filed application discloses only species of it).

Requirements for Actual Reduction to Practice

In what seems paradoxical, it may be possible to show **constructive** reduction to practice without **actual** reduction to practice, as actual reduction to practice is in fact a higher standard that "requires a showing of the invention in a physical or tangible form that shows every element" of the claimed invention.[78] While the actual reduction to practice standard does not mandate a commercially satisfactory stage of development, it does require that "the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose".[79] The requirements for testing are fact dependent and may not require that all the conditions of actual use be duplicated.[80] However, there

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78 MPEP § 2138.05 "Reduction to Practice" – REQUIREMENTS TO ESTABLISH ACTUAL REDUCTION TO PRACTICE

The same evidence sufficient for a constructive reduction to practice may be insufficient to establish an actual reduction to practice, which requires a showing of the invention in a physical or tangible form that shows every element of the count. *Wetmore v. Quick*, 536 F.2d 937, 942, 190 U.S.P.Q. 223, 227 (CCPA 1976). For an actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose, but it need not be in a commercially satisfactory stage of development. If a device is so simple, and its purpose and efficacy so obvious, construction alone is sufficient to demonstrate workability. *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860, 226 U.S.P.Q. 402, 407 (Fed. Cir. 1985).

For additional cases pertaining to the requirements necessary to establish actual reduction to practice *see DSL Dynamic Sciences, Ltd. v. Union Switch & Signal, Inc.*, 928 F.2d 1122, 1126, 18 USPQ2d 1152, 1155 (Fed. Cir. 1991) ("events occurring after an alleged actual reduction to practice can call into question whether reduction to practice has in fact occurred"); *Corona v. Dovan*, 273 U.S. 692, 1928 C.D. 252 (1928) ("A process is reduced to practice when it is successfully performed. A machine is reduced to practice when it is assembled, adjusted and used. A manufacture [i.e., article of manufacture] is reduced to practice when it is completely manufactured. A composition of matter is reduced to practice when it is completely composed." 1928 C.D. at 262-263 (emphasis added).); *Fitzgerald v. Arbib*, 268 F.2d 763, 765-66, 122 U.S.P.Q. 530, 531-32 (CCPA 1959) ("the reduction to practice of a three-dimensional design invention requires the production of an article embodying that design" in "other than a mere drawing").

79 *Id.*

80 MPEP § 2138.05 "Reduction to Practice" – TESTING REQUIRED TO ESTABLISH AN ACTUAL REDUCTION TO PRACTICE

is a requirement at the time of testing that the inventor have an appreciation of the fact that he/she has created an invention and that there is in fact something of utility that may be patentable.[81] Finally, actual reduction to practice requires a constructed invention embodiment include every element of the patent claim, not merely an expectation that the invention missing the patent claim element will work.[82]

"The nature of testing which is required to establish a reduction to practice depends on the particular facts of each case, especially the nature of the invention." *Gellert v. Wanberg*, 495 F.2d 779, 783, 181 U.S.P.Q. 648, 652 (CCPA 1974) ("an invention may be tested sufficiently – where less than all of the conditions of actual use are duplicated by the tests"); *Wells v. Fremont*, 177 U.S.P.Q. 22, 24-5 (Bd. Pat. Inter. 1972) ("even where tests are conducted under `bench' or laboratory conditions, those conditions must `fully duplicate each and every condition of actual use' or if they do not, then the evidence must establish a relationship between the subject matter, the test condition and the intended functional setting of the invention," but it is not required that all the conditions of all actual uses be duplicated, such as rain, snow, mud, dust and submersion in water).

81 MPEP § 2138.05 "Reduction to Practice" – REDUCTION TO PRACTICE REQUIRES RECOGNITION AND APPRECIATION OF THE INVENTION

The invention must be recognized and appreciated for a reduction to practice to occur. *Alsenz v. Hargraves*, 13 USPQ2d 1371, 1374 (Bd. Pat. App. & Int. 1989) (a reduction to practice cannot be established *nunc pro tunc*); *Meitzner v. Corte*, 537 F.2d 524, 528, 190 U.S.P.Q. 407, 410 (CCPA 1976) (there can be no conception or reduction to practice of a new form or of a process using such a new form of an otherwise old composition where there has been no recognition or appreciation of the existence of the new form); *Estee Lauder, Inc. v. L'Oreal S.A.*, 129 F.3d 588, 593, 44 USPQ2d 1610, 1615 (Fed. Cir. 1997) ("[W]hen testing is necessary to establish utility, there must be recognition and appreciation that the tests were successful for reduction to practice to occur." A showing that testing was completed before the critical date, and that testing ultimately proved successful, was held insufficient to establish a reduction to practice before the critical date, since the success of the testing was not appreciated or recognized until after the critical date.); *Parker v. Frilette*, 462 F.2d 544, 547, 174 U.S.P.Q. 321, 324 (CCPA 1972) ("[an] inventor need not understand precisely why his invention works in order to achieve an actual reduction to practice").

82 *Eaton v. Evans*, 204 F.3d 1094, 53 U.S.P.Q.2d 1696 (Fed. Cir. 2000) (party seeking to establish actual reduction to practice in interference proceeding must show that party constructed embodiment or performed process that met every element of interference count, and that embodiment or process operated for its intended purpose; for purposes of interference, there can be no actual reduction to practice if constructed embodiment or performed process lacks element recited in count, or uses equivalent of that element; party to interference proceeding seeking to establish actual reduction to practice cannot obviate initial requirement that constructed embodiment include every element of count through evidence that embodiment operated for its intended purpose, regardless of quality of such evidence,

Tax Definition of "Reduction to Practice"

Generally, the IRS follows the conventional definitions of "reduction to practice" as indicated above.[83] For purposes of calculating holding time periods, however, the IRS accepts either actual reduction to practice or constructive reduction to practice, whichever occurs earlier, as the trigger date for computing capital gain treatment of patent sales and transfers.[84] Note, however, that the courts have ruled that capital gain

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since these are two distinct requirements, and party must satisfy each one in order to establish actual reduction to practice).

[83] PLR 8326,035, 1983 WL 198933 (IRS PLR) (1983) states in part:

…

For purposes of defining what is meant by the term "actual reduction to practice", reference will be made to the definition of such term as set forth in section 1.1235-2(e) of the regulations. Constructive reduction to practice takes place upon the filing, in the U.S. Patent and Trademark Office, of a complete patent application disclosing the subject matter of the invention. For purposes of this ruling request, * * * is deemed to be the date of actual reduction to practice of the invention and * * * (the filing date of the patent application) is the date of the constructive reduction to practice of the invention.

The term "reduction to practice", as set forth in U.S.C. § 102(g), describes a term of art in patent law related to the determination of which of two or more apparent inventors is in fact the "first" inventor. Under patent law, for purposes of determining priority of invention, a reduction to practice can be either an actual reduction to practice or a constructive reduction to practice. In effect, an actual reduction to practice and a constructive reduction to practice are equivalent. Insofar as the federal income tax significance of the term "reduction to practice" is concerned, section 1235(b) provides that an individual other than the creator of the property (i.e., the inventor) cannot qualify as a holder for purposes of section 1235 if he has acquired his interest in such property in exchange for consideration in money or money's worth paid to such creator prior to actual reduction to practice of the invention covered by the patent. As noted above, section 1235 has no application to the proposed transaction of the ruling request.

…

[84] PLR 8326,035, 1983 WL 198933 (IRS PLR) (1983) states in part:

…

This is in response to your ruling request dated * * *. All of the stock of the Corporation is owned by * * * which makes * * * a 100% shareholder of the Corporation. The ruling request concerns the proposed transfer of a patent right to an original invention to a transferee production company by the Corporation. Specifically, the ruling requested is that the Corporation's holding period for long-term capital gain treatment, as defined in Section 1222(3) of the Internal Revenue Code, as to the patent right commences upon the actual treatment will not be afforded to organizations whose *sole* purpose is the transfer of technology.[85]

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reduction to practice of the original invention or the constructive reduction to practice (i.e., the date when a complete patent application disclosing the subject matter of the invention is filed) whichever occurs first.

…

Rev. Rul. 69-482 and the *Chu* case suggest that if a patent or patent application transfer is not within the provision of section 1235, a taxpayer might still qualify for long-term capital gain treatment under other provisions of the Internal Revenue Code. Rev. Rul. 69-482 held that the mere fact that a patent transfer for contingent amounts does not qualify for long-term capital gain treatment under section 1235 of the Code will not prevent it from qualifying for such treatment under other provisions of the Code if it would qualify for such treatment in the absence of section 1235. *Chu*, in concluding that the patent application in question did not constitute depreciable property for section 1239 purposes, held that the proceeds of the sale of the patent application are to be taxed as long-term capital gain (presumably under other provisions of the Code other than section 1235 as noted in footnote $ 1 at page 608 of the *Chu* opinion) and not as ordinary income under section 1239.

Unlike the facts in *Burde*, the date of constructive reduction to practice of the original invention under the facts of this case is prior to the date of actual reduction to practice of the original invention. It should be noted that section 1.1235-2(e), in defining the term "actual reduction to practice", acknowledges that actual reduction to practice can occur after the filing of a patent application. The date of constructive reduction to practice can be viewed as the date the patent application came into existence. **A patent application, in effect, manifests a patent right to an original invention**. Under the facts of this case where the date of constructive reduction to practice is prior to the date of actual reduction to practice, the date of constructive reduction to practice marks the beginning of the existence of the Corporation's patent right to the original invention, for federal income tax purposes. Moreover, the date of constructive reduction to practice is the date that the Corporation's holding period of the patent right to the original invention commenced, for purposes of long-term capital gain treatment under section 1222(3) of the Code.

Accordingly, in view of the above discussion, we conclude that the Corporation's holding period for long-term capital gain treatment, as defined in section 1222(3) of the Internal Revenue Code, as to the patent right to the original invention commenced on * * * the date of constructive reduction to practice. This conclusion is based on the assumption that all other requirements for capital gain treatment are met.

…

85 *Juda, v. Commissioner of Internal Revenue*, 877 F.2d 1075, 64 A.F.T.R.2d 89-5068, 89-1 USTC P 9367 (1st Cir, 1989) (profits from transaction in which partnership acquired invention and know-how from inventor and then sold it to another partnership which would develop and market it were not entitled to capital gains treatment).

Priority

An issue associated with the timing of when the patent application is filed is that of the "priority date" associated with the patent application. This date has significance because it determines in many instances who "wins" if multiple parties independently develop an invention and subsequently file patent applications. Generally, this "interference" between potential patentees is handled administratively within the USPTO and more often than not is determined by who filed their patent application first.[86] Although the United States is a "first to invent" country rather than a "first to file" country as is the rest of the world, the inventor first to file is generally the first to invent[87] absent proof of prior date of conception coupled with diligence.[88] Thus, diligence in

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[86] MPEP § 2138.01 Interference Practice

Note, however, in the context of 37 CFR § 1.131, an applicant does not have to show that the invention was not abandoned, suppressed, or concealed from the time of an actual reduction to practice to a constructive reduction to practice because the length of time taken to file a patent application after an actual reduction to practice is generally of no consequence except in an interference proceeding. *Paulik v. Rizkalla*, 760 F.2d 1270, 226 U.S.P.Q. 224 (Fed. Cir. 1985). See the discussion of abandonment, suppression, and concealment in MPEP § 2138.03.

[87] *Dewey v. Lawton*, 52 C.C.P.A. 1573, 347 F.2d 629, 146 U.S.P.Q. 187 (CCPA 1965) ("Dewey's patent issued on an application which was filed March 18, 1954. Dewey took no testimony and relies upon the filing date of his application as establishing a constructive reduction to practice of the subject matter defined by the counts.").

[88] *Coleman v. Dines et al.*, 754 F.2d 353, 224 U.S.P.Q. 857, (Fed. Cir 1985) states the requirements associated with conception an associated constructive reduction to practice as follows:

Although we affirm the Board's finding that Coleman is only entitled to a 1980 filing date for a constructive reduction to practice, we also find it necessary to address the Board's findings relating to the date of priority. [It is possible for Coleman still to be awarded priority in this inter partes interference proceeding if he were to establish the earlier conception date coupled with diligence until his 1980 filing date. For this reason we consider the section of the Board's opinion in which it addressed date priority in the "interest of completeness."]. In this interference, Coleman's whole case falls on one of the elements required in proving date priority, date of conception. The CCPA has defined conception of an invention as:

either form of reduction to practice (and particularly in constructive reduction to practice) is what the U.S. patenting system rewards.[89] Since the issue of diligence is a factual inquiry that must be supported by the inventor asserting it for purposes of proving a priority date,[90] constructive reduction to practice by filing a patent application is in general the only **sure** way of proving reduction to practice.

> "the complete performance of the mental part of the inventive act. All that remains to be accomplished, in order to perfect the act or instrument, belongs to the department of construction, not invention. It is therefore the formation, in the mind of the inventor of a definite and permanent idea of the complete and operative invention, as it is thereafter to be applied in practice, that constitutes an available conception, within the patent law."

Gunter v. Stream, 573 F.2d 77, 80, 197 U.S.P.Q. 482, 484, (CCPA 1978) (emphasis in original) (citing *Mergenthaler v. Scudder*, 11 App. D.C. 264, 276, 1897 C.D. 724, 731 (1897)). It is settled that in establishing conception a party must show possession of every feature recited in the count, and that every limitation of the count must have been known to the inventor at the time of the alleged conception. *Davis v. Reddy*, 620 F.2d 885, 889, 205 U.S.P.Q. 1065, 1069 (CCPA 1980). Conception must be proved by corroborating evidence which shows that the inventor disclosed to others his "completed thought expressed in such clear terms as to enable those skilled in the art" to make the invention. *Fields v. Knowles*, 183 F.2d 593, 601, 86 U.S.P.Q. 373, 379 (CCPA 1950).

89 *The Bendix Corporation v. United States*, 199 U.S.P.Q. 203, 1978 WL 21437 (Ct.Cl. 1978) ("Scope of right of exclusion granted to patentee is to be determined in light of state of art at time invention was made; 'invention' is defined in 35 U.S.C. § 100 as either 'invention or discovery,' and invention is 'made' at time of conception; actual or constructive 'reduction to practice' is merely 'carrot' that inspires 'donkey' in race for patent in event two or more parties invent same thing at about same time.").

90 *Windsurfing International, Inc., et al. v. Fred Ostermann GmbH, et al.,* 613 F.Supp. 933, 227 U.S.P.Q. 927 (S. D. N. Y. 1985) ("The party seeking to establish that a particular item fulfills the priority requirements of Section 102(g) has the burden of proving the existence of "that continuity of activity which constitutes reasonable diligence." *Gould v. Schawlow*, 363 F.2d at 918, 150 U.S.P.Q. at 642; *Naber v. Cricchi,* 567 F.2d 382, 385, 196 U.S.P.Q. 294 (C.C.P.A. 1977) *cert. denied*, 439 U.S. 826, 200 U.S.P.Q. 64 (1978). For the reasons set forth below we conclude that BIC and AMF have not met that burden as to the Perrin sailboard. The March 24th letter from Perrin to his attorney constitutes an admission against BIC and AMF (who stand in Perrin's position for the purposes of establishing diligence) that between August 1967 and the end of March 1968 Perrin engaged in no activity related to actually reducing his "invention" to practice. Nor did Perrin take any steps toward constructive reduction to practice (i.e., filing his patent application) during the relevant period. The letter clearly indicates that during this period Perrin made no attempts to contact his lawyer to ensure that progress was being made toward filing his patent application. BIC and AMF have offered no proof to the contrary. Although Perrin was not responsible for the misfiling of the

Within this context, there was generally an advantage given to U.S. inventors who invented and reduced to practice within the United States as compared to persons working outside the United States. The result of this advantage was that inventions reduced to practice outside the United States were not afforded the advantage of this date of conception. Recent changes in the patent statute have generally eliminated this advantage, and now permit persons outside the United States to have equal footing with inventors who conceive and reduce to practice within the United States, whether the reduction to practice is actual or constructive.[91]

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application we nonetheless conclude that allowing seven months to pass without any action to check on the status of the application does not demonstrate reasonable diligence. Accordingly, we hold that Perrin's work is not prior art as defined by 35 U.S.C. §102(g).).

[91] MPEP § 2138.02 "The Invention Was Made in This Country"

An invention is made when there is a conception and a reduction to practice. *Dunn v. Ragin,* 50 U.S.P.Q. 472, 474 (Bd. Pat. Inter. 1941). Prior art under 35 U.S.C. § 102(g) is limited to an invention that is made. *In re Katz*, 687 F.2d 450, 454, 215 U.S.P.Q. 14, 17 (CCPA 1982) (the publication of an article, alone, is not deemed a constructive reduction to practice, and therefore its disclosure does not prove that any invention within the meaning of 35 U.S.C. § 102(g) has ever been made).

Subject matter under 35 U.S.C. § 102(g) is available only if made in this country. 35 U.S.C. § 104. *Kondo v. Martel*, 220 U.S.P.Q. 47 (Bd. Pat. Inter. 1983) (acts of conception, reduction to practice and diligence must be demonstrated in this country). *Compare Colbert v. Lofdahl*, 21 USPQ2d 1068, 1071 (Bd. Pat. App. & Inter. 1991) ("[i]f the invention is reduced to practice in a foreign country and knowledge of the invention was brought into this country and disclosed to others, the inventor can derive no benefit from the work done abroad and such knowledge is merely evidence of conception of the invention").

Note, however, that 35 U.S.C. § 104, as amended by GATT (Public Law 103-465, 108 Stat. 4809 (1994)) and NAFTA (Public Law 103-182, 107 Stat. 2057 (1993)), provides that an applicant can establish a date of invention in a NAFTA member country on or after December 8, 1993 or in WTO member country other than a NAFTA member country on or after January 1, 1996. Accordingly, an interference count may be won or lost on the basis of establishment of invention by one of the parties in a NAFTA or WTO member country, thereby rendering the subject matter of that count unpatentable to the other party under the principles of *res judicata* and collateral estoppel, even though such subject matter is not available as statutory prior art under 35 U.S.C. § 102(g). *See* MPEP § 2138.01 regarding lost interference counts which are not statutory prior art.

Patenting Cost Minimization Architectural Structure

Overview

The proposed methodology for cost minimizing patents attempts to exploit the bifurcation in ownership that can occur when a portion of an invention conception has occurred in the United States and which is subsequently augmented by additional creative efforts that occur offshore. As mentioned previously, if the offshore creative efforts result in the addition of **even one claim** to a Utility Patent Application or to the disclosure of a Provisional Patent Application, then the ownership of the entire IP asset is bifurcated, with each inventor having full rights to exploit the invention and its proceeds, without regard to accounting to other inventors.

Furthermore, since the IRS views "legal ownership" as occurring at the point of "reduction to practice", this will occur in this circumstance when either a Utility Patent Application or to the disclosure of a Provisional Patent Application is filed with the USPTO. Given that either a Utility or Provisional Patent Application suffices in this respect may at first glance have little significance, except for the fact that under USPTO regulations inventors need not be identified in a Provisional Patent Application and no claims need be present in a Provisional Patent Application. Thus, the mere fact that another individual technically augments a patent disclosure that has not yet been filed with the USPTO, then files the resulting document as a Provisional Patent Application, should be sufficient to bifurcate the subsequent patent rights to the original and subsequent "inventor".

Since the threshold for contribution to a disclosure to show inventorship is minimal, this will in general present little difficulty to a skilled patent agent/attorney working for a foreign hybrid invention development entity. Since the practice of assigning rights to invention augmentations by patent agents/attorneys is common and mandated in some instances,[92] the potential to have the individuals preparing the actual patent applications or their technical subordinates is ripe with advantage in this context. Ideally, a registered agent/attorney could supervise a pool of technical specialists who actually write and augment patent applications from original disclosures provided by U.S. corporations. The focus here would be to both improve the patent application process for the U.S. corporations as well as provide a means of shifting some of the costs of the process to outside contractors. The result would also permit exportation of IP resources by virtue of the bifurcation of ownership that occurs before the patent application is filed in the United States.

Goals

The goals of the proposed system are as follows:

- Bifurcate the ownership of IP before legal ownership takes hold to take advantage of 35 U.S.C. § 262 which permits ownership of patents for the purposes of licensing to be placed in any inventor who materially contributes to one or more of the claims in an issued U.S. patent. This may permit advantageous licensing arrangements that shelter U.S. income by incorporating licensing arrangement

92 *See* Lisa A. Dolak, "Conflicts of Interest: Guidance for the Intellectual Property Practitioner", ADVANCED COMPUTER AND ELECTRONIC PATENT PRACTICE SEMINAR,

with foreign entities that have ownership rights in the same IP asset.

- Reduce the fees associated with the patent filing process by placing ownership of patent IP in the hands of a "small entity" that qualifies for reduced patent filing and maintenance fees. This will result in a 50% reduction in the fees paid to the USPTO for a given patent over its lifetime.

- Reduce patent preparation and prosecution costs by outsourcing this activity to offshore countries where educated labor is significantly cheaper than that available in the United States.

- Speed the patent application process so as to give U.S. corporations a procedural advantage both in the United States and abroad.

How these goals are implemented is discussed in detail in the following sections.

Basic Roadmap

Figure 10 illustrates an architectural overview of the proposed plan to minimize patenting costs and improve patent revenues for large U.S. corporations.

Houston, TX (May 8, 1998).

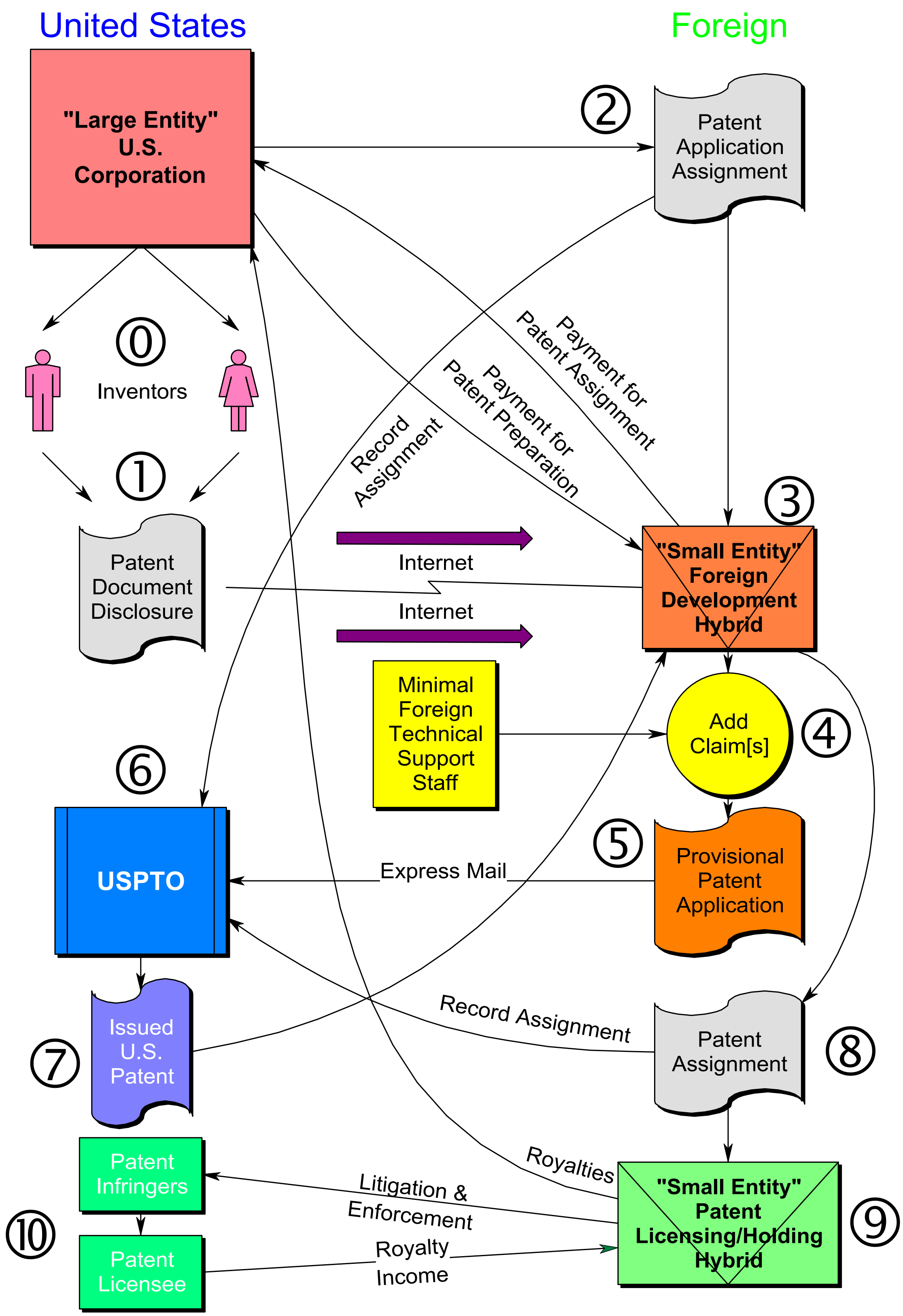

Figure 10: Architectural Overview of Proposed IP Management Methodology

The process starts with a U.S. corporation employing inventors ⓪ that generate patent document disclosures ① of inventions that they have collaborated in creating. Generally, these disclosure documents involve inventions that have yet to be reduced to practice. These document disclosures are then assigned ② to a foreign hybrid ③ for a low development fee, and may involve a payment for future royalties or patent preparation services. At this point the patent disclosure are augmented by a small technical team by adding claims ④ outside the scope of the original disclosure or by making small technical additions to the document disclosure sufficient to support an additional patent claim. From this document a Provisional/Utility Patent Application ⑤ is filed with the USPTO ⑥ from which a U.S. Patent issues. ⑦ The rights in this issued patent ⑦ are then assigned ⑧ to another licensing organization ⑨ which supervises the enforcement and licensing ⑩ of the patent in the United States.

Key to this methodology is bifurcating the ownership in the patent rights at an early stage in development when the value of the patent is highly speculative. Additionally, the small additions made by the technical support staff ④ result in co-ownership status for these individuals, who may be patent agents/attorneys or other technical staff that may take advantage of 26 U.S.C. § 1235 capital gains treatment on the eventual sale of the patent right to other entities.

Additionally, it is important to note that this methodology relies heavily on high speed communications between the United States and the foreign hybrid responsible for preparing and prosecuting the patent application(s) in this process flow. As illustrated in

Figure 11, this may be generally accomplished over the Internet given that most of the industrialized world has access to this communications medium.

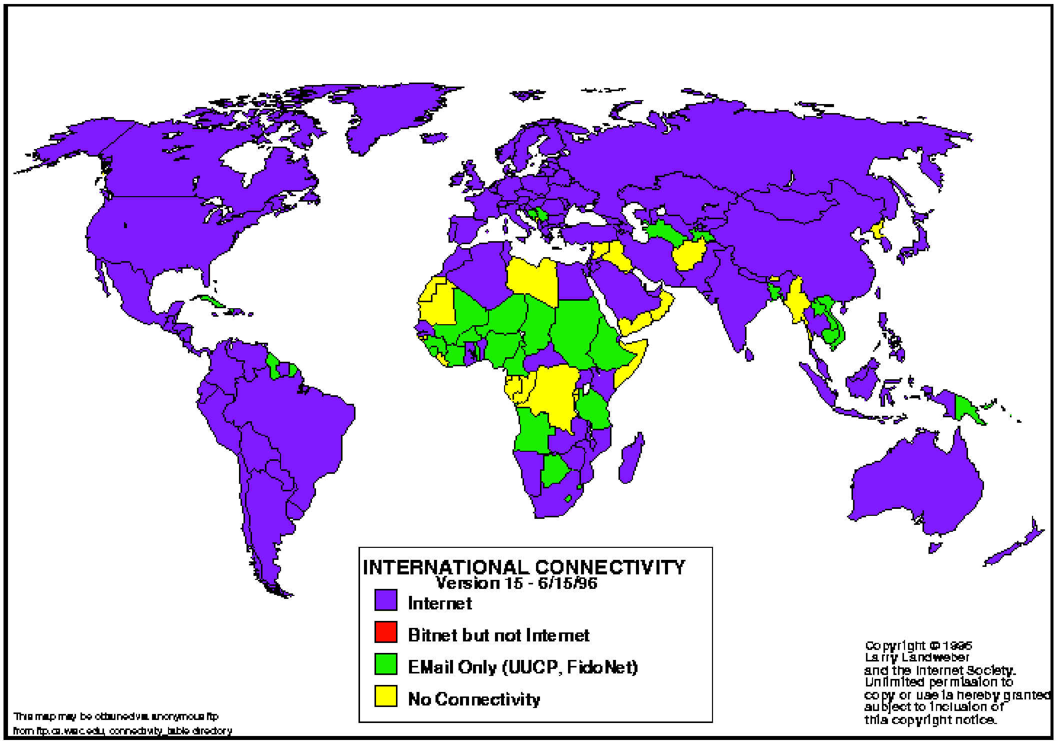

Figure 11: Worldwide Internet Connectivity[93]

U.S. Definition of Patent Ownership

Scope of Ownership

The majority of patent-related statutes have been codified within Title 35 of the U.S. code. 35 U.S.C. § 261 dictates that patents have the attributes of personal

[93] Graphic obtained from http://www.isoc.org/images/mapv15.gif. *See also* I. Trotter Hardy, Project Looking Forward – Sketching the Future of Copyright in a Networked World, available from the Library of Congress website at http://www.loc.gov/copyright/docs/thardy.pdf (1998).

property.[94] Furthermore, the statute permits **patent applications** to be assignable in law by any instrument in writing.[95] The U.S. patent statute makes a differentiation between the patent "applicant" and the "patentee",[96] but permit either (or their assigns or legal representatives) to grant or convey an exclusive right to a whole or partial right in a patent or patent application.[97]

Locale of Writing Requirement

Of significant importance in the international context is the fact that the "writing" required by 35 U.S.C. § 261 need not be performed within the United States. On the contrary, the patent statute specifically provides that the following constitute "prima facie evidence of the execution of an assignment, grant, or conveyance of a patent application for patent":[98]

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[94] 35 U.S.C. § 261. Ownership; assignment

Subject to the provisions of this title, patents shall have the attributes of personal property. …

[95] 35 U.S.C. § 261. Ownership; assignment

… Applications for patent, patents, or any interest therein, shall be assignable in law by an instrument in writing. …

[96] In contrast to other countries, the United States requires that the true "inventors" be listed in the application for patent. Other countries permit companies and other non-corporeal entities to be 'applicants' for purposes of patent applications.

[97] 35 U.S.C. § 261. Ownership; assignment

… The applicant, patentee, or his assigns or legal representatives may in like manner grant and convey an exclusive right under his application for patent, or patents, to the whole or any specified part of the United States. …

[98] 35 U.S.C. § 261. Ownership; assignment

A certificate of acknowledgment under the hand and official seal of a person authorized to administer oaths within the United States, or, in a foreign country, of a diplomatic or consular officer of the United States or an officer authorized to administer oaths whose authority is proved by a certificate of a diplomatic or consular officer of the United States, or apostille of an official designated by a foreign country which, by treaty or convention,

- A certificate of acknowledgment under the hand and official seal of a person authorized to administer oaths
    - within the United States; or
    - In a foreign country:
        - a diplomatic or consular officer of the United States;
        - an officer authorized to administer oaths whose authority is proved by a certificate of a diplomatic or consular officer of the United States; or
        - an apostille of an official designated by a foreign country which, by treaty or convention, accords like effect to apostilles of designated officials in the United States.

The import of this provision is that within the context of international transactions involving patents and patent applications, *the formalities of assignment and transfer need not occur within the confines of the United States to have the effect of United States law*. This permits the transfers required in Figure 11 to be accomplished within the country of the foreign hybrid.

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accords like effect to apostilles of designated officials in the United States, shall be prima facie evidence of the execution of an assignment, grant or conveyance of a patent or application for patent.

Recordation Requirements

However, it should be noted that formalities must still be adhered to with respect to recordation within the United States Patent and Trademark Office (USPTO). Specifically, the patent assignment statute provides that patent assignments are "void as against any subsequent purchaser or mortgagee for valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage."[99]

Recordation of a patent assignment may take any one of three non-exclusive forms:

1. **Recordation at the time the patent is filed**. In this case USPTO form PTO/SB/15 (or equivalent) is utilized to affect the transfer.[100] Note that in the case of "small entities" this must be accompanied by a corresponding Small Entity Statement (USPTO Form PTO/SB/09, PTO/SB/10, PTO/SB/11, or PTO/SB/12) that properly indicates the nature of the

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[99] 35 U.S.C. § 261. Ownership; assignment.

An assignment, grant or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.

[100] USPTO Form PTO/SB/15 may be obtained from the USPTO web site at http://www.uspto.gov/ or by directly access using Adobe Acrobat reader (web address http://www.uspto.gov/web/forms/sb0015.pdf).

assignee of the patent right, so that the proper fee may be charged for the patent application.[101]

2. **Recordation during the patent application process**. In this case USPTO form PTO/SB/15 (or equivalent) is utilized to affect the transfer.[102]

3. **Recordation after the patent has issued**. In this case USPTO form PTO/SB/41 (or equivalent) is utilized to affect the transfer.[103]

Small Entity Status

The USPTO distinguishes between various classes of "small entities" for the purposes of determining patent filing and maintenance fees.[104] As illustrated in Figure 12, the term "small entity" is given the definition of "an[y] independent inventor, a small business concern, or a non-profit organization eligible for reduced patent fees."[105] It is instructive to closely examine the definitions used in this context, as they present an opportunity for cost savings in the context of international management of intellectual property. A quick view of the cost differential in Figure 12 indicates that if an entity

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[101] Small Entity fees are generally half those of normal patent applications. *See* 37 CFR § 1.16 generally.

[102] USPTO Form PTO/SB/15 may be obtained from the USPTO web site at http://www.uspto.gov/ or by directly access using Adobe Acrobat reader (web address http://www.uspto.gov/web/forms/sb0015.pdf).

[103] USPTO Form PTO/SB/41 may be obtained from the USPTO web site at http://www.uspto.gov/ or by directly access using Adobe Acrobat reader (web address http://www.uspto.gov/web/forms/sb0041.pdf).

[104] 37 CFR § 1.9.

[105] 37 CFR § 1.9(f).

could take advantage of "small entity" status, the resulting decrease in overall patenting cost could be significant.

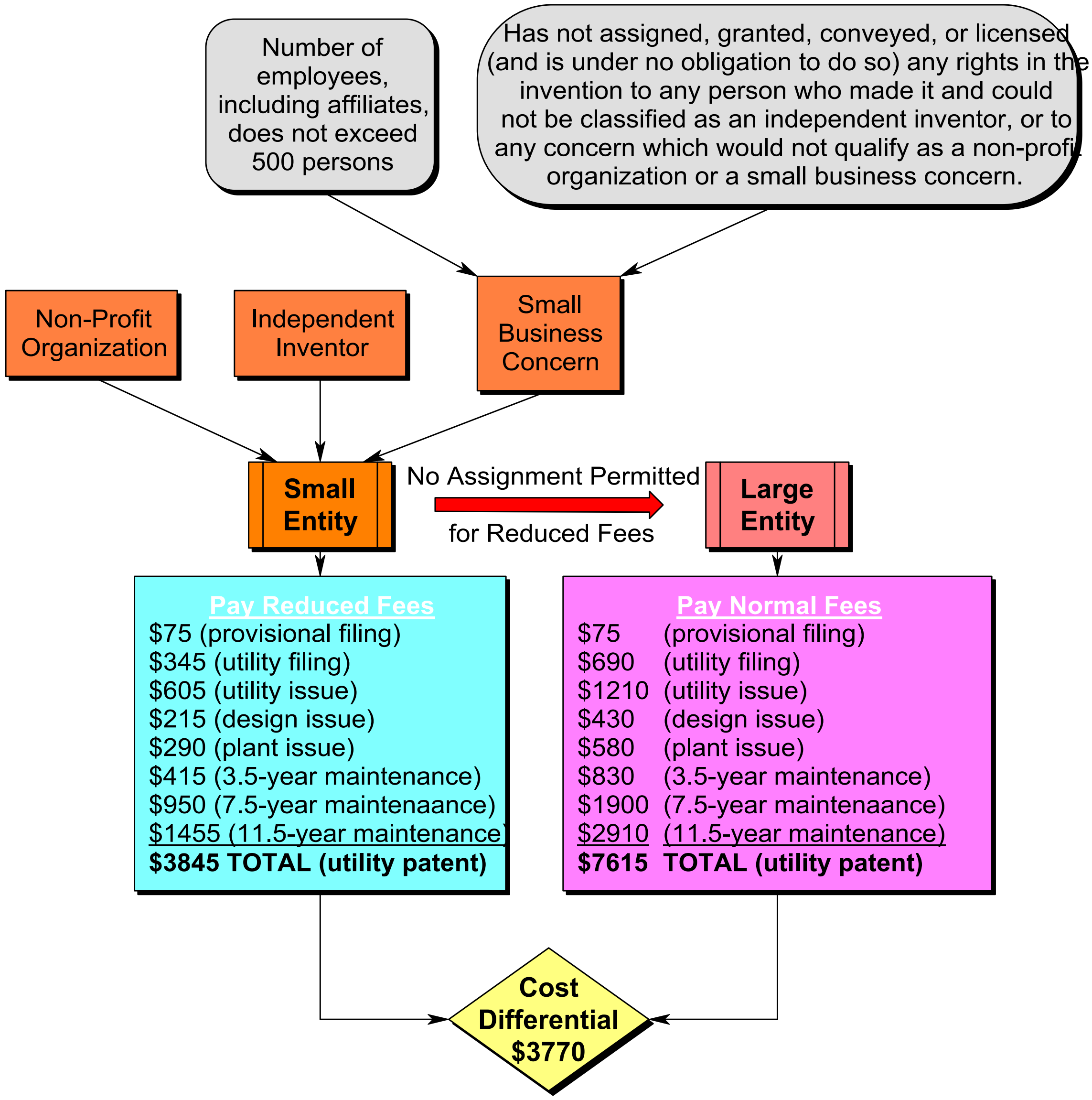

Figure 12: Structural View of Small and Large Entity Cost Paradigms

"Independent Inventors"

Specifically, the USPTO defines an independent inventor as

"… any inventor who

(1) has not assigned, granted, conveyed, or licensed, and

(2) is under no obligation under contract or law to assign, grant, convey, or license,

any rights in the invention to

[a] any person who could not likewise be classified as an independent inventor if that person had made the invention, or

[b] to any concern which would not qualify as a small business concern or a nonprofit organization under this section."[106]

"Small Business Concerns"

"Small business concerns" are similarly defined as

"…any business concern meeting the size standards set forth in 13 CFR Part 121 to be eligible for reduced patent fees."[107]

Regulations regarding what constitutes a "small" business for patent application purposes are defined by the Small Business Administration Regulations.[108] 13 CFR § 121.802 further elucidates the requirements for a small business concern:

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106 37 CFR § 1.9(c).

107 37 CFR § 1.9(d).

108 *See* 13 CFR § 121.801 (May patent fees be reduced if a concern is small?):

> These sections apply to size status for the purpose of paying reduced patent fees authorized by Pub.L. 97-247, 96 Stat. 317. The eligibility requirements for independent inventors and nonprofit organizations for the purpose of paying reduced patent fees are set forth in regulations of the Patent and Trademark Office of the Department of Commerce, 37 CFR §§ 1.9, 1.27, 1.28.

> "A concern eligible for reduced patent fees is one:
>
> (a) Whose number of employees, including affiliates, does not exceed 500 persons; and
>
> (b) Which has not assigned, granted, conveyed, or licensed (and is under no obligation to do so) any rights in the invention to any person who made it and could not be classified as an independent inventor, or to any concern which would not qualify as a non-profit organization or a small business concern under this section."[109]

It must be noted that the determination of "small business concern" status by the SBA is binding on the parties unless the SBA issues an advisory opinion to the party.[110] Size determinations are made at the time of verification by the patenting entity,[111] which may be done by a self-certification process at the time of patent filing.[112]

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[109] 13 CFR § 121.802 (What size standards are applicable to reduced patent fees programs?).

[110] 13 CFR § 121.803 Are formal size determinations binding on parties?

Size determinations by authorized SBA officials are formal actions, based upon a specific patent application pursuant to the rules of the Patent and Trademark Office, Department of Commerce, and are binding upon the parties. Other SBA opinions provided to patent applicants or others are only advisory, and are not binding or appealable.

[111] 13 CFR § 121.804 When does SBA determine the size status of a business concern?

Size status is determined as of the date of the patent applicant's written verification of size.

[112] 13 CFR § 121.805 May a business concern self-certify its size status?

(a) A concern verifies its size status with its submission of its patent application.
(b) Any attempt to establish small size status improperly (fraudulently, through gross negligence, or otherwise) may result in remedial action by the Patent and Trademark Office.
(c) In the absence of credible information indicating otherwise, the Patent and Trademark Office may accept the verification by the concern as a small business as true.
(d) Questions concerning the size verification are resolved initially by the Patent and Trademark Office. If not verified as small, the applicant may request a formal SBA size determination.

"Non-Profit Organizations"

"Non-Profit Organizations" are defined by the regulations as

"(1) a university or other institution of higher education located in any country;

(2) an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)(3)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a));

(3) any nonprofit scientific or educational organization qualified under a nonprofit organization statute of a state of this country (35 U.S.C. 201(i)); or

(4) any nonprofit organization located in a foreign country which would qualify as a nonprofit organization under paragraphs (e)(2) or (3) of this section if it were located in this country."[113]

Summary

The regulations involving "small entities" as defined in regards to the USPTO seem to be primarily concerned with assignments of patents from "small" individual/business concerns to "large" individual/business concerns for the purposes of reducing filing and maintenance fees with the USPTO. However, **there seems to be no prohibition against "large" entities transferring patent assets to "small" entities under either exclusive or non-exclusive license agreements. This omission presents a unique opportunity to exploit the ministerial nature of the patenting process to the**

advantage of companies that expend a significant portion of their research and development budget on United States patent prosecution and maintenance fees.

Maintenance Fees

Patent ownership to be meaningful must include the right of patent enforcement.[114] Patents once issued after paying the appropriate fee[115] must be 'maintained' via the payment of maintenance fees to remain enforceable. Maintenance fees are due at 3.5, 7.5, and 11.5 years after issuance of the patent and may not be paid in advance.[116] Note the potential advantage of transferring patents to foreign hybrid entities entitled to small entity status prior to the required payment of issue and maintenance fees. This would generally result in a savings of $3770 per issued patent.

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113 37 CFR § 1.9(e).

114 35 U.S.C. § 281. Remedy for infringement of patent

A patentee shall have remedy by civil action for infringement of his patent.

115 The current issue fee as of December 19, 1999 is $1210 for a utility patent (37 CFR § 1.18(a)), $430 for a design patent (37 CFR § 1.18(b)), and $580 for a plant patent (37 CFR § 1.18(c)). **Small entity rates are half these amounts**. Reference the USPTO current fee structure at http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm.

116 The current maintenance fee as of December 19, 1999 are $830 at 3.5 years (37 CFR § 1.20(e)), $1900 at 7.5 years (37 CFR § 1.20(f)), and $2910 at 11.5 years (37 CFR § 1.20(g)). **Small entity rates are half these amounts**. Reference the USPTO current fee structure at http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm.

Foreign Filing License Mandatory

Any patent filing in foreign country must be preceded by obtaining a foreign filing license in the United States by U.S. citizens.[117] Note, however, that this provision is automatically satisfied for PCT patent applications filed with the U.S. receiving office.

Arm's Length / Transfer Pricing Issues

Of concern in the proposed tax reduction methodology are Treasury Regulations regarding transfer pricing and "arm's length transactions" involving intangibles.[118] In

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[117] 35 U.S.C. § 185. Patent barred for filing without license

> Notwithstanding any other provisions of law any person, and his successors, assigns, or legal representatives, shall not receive a United States patent for an invention if that person, or his successors, assigns, or legal representatives shall, without procuring the license prescribed in section 184 of this title, have made, or consented to or assisted another's making, application in a foreign country for a patent or for the registration of a utility model, industrial design, or model in respect of the invention. A United States patent issued to such person, his successors, assigns, or legal representatives shall be invalid, unless the failure to procure such license was through error and without deceptive intent, and the patent does not disclose subject matter within the scope of section 181 of this title.

[118] Treas. Reg. § 1.482-4 Methods to determine taxable income in connection with a transfer of intangible property.

(a) In general. The arm's length amount charged in a controlled transfer of intangible property must be determined under one of the four methods listed in this paragraph (a). Each of the methods must be applied in accordance with all of the provisions of § 1.482-1, including the best method rule of § 1.482-1(c), the comparability analysis of § 1.482-1(d), and the arm's length range of § 1.482-1(e). The arm's length consideration for the transfer of an intangible determined under this section must be commensurate with the income attributable to the intangible. See § 1.482-4(f)(2) (Periodic adjustments). The available methods are--

(1) The comparable uncontrolled transaction method, described in paragraph (c) of this section;

(2) The comparable profits method, described in § 1.482-5;

(3) The profit split method, described in § 1.482-6; and

(4) Unspecified methods described in paragraph (d) of this section.

(b) Definition of intangible. For purposes of section 482, an intangible is an asset that comprises any of the following items and has substantial value independent of the services of any individual--

(1) Patents, inventions, formulae, processes, designs, patterns, or know-how;

(2) Copyrights and literary, musical, or artistic compositions;

(3) Trademarks, trade names, or brand names;

(4) Franchises, licenses, or contracts;

order to avoid recharacterization of the transfer, one of several accepted valuation methods must be utilized.[119] Failure to adhere to the formalities in this process can have

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(5) Methods, programs, systems, procedures, campaigns, surveys, studies, forecasts, estimates, customer lists, or technical data; and

(6) Other similar items. For purposes of section 482, an item is considered similar to those listed in paragraph (b)(1) through (5) of this section if it derives its value not from its physical attributes but from its intellectual content or other intangible properties.

[119] Treas. Reg. § 1.482-4 Methods to determine taxable income in connection with a transfer of intangible property.

…

(c) Comparable uncontrolled transaction method—

(1) In general. The comparable uncontrolled transaction method evaluates whether the amount charged for a controlled transfer of intangible property was arm's length by reference to the amount charged in a comparable uncontrolled transaction. The amount determined under this method may be adjusted as required by paragraph (f)(2) of this section (Periodic adjustments).

(2) Comparability and reliability considerations—

(i) In general. Whether results derived from applications of this method are the most reliable measure of an arm's length result is determined using the factors described under the best method rule in § 1.482-1(c). The application of these factors under the comparable uncontrolled transaction method is discussed in paragraphs (c)(2)(ii), (iii), and (iv) of this section.

(ii) Reliability. If an uncontrolled transaction involves the transfer of the same intangible under the same, or substantially the same, circumstances as the controlled transaction, the results derived from applying the comparable uncontrolled transaction method will generally be the most direct and reliable measure of the arm's length result for the controlled transfer of an intangible. Circumstances between the controlled and uncontrolled transactions will be considered substantially the same if there are at most only minor differences that have a definite and reasonably ascertainable effect on the amount charged and for which appropriate adjustments are made. If such uncontrolled transactions cannot be identified, uncontrolled transactions that involve the transfer of comparable intangibles under comparable circumstances may be used to apply this method, but the reliability of the analysis will be reduced.

(iii) Comparability—

(A) In general. The degree of comparability between controlled and uncontrolled transactions is determined by applying the comparability provisions of § 1.482-1(d). Although all of the factors described in § 1.482-1(d)(3) must be considered, specific factors may be particularly relevant to this method. In particular, the application of this method requires that the controlled and uncontrolled transactions involve either the same intangible property or comparable intangible property, as defined in paragraph (c)(2)(iii)(B)(1) of this section. In addition, because differences in contractual terms, or the economic conditions in which transactions take place, could materially affect the amount charged, comparability under this method also depends on similarity with respect to these factors, or adjustments to account for material differences in such circumstances.

(B) Factors to be considered in determining comparability—

dire consequences as has been amply demonstrated in the *DHL* case.[120] However, note that if the required formalities associated with the transfer of patentable IP prior to the patenting process are followed, it is expected that results similar to the *Compaq* case[121]

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(1) Comparable intangible property. In order for the intangible property involved in an uncontrolled transaction to be considered comparable to the intangible property involved in the controlled transaction, both intangibles must--

(i) Be used in connection with similar products or processes within the same general industry or market; and

(ii) Have similar profit potential. The profit potential of an intangible is most reliably measured by directly calculating the net present value of the benefits to be realized (based on prospective profits to be realized or costs to be saved) through the use or subsequent transfer of the intangible, considering the capital investment and start-up expenses required, the risks to be assumed, and other relevant considerations. The need to reliably measure profit potential increases in relation to both the total amount of potential profits and the potential rate of return on investment necessary to exploit the intangible. If the information necessary to directly calculate net present value of the benefits to be realized is unavailable, and the need to reliably measure profit potential is reduced because the potential profits are relatively small in terms of total amount and rate of return, comparison of profit potential may be based upon the factors referred to in paragraph (c)(2)(iii)(B)(2) of this section. See Example 3 of § 1.482-4(c)(4). Finally, the reliability of a measure of profit potential is affected by the extent to which the profit attributable to the intangible can be isolated from the profit attributable to other factors, such as functions performed and other resources employed.

(2) Comparable circumstances. In evaluating the comparability of the circumstances of the controlled and uncontrolled transactions, although all of the factors described in § 1.482-1(d)(3) must be considered, specific factors that may be particularly relevant to this method include the following--

  (i) The terms of the transfer, including the exploitation rights granted in the intangible, the exclusive or nonexclusive character of any rights granted, any restrictions on use, or any limitations on the geographic area in which the rights may be exploited;

  (ii) The stage of development of the intangible (including, where appropriate, necessary governmental approvals, authorizations, or licenses) in the market in which the intangible is to be used;

  (iii) Rights to receive updates, revisions, or modifications of the intangible;

  (iv) The uniqueness of the property and the period for which it remains unique, including the degree and duration of protection afforded to the property under the laws of the relevant countries;

  (v) The duration of the license, contract, or other agreement, and any termination or renegotiation rights;

  (vi) Any economic and product liability risks to be assumed by the transferee;

  (vii) The existence and extent of any collateral transactions or ongoing business relationships between the transferee and transferor; and

  (viii) The functions to be performed by the transferor and transferee, including any ancillary or subsidiary services.

  (iv) Data and assumptions. The reliability of the results derived from the comparable uncontrolled transaction method is affected by the completeness and accuracy of the data used and the reliability of the assumptions made to apply this method. See § 1.482-1(c) (Best method rule).

[120] *DHL Corporation and Subsidiaries v. Commissioner Of Internal Revenue*, T.C. Memo. 1998-461, 1998 WL 906788 (U.S.Tax Ct.), 76 T.C.M. (CCH) 1122, T.C.M. (RIA) 98,461, 1998 RIA TC Memo 98,461 (U.S. Tax Court 1998)(40-percent penalty of section 6662(h) applies to the trademark adjustment because there is a gross valuation misstatement; $200+ million tax assessment upheld).

[121] *Compaq Computer Corporation And Subsidiaries v. Commissioner Of Internal Revenue*, 1999 WL 1042573 (U.S.Tax Ct.), Tax Ct. Rep. Dec. (RIA) 113.25 (U.S. Tax Court 1999) (Petitioner is entitled to a foreign tax credit under section 901(a)).

may be expected. To avoid the potential pitfalls of statutory provisions regarding allocation of income attributed to intangibles,[122] investigation of Advanced Pricing Agreements (APAs)[123] may be warranted in many circumstances.

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[122] 26 U.S.C. § 482. Allocation of income and deductions among taxpayers

> In any case of two or more organizations, trades, or businesses (whether or not incorporated, whether or not organized in the United States, and whether or not affiliated) owned or controlled directly or indirectly by the same interests, the Secretary may distribute, apportion, or allocate gross income, deductions, credits, or allowances between or among such organizations, trades, or businesses, if he determines that such distribution, apportionment, or allocation is necessary in order to prevent evasion of taxes or clearly to reflect the income of any of such organizations, trades, or businesses. In the case of any transfer (or license) of intangible property (within the meaning of section 936(h)(3)(B)), the income with respect to such transfer or license shall be commensurate with the income attributable to the intangible.

[123] *See generally,* Rev. Proc. 96-53.

EXPLOITING THE DEFINITION OF "PATENTABLE INVENTIONS"

Introduction

The U.S. patent statute[124] has been at times viewed as one of the most expansive and all-encompassing in the world in terms of its definition of "invention". While the patent statute has defined a patentable invention as "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof",[125] courts have often wrestled with the scope of patentable subject matter. For example, for many years a wide variety of biogenic materials, computer software, and business methods were held to be non-patentable subject matter. Recent clarifications of the scope of patentable matter by the U.S. Supreme Court to include "anything under the sun that is made by man"[126] presents some unique tax opportunities in regards to these newer subject areas that are discussed more fully in the following sections.

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[124] Title 35 of the United States Code.

[125] 35 U.S.C. § 101. Inventions patentable

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

[126] *Diamond v. Chakrabarty*, 447 U.S. 303, 100 S.Ct. 2204, 65 L.Ed.2d 144, 206 U.S.P.Q. 193, 197 (1980) (Constitution grants Congress broad power to legislate to "promote the Progress of Science and the useful Arts, by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries"; patent laws promote this progress by offering inventors exclusive rights for limited period as incentive for their inventiveness and research efforts; authority of Congress is exercised in hope that productive effort thereby fostered will have positive effect on society through introduction of new products and processes of manufacture into economy, and emanations by way of increased employment and better lives for our citizens; Congress in choosing expansive terms "manufacture" and "composition of matter," modified by comprehensive "any," contemplated that patent laws would be given wide scope; relevant legislative history also supports broad construction.

Biotechnology

While the patentability of manmade articles of biotechnology and the like has no direct tax implications with respect to the methodologies illustrated in this document, the Supreme Court's landmark decision in *Diamond v. Chakrabarty* [127] did set the stage for later redefinitions of what was patentable in the computer software and business method arenas, which do have applicability to the tax savings methodologies presented herein. In short, the *Chakrabarty* decision opened the floodgates to review of exactly what was patentable subject matter, with the Supreme Court holding that the test for patentability was generally "novelty and nonobviousness".[128] Furthermore, the Court indicated that it was "man's handiwork" that determined whether an invention was patentable given that it was novel and nonobvious.[129] While this has been limited to exclude "[t]he laws of nature, physical phenomena, and abstract ideas",[130] any interpretation of what is patentable should be broadly construed in this context when determining tax strategies to export IP assets using the methodologies discussed herein.

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[127] *Id*.

[128] *Id*. (novelty and nonobviousness are two conditions and requirements of patent laws).

[129] *Id*. (microorganism claim that is not hitherto unknown natural phenomenon, but to nonnaturally occurring manufacture or composition of matter, that is, product of human ingenuity having distinctive name, character, and use, and is to new bacterium, which has potential for significant utility, with markedly different characteristics from any found in nature qualifies as patentable subject matter; such applicant's discovery that is not nature's handiwork, but his own, is patentable subject matter under Section 101).

[130] *Id*. ("This is not to suggest that §101 has no limits or that it embraces every discovery. The laws of nature, physical phenomena, and abstract ideas have been held not patentable.").

Computer Software

The patentability of computer software[131] has significant application in the context of tax savings given the Treasury Regulations regarding the transfer of computer software.[132] Note that these Treasury Regulations make no mention of the potential

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131 *In re Kuriappan P. ALAPPAT, Edward E. Averill and James G. Larsen*, 33 F.3d 1526, 63 USLW 2088, 31 U.S.P.Q.2d 1545 (Fed. Cir. 1994) (fact that claimed invention would read on general purpose computer programmed to carry out claimed invention did not preclude finding that programming creates new machine, as general purpose computer became, in effect, special purpose computer once it was programmed to perform particular functions pursuant to instructions from program software; computer operating pursuant to software may represent patentable subject matter, as long as claimed subject matters meet all other statutory patentability claims; computer is "apparatus" and not mathematics).

132 Treas. Reg. § 1.861-18 Classification of transactions involving computer programs. states in part:

(a) General—

(1) Scope. This section provides rules for classifying transactions relating to computer programs for purposes of subchapter N of chapter 1 of the Internal Revenue Code, sections 367, 404A, 482, 551, 679, 1059A, chapter 3, chapter 5, sections 842 and 845 (to the extent involving a foreign person), and transfers to foreign trusts not covered by section 679.

(2) Categories of transactions. This section generally requires that such transactions be treated as being solely within one of four categories (described in paragraph (b)(1) of this section) and provides certain rules for categorizing such transactions. In the case of a transfer of a copyright right, this section provides rules for determining whether the transaction should be classified as either a sale or exchange, or a license generating royalty income. In the case of a transfer of a copyrighted article, this section provides rules for determining whether the transaction should be classified as either a sale or exchange, or a lease generating rental income.

(3) Computer program. For purposes of this section, a computer program is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result. For purposes of this paragraph (a)(3), a computer program includes any media, user manuals, documentation, data base or similar item if the media, user manuals, documentation, data base or similar item is incidental to the operation of the computer program.

(b) Categories of transactions—

(1) General. Except as provided in paragraph (b)(2) of this section, a transaction involving the transfer of a computer program, or the provision of services or of know-how with respect to a computer program (collectively, a transfer of a computer program) is treated as being solely one of the following –

(i) A transfer of a copyright right in the computer program;

(ii) A transfer of a copy of the computer program (a copyrighted article);

(iii) The provision of services for the development or modification of the computer program; or

(iv) The provision of know-how relating to computer programming techniques.

patent rights associated with computer software. Thus, it may be possible to export the potential patent rights to portions of existing (or to be developed) computer software and thus gain significant tax advantages when the IP for the finished product is then sold or licensed from the overseas hybrid entity.

Key to this strategy is the use of *Beauregard* [133] patent claims[134] to cover the physical media on which computer software is distributed. Note that traditionally computer software developers have relied on the Copyright Statute[135] prohibition on making unauthorized copies and derivative works by non-authors to restrict unauthorized copying of their works after initial fixation.[136] However, patent protection while more

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> (2) Transactions consisting of more than one category. Any transaction involving computer programs which consists of more than one of the transactions described in paragraph (b)(1) of this section shall be treated as separate transactions, with the appropriate provisions of this section being applied to each such transaction. However, any transaction that is de minimis, taking into account the overall transaction and the surrounding facts and circumstances, shall not be treated as a separate transaction, but as part of another transaction.

[133] *In re Beauregard*, 53 F.3d 1583, 35 U.S.P.Q.2d 1383 (Fed. Cir. 1995) (decision of Board of Patent Appeals and Interferences rejecting applicants' computer program product claims on basis of printed matter doctrine is vacated, since Patent and Trademark Office now states that computer programs embodied in tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. § 101 and must be examined under 35 U.S.C. § 102 and § 103).

[134] *Beauregard* patent claims cover the physical media containing the software program and typically have a format similar to the following:

> A computer usable medium having computer-readable program code means providing [specified] functionality, said computer-readable program means comprising:
>
> (1) computer program code means for [providing specified functionality 1];
> (2) computer program code means for [providing specified functionality 2];
> …
> (n) computer program code means for [providing specified functionality n];

[135] Title 17 of the United States Code.

[136] Note that a copyrighted work is 'created' when it is initially fixed on a tangible medium. 17 U.S.C. § 101 defines the point of "creation" of a copyrighted work as follows:

> A work is "created" when it is fixed in a copy or phonorecord for the first time; where a work is prepared over a period of time, the portion of it that has been fixed at any particular

expensive, provides more substantive protection over the IP asset embodied in the tangible medium, as copyright law does nothing to protect "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in … [any copyrighted] work."[137]

Therefore, it would be useful in the context of reducing tax liability to urge clients to pursue patent protection on their software and characterize these projects as patentable "systems" rather than copyrightable "software". As mentioned previously, the use of the Provisional Patent Application followed by a Utility Patent Application, even if there is a question as to whether the software system is patentable is warranted in this case if only to take advantage of the tax treatment afforded bifurcated ownership of co-inventors. Since modern software has a lifespan of three years or less, this fact coupled with the latency within the USPTO in processing requests for software related patents could in many cases mean that the software will be obsolete prior to the issuance of the first

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time constitutes the work as of that time, and where the work has been prepared in different versions, each version constitutes a separate work.

[137] 17 U.S.C. § 102. Subject matter of copyright: In general

(a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include the following categories:
   (1) literary works;
   (2) musical works, including any accompanying words;
   (3) dramatic works, including any accompanying music;
   (4) pantomimes and choreographic works;
   (5) pictorial, graphic, and sculptural works;
   (6) motion pictures and other audiovisual works;
   (7) sound recordings; and
   (8) architectural works.

Office Action on the merits from the USPTO.[138] Procedurally, this process might look as follows:

- Software is partly developed in the United States and shipped for completion to a contractor overseas.
- Provisional Patent Application is filed with co-inventors including foreign hybrid developers and/or technical specialist patent agent/attorneys.
- Software product is completed and shipped to the U.S. corporation, which is billed for the product completion and patent preparation costs.
- Foreign hybrid purchases remaining rights from the U.S. corporation, and licenses back patent rights to U.S. corporation.
- Foreign hybrid files for Utility Patent in United States within 12 months of PPA filing and simultaneously increases fees to the U.S. corporation for the potential patent rights in the software.
- 2-3 years pass. Foreign hybrid abandons Utility Patent Application if necessary. PPAs are filed on subsequent patentable(?) improvements in the software and the cycle repeats. U.S. corporation may be made contractually liable for losses if no patent is obtained.

(b) In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.

[138] Latencies in software patents have been ranging from 2-3 years from date of filing of the Utility Patent Application, meaning that in reality if a Provisional Patent Application is filed

While this outline is somewhat crude and should be considered in light of other IP protection strategies,[139] it does illustrate the basic concept and shows that there are distinct tax advantages to characterizing software developments in terms of patentable inventions as compared to copyrightable software, even though there is no difference in the tangible media on which both reside.

Business Methods

Possibly the most tantalizing tax opportunity in regards to new classes of patentable subject matter is that of "business method" patents. Prior to the 1998 decision in *State Street*,[140] it had been generally accepted that methods of doing business, even if coupled with inventive computer hardware, software, and/or processes, were outside the scope of patentable subject matter.[141] The change in stance by the Federal Circuit has

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it might be as long as 4 years between the time of filing the first patent application and the results from the USPTO.

139 *See* Fabio Elia Marino and Michael Joel Schallop, "A Strategic Approach to Intellectual Property Protection for Software", INTELLECTUAL PROPERTY TODAY, Vol. 6. No. 2, at 8 (February, 1999).

140 *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 47 U.S.P.Q.2d 1596 (Fed. Cir. 1998) (patent cannot be held invalid under 35 U.S.C. § 101 pursuant to so-called "business method" exception to statutory subject matter, since business methods are subject to same legal requirements for patentability as any other process or method). *See also*, Scott M. Alter, "The Rest of the Wall Comes Down: Federal Circuit Holds Software is Freely Patentable", INTELLECTUAL PROPERTY TODAY, Vol. 5, No. 9, page 32-33 (September 1998); Gregory J. Maier, "State Street Bank: Are Useful Algorithms Patentable?", INTELLECTUAL PROPERTY TODAY, Vol. 6. No. 3, at 18 (March, 1999).

141 *See In re Patton*, 127 F.2d 324, 327, 53 U.S.P.Q. 376, 379 (CCPA 1942) (a system for transacting business, separate from the means for carrying out the system, is not patentable subject matter, and jurisprudence does not require the creation of a distinct business class of unpatentable subject matter).

The arguments against business methods are more generally put forth in *In re Schrader*, 22 F.3d 290, 30 U.S.P.Q.2d 1455 (Fed. Cir. 1994) which states:

> The cases simply reaffirm that the patent system is directed to tangible things and procedures, not mere ideas. *See Rubber-Tip Pencil Co. v. Howard*, 87

triggered a flood of business-related method patents that generally integrate some form of computer hardware and/or software with business methods to achieve a more optimal (and profitable) overall business operating environment.

While the present patent bar views these new forms of patent protection as offensive and defensive weapons to provide a business advantage to their clients,[142] there also exists a potential tax benefit to the use of these patents irrespective of whether the patent has commercial marketability or enforceability.[143] Consider the use of the previously detailed patent IP exporting methodology in terms of the following context illustrated in Figure 13. Here we have a business method developed *in concept* (but not reduced to practice) in the United States for a large corporation. ⓪ The concept (with contingent patent rights) is sold to a foreign software development firm, ① who in turn applies for one or more U.S. patents. ② These patents ③ are then licensed to the original

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U.S. (20 Wall.) 498, 507 (1874) ("An idea of itself is not patentable, but a new device by which it may be made practically useful is"). Any historical distinctions between a method of "doing" business and the means of carrying it out blur in the complexity of modern business systems. *See Paine, Webber, Jackson and Curtis v. Merrill Lynch,* 564 F. Supp. 1358, 218 U.S.P.Q. 212 (D. Del. 1983), wherein a computerized system of cash management was held to be statutory subject matter.

I discern no purpose in perpetuating a poorly defined, redundant, and unnecessary "business methods" exception, indeed enlarging (and enhancing the fuzziness of) that exception by applying it in this case. All of the "doing business" cases could have been decided using the clearer concepts of Title 35. Patentability does not turn on whether the claimed method does "business" instead of something else, but on whether the method, viewed as a whole, meets the requirements of patentability as set forth in Sections 102, 103, and 112 of the Patent Act.

142 *See* Joel S. Goldman, "The State Street Bank Case – Its Implications to Financial Institutions", INTELLECTUAL PROPERTY TODAY, Vol. 6. No. 1, at 8 (January, 1999).

143 The patent statute was recently amended to provide a "First Inventor Defense" to business method patents. *See* F. Jason Far-Hadian, "Re: 35 U.S.C. § 273: 'First Inventor Defense'", INTELLECTUAL PROPERTY TODAY, Vol. 7. No. 4, at 12 (April, 2000).

U.S. parent corporation, or one of its subsidiaries ④ by a foreign licensing subsidiary.⑤ Profits from this venture flow out of the country and are not taxable to the U.S. parent corporation. What may be useful in this context is to integrate the "business method" to some form of manufacturing enterprise so as to take advantage of favorable tax rates in some foreign countries.[144] Since the licensing arm of the venture may be separated from the research/development/patenting portion of the proposed methodology, this portion of the income generator may be placed in a tax haven having even more favorable tax treatment.[145]

This particular form of IP exportation has particular applicability to modern trends in e-commerce wherein business method patents may cover both the methodologies involved in implementing a particular business system, but also include patents on the communication signals that are transmitted between software agents implementing this functionality.[146] Thus, while portions of the patented invention may be used overseas by the U.S. parent corporation, the mere fact that the communication signals terminate within the United States permits patent royalties to be extracted from the U.S. parent and deducted as payments to the foreign hybrid.

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[144] Currently Ireland has a 10% tax on manufacturing that will go to 12.5% in the future.

[145] Currently Bermuda and the Cayman Islands have a 0% tax rate, making them potential candidates for the licensing end of this operation.

[146] *See* Scott A. Horstemeyer and Daniel J. Santos, "A New Frontier in Patents: Patent Claims to Propagated Signals", INTELLECTUAL PROPERTY TODAY, Vol. 5. No. 7, at 16 (July, 1998).

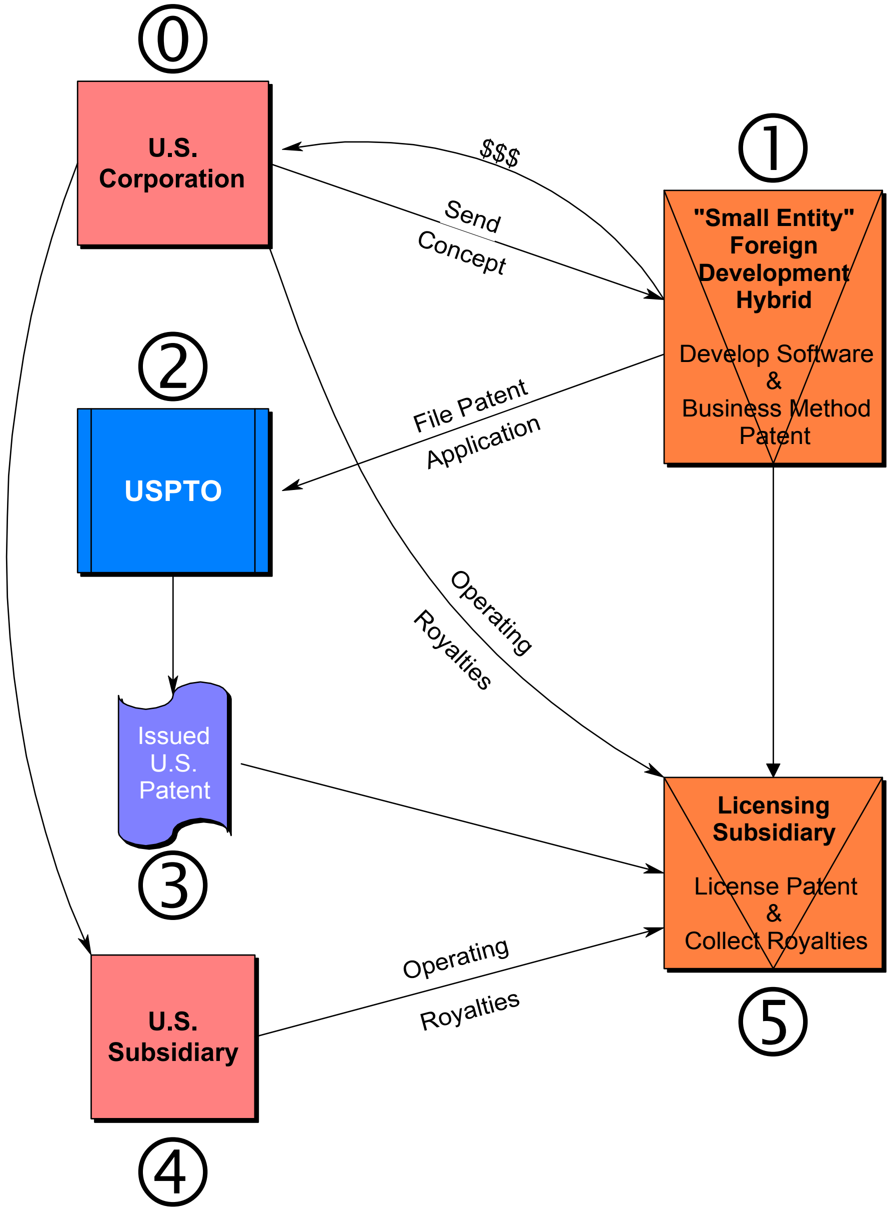

Figure 13: Use of Business Method Patents to Export U.S. Income

In summary, this proposed IP exporting methodology when coupled with "business method" patents seems to provide a way of exporting valuable **operating rights** in how a business functions on an everyday basis without incurring adverse tax consequences in the near term. This methodology appears to have all the advantages of trademark licensing with none of the drawbacks associated with the Treasury Regulations regarding arm's length pricing agreements. Furthermore, since the development costs for software and the like in this system are borne by inexpensive (yet skilled) overseas labor, the overall cost of the systems associated with the business method are drastically reduced over what they would be if done domestically in the United States.

EXPLOITING PATENT "HOLDER" STATUS

26 U.S.C. § 1235 Generally

Unknown to most tax practitioners and buried within the tax code is a little known provision of the Internal Revenue Code that provides for long term capital gain treatment for sales of patents and patent rights without the need for holding the asset for the traditional 1-year holding period.[147] This long-term capital gain treatment is provided for even if payments in consideration of such transfer are

(1) payable periodically over a period generally coterminous with the transferee's use of the patent, or

(2) contingent on the productivity, use, or disposition of the property transferred.

The sale/transfer requirement dictates that "all substantial rights to [the] patent, or an undivided interest therein which includes a part of all such rights"[148] be the object of the sale/transfer.

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[147] 26 U.S.C. § 1235. Sale or exchange of patents

(a) General. – A transfer (other than by gift, inheritance, or devise) of property consisting of all substantial rights to a patent, or an undivided interest therein which includes a part of all such rights, by any holder shall be considered the sale or exchange of a capital asset held for more than 1 year, regardless of whether or not payments in consideration of such transfer are –

(1) payable periodically over a period generally coterminous with the transferee's use of the patent, or

(2) contingent on the productivity, use, or disposition of the property transferred.

…

[148] *Id.*

Patent "Holders" Defined

Additionally, the transfer is restricted as to "holders" defined by the statute.[149] A "holder" is generally

(1) any individual whose efforts created such property, or

(2) any other individual who has acquired his interest in such property in exchange for consideration in money or money's worth paid to such creator prior to actual reduction to practice of the invention covered by the patent, if such individual is neither –

(A) the employer of such creator, nor

(B) related to such creator (within the meaning of 26 U.S.C. § 1235(d)).

Normally 26 U.S.C. § 1235(b)(2) would present an impermissible barrier to the type of taxation arrangement proposed in this paper. But note the following:

- If the methodologies presented in this paper are followed, the foreign

[149] 26 U.S.C. § 1235. Sale or exchange of patents

…

(b) "Holder" defined. – For purposes of this section, the term "holder" means –

(1) any individual whose efforts created such property, or

(2) any other individual who has acquired his interest in such property in exchange for consideration in money or money's worth paid to such creator prior to actual reduction to practice of the invention covered by the patent, if such individual is neither –

(A) the employer of such creator, nor

(B) related to such creator (within the meaning of subsection (d)).

(c) Effective date. – This section shall be applicable with regard to any amounts received, or payments made, pursuant to a transfer described in subsection (a) in any taxable year to which this subtitle applies, regardless of the taxable year in which such transfer occurred.

development hybrid who has a U.S. inventor satisfies 26 U.S.C. § 1235(b)(1) since based on U.S. patent law the foreign-placed U.S. inventor did through his efforts create the intellectual property which is the subject of the patent application.

- Furthermore, payment of money to the U.S.-based inventors prior to actual reduction to practice by the foreign development hybrid entitles the foreign hybrid to qualify under 26 U.S.C. § 1235(b)(2) as a holder, as long as the U.S. parent does not own more than 25% of the foreign development hybrid as required by 26 U.S.C. § 267 and 26 U.S.C. 707(b) as modified by 26 U.S.C. 1235(d)(1).[150]

While this favorable tax treatment may not be applied to non-resident aliens,[151] as 26 U.S.C. § 871(a) provides that this income is taxed at 30% rather than the normal capital gains rate of 20%,[152] there may still be a tax savings of approximately 5% over the

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[150] 26 U.S.C. § 1235. Sale or exchange of patents

…

(d) Related persons. – Subsection (a) shall not apply to any transfer, directly or indirectly, between persons specified within any one of the paragraphs of section 267(b) or persons described in section 707(b); except that, in applying section 267(b) and (c) and section 707(b) for purposes of this section –

(1) the phrase "25 percent or more" shall be substituted for the phrase "more than 50 percent" each place it appears in section 267(b) or 707(b), and

(2) paragraph (4) of section 267(c) shall be treated as providing that the family of an individual shall include only his spouse, ancestors, and lineal descendants.

…

[151] 26 U.S.C. § 1235. Sale or exchange of patents

…

(e) Cross reference. – For special rule relating to nonresident aliens, see section 871(a).

[152] 26 U.S.C. § 871. Tax on nonresident alien individuals

(a) Income not connected with United States business – 30 percent tax. –

standard corporate income tax by "flushing" royalty income through a non-resident alien using this technique.

Imputed Interest

The IRS has ruled that periodic payments made in conjunction with 26 U.S.C. 1235 are not subject to the interest imputation rules of 26 U.S.C. § 483[153] if the

(1) Income other than capital gains. – Except as provided in subsection (h), there is hereby imposed for each taxable year a tax of 30 percent of the amount received from sources within the United States by a nonresident alien individual as—

…

(D) gains from the sale or exchange after October 4, 1966, of patents, copyrights, secret processes and formulas, good will, trademarks, trade brands, franchises, and other like property, or of any interest in any such property, to the extent such gains are from payments which are contingent on the productivity, use, or disposition of the property or interest sold or exchanged, but only to the extent the amount so received is not effectively connected with the conduct of a trade or business within the United States.

153 Rev. Rul. 78-124, 1978-1 C.B. 147, 1978 WL 41965 (I.R.S.) (1978) – UNSTATED INTEREST; TRANSFER OF PATENT

Section 483. – Interest on Certain Deferred Payments, 26 CFR § 1.483-2: Treatment as interest for purposes of Code; exceptions and limitations to application of section 483.

Unstated interest; transfer of patent. Interest will not be imputed under section 483 of the Code to payments received for the transfer of all substantial rights to a patent meeting all the requirements of section 1235(a), even if the transfer is between related parties and therefore, because of the application of section 1235(d), does not qualify for capital gains treatment under section 1235(a); interest will be imputed under section 483 if the transfer fails to meet all the requirements of section 1235(a) because the transferor is not a holder as defined in section 1235(b). Rev. Rul. 72-138 superseded.

The Internal Revenue Service has reconsidered its position in Rev. Rul. 72-138, 1972-1 C.B. 140, concerning the application of section 483(f)(4) of the Internal Revenue Code of 1954, which excludes amounts received from the sale or exchange of patents from the imputed interest rules of section 483.

Situation 1. An individual transfers all substantial rights to certain patents to a corporation wholly owned by the individual. Payment of the purchase price is to be made at a stated percentage of the sales of the patented articles over the remaining life of the patent, but the total amount paid may not be less than a fixed minimum price. The individual is a 'holder' as defined in section 1235(b) of the Code, and the transfer meets all the requirements of section 1235. However, the individual and the corporation are 'related persons' within the meaning of section 1235(d).

Situation 2. A corporation transfers all substantial rights to certain patents to an unrelated corporation for a stated dollar amount. Payment of the purchase price is to be made periodically over the period of the transferee's use of the patent. The transfer meets all the requirements of section 1235 of the Code except that the transferor corporation is not a 'holder' as defined in section 1235(b).

In neither of the above situations was there any provision for the payment of interest.

Section 483 of the Code provides, in general, that, in the case of a contract for the sale or exchange of property in which no interest, or an inadequate rate of interest, is provided, a portion of each payment represents 'unstated interest' and is to be treated as interest income rather than part of the sales price.

Section 483(f)(4) of the Code and section 1.483-2(b)(4) of the Income Tax Regulations provide that section 483 does not apply to any payments made pursuant to a transfer described in section 1235(a) (relating to sale or exchange of patents). Section 1.480-2(b)(4) further provides that section 483 is applicable to transfers that are not described in section 1235(a) but which receive capital gain treatment under another section of the Code.

Section 1235(a) of the Code provides, in part, that a transfer (other than by gift, inheritance, or devise) of property consisting of all substantial rights to a patent by any holder is considered the sale or exchange of a capital asset held for more than 1 year (9 months for taxable years beginning in 1977; 6 months for taxable years beginning before January 1, 1977).

Section 1235(b) of the Code provides that, for purposes of section 1235, the term 'holder' means any individual whose efforts created the property or any other individual who has acquired an interest in the property in exchange for consideration in money or money's worth paid to the creator **prior to actual reduction to practice** of the invention covered by the patent, if the individual is neither the employer of the creator nor related to the creator (within the meaning of section 1235(d)).

Section 1235(d) of the Code provides, in part, that section 1235(a) does not apply to any transfer, directly or indirectly, between persons specified in any paragraph of section 267(b). In applying section 267(b) and (c) for purposes of section 1235, the phrase '25 percent or more' is substituted for the phrase 'more than 50 percent' each place it appears in section 267(d).

Rev. Rul. 72-138 concluded that, because the transfer in Situation 1 is between 'related parties' and the transfer in Situation 2 is made by a person other than a 'holder,' neither transfer is described in section 1235(a) of the Code because neither meets the requirements for capital gains treatment under section 1235(a). On the basis of this conclusion, the Revenue Ruling held that the exception provided by section 483(f)(4) is not applicable in either situation, and interest is required to be reported in accordance with the provisions of section 483.

The Service has determined that the transfer in Situation 1 does, in fact, meet all the requirements of section 1235(a) and is, therefore, a transfer described in section 1235(a), even though, because of the provision of section 1235(d), the transfer is not governed by section 1235(a) for purposes of determining whether the transfer is a sale or exchange of a capital asset. *See Busse v. Commissioner*, 479 F.2d 1147 (7th Cir. 1973), *aff'g* 58 T.C. 389 (1972), *acq.* page 5, this Bulletin; *Paxton v. Commissioner*, 53 T.C. 202 (1969), *acq.* page 5, this Bulletin; *Goldman v. United States*, 34 A.F.T.R.2d 6019 (E.D.La. 1974).

definitional requirements for “holder” and “related party” are met. This can have a significant impact on the deal formed between the foreign hybrid entity and the U.S. domestic corporation, and may provide some avenues for income shifting or tax deferral.

Practice Examples

Typical scenarios where this technique may have use are in cases where the U.S. parent corporation has the foreign development hybrid develop and apply for the patent. Once the patent issues, the U.S. parent purchases the patent rights that the foreign hybrid has retained (since they are co-owners due to addition of claims, etc.). This technique may be particularly advantageous in the case of Provisional Patent Applications, in which there is a 1-year pendency period in which the regular utility patent can be filed. Here, the rights in the future U.S. utility patent can be assigned back to the U.S. parent corporation by the foreign development hybrid prior to the 1-year anniversary date of the U.S. Provisional Patent Application. The IP resource has been enhanced by the foreign hybrid from a mere disclosure to a patent (with claims), and is thus significantly more valuable than in its prior form. The U.S. parent corporation can then pay handsomely for this and later use this income from foreign sources as it sees fit. In the meantime, the

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Accordingly, the exception provided by section 483(f)(4) of the Code applies to the transfer in Situation 1 because it is a transfer described in section 1235(a), even though section 1235(a) is not applicable because the transfer is to a related person.

In Situation 2, the transfer does not meet all the requirements of section 1235(a) of the Code because the transferor is not a 'holder' as defined in section 1235(b), and the transfer is, therefore, not a transfer described in section 1235(a). *Busse v. United States*, 543 F.2d 1321 (Ct. Cl. 1976); *Busse v. Commissioner*, 479 F.2d 1147, 1152 (7th Cir. 1973). Accordingly, because the transfer in Situation 2 is not a transfer described in section 1235(a) of the Code, the exception provided by section 483(f)(4) is not applicable, and interest is required to be reported in accordance with the provisions of section 483.

income has been essentially deferred until the foreign development hybrid distributes its earnings to the U.S. Since the foreign hybrid is not controlled by the U.S. parent corporation, there is nothing to prevent this income from being held for a significant period of time.

Rev. Rul. 72-138 is modified and superseded, since the position set forth in Rev. Rul. 72-138, as modified, is restated in this Revenue Ruling.

EXPLOITING PRIORITY DATES AND LABOR RATES

Overview

Yet other rationales for implementing the proposed system of exporting the patent prosecution and licensing functions include improving the priority dates of patent filings (by filing patents earlier than they would normally be filed if handled by U.S. patent counsel), and exploiting the lower labor rates in foreign countries having pools of unutilized educated labor.

Priority Dates

The issue of improving priority dates was not a significant concern in the past until the Supreme Court in *Pfaff v. Wells Electronics* [154] significantly changed the existing standard for when a patent application had to be filed to be within the 1-year safe harbor provided by the U.S. patent statute.[155] Prior court rulings had indicated that the 1-

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[154] *Pfaff v. Wells Electronics Inc.*, 525 U.S. 55, 119 S.Ct. 304, 142 L.Ed.2d 261, 98 Cal. Daily Op. Serv. 8319, 98 Daily Journal D.A.R. 11,535, 98 CJ C.A.R. 5775, 12 Fla. L. Weekly Fed. S 12, 48 U.S.P.Q.2d 1641 (1998) (invention can be "on sale" within meaning of 35 U.S.C. § 102(b) even if it has not yet been reduced to practice, since on-sale bar of Section 102(b) applies if, prior to critical date, product is subject of commercial offer for sale, and invention is ready for patenting, and since second condition may be satisfied by proof of reduction to practice before critical date, or by proof that prior to critical date inventor had prepared drawings or other descriptions of invention that were sufficiently specific to enable person skilled in art to practice invention).

[155] 35 U.S.C. § 102 generally provides that an inventor has a maximum of 1 year between the time of commercialization of the patent to the time of filing a U.S. patent, or he/she forfeits any right to obtain a patent:

35 U.S.C. § 102. Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or year statutory clock barring patentability started on first commercialization of the patented product, but that if the product had yet to be manufactured that the clock started on the later of the commercialization or the actual manufacture or reduction to practice of the product.

In *Pfaff*, the Supreme Court changed this standard by stating that if the product is "ready for patenting" and then commercialized, the statutory 1-year clock starts on the commercialization. This result drastically shortens the time period that companies have to apply for patents,[156] and can have a dramatic impact on the evaluation of and timing for filing patents on a wide variety of technologies,[157] especially business method

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(b) **the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States**, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g)

(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or

(2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

[156] *See* Robert J. Sayre, "The On-Sale Bar to Patentability and the Specter of Reduction to Practice", INTELLECTUAL PROPERTY TODAY, Vol. 5. No. 10, at 8 (October, 1998).

[157] *See* Lawrence B. Ebert, "The *Pfaff* Case and Evaluating Technology", INTELLECTUAL PROPERTY TODAY, Vol. 5. No. 5, at 8 (May, 1998).

patents.[158] Since the marketing arms of most companies are always aggressively marketing product prior to its actual design, construction, or manufacture, the need to aggressively promote the patenting process given the *Pfaff* decision cannot be overemphasized. While later decisions have moderated this ruling somewhat,[159] there still exists a significant danger for most U.S. business entities in failing to aggressively pursue patents during the design and manufacturing process of their business.

The application of these conditions in light of the proposed patenting methodology put forth in this document is clear: **export the generation of IP assets (patents) to overseas IP development hybrids that can react rapidly to the needs of U.S. businesses and protect them from the pitfalls indicated in the *Pfaff* decision.** Given that the U.S. patent bar is relatively small,[160] the solution is to have one or more U.S. patent practitioners "seed" the IP development effort overseas and train foreign nationals to do the majority of the logistical and clerical tasks associated with patent prosecution, as well as make use of the technical labor force in foreign countries to

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[158] *See* Lawrence B. Ebert, "*Pfaff* in View of *State Street*: Would You Have Known It If You Could Have Seen It?", INTELLECTUAL PROPERTY TODAY, Vol. 5. No. 12, at 42 (December, 1998); Lawrence B. Ebert, "More on *Pfaff v. Wells Electronics*: Knowing It When You See It", INTELLECTUAL PROPERTY TODAY, Vol. 5. No. 9, at 16 (September, 1998).

[159] *See Tec Air Inc. v. Denso Manufacturing Michigan Inc*., 192 F.3d 1353, 52 U.S.P.Q.2d 1294 (Fed. Cir. 1999) (reasonable jury could have found that infringement plaintiff's offers to sell fan blades did not raise on-sale bar of 35 U.S.C. Section 102(b), since evidence supports finding that subject matter of offers does not fully anticipate claimed invention, and since defendant does not argue that it would have rendered invention of patents in suit obvious; whether invention was ready for patenting at time of offers is irrelevant under these circumstances, since subject matter of commercial offer for sale must "be something within the scope of the claim").

[160] There are approximately 25000 patent agents/attorneys registered with the USPTO. Enrollment increases at approximately 1000-1200/year. However, this increase in bar membership has not kept pace with increases in demand for patent filings with the USPTO.

actually prepare the patent applications.[161] As long as the procedural restrictions regarding payment[162] and practice are followed,[163] this arrangement should present no

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161 37 CFR § 10 prohibits practice before the USPTO of non-registered individuals, whether or not they are attorneys. However, patent applications may be prepared by "technical specialists" and reviewed by registered patent agents/attorneys before being submitted to the USPTO. The registered patent agent/attorney is responsible for and named on the patent application as required by 37 CFR § 1.4.

162 37 CFR § 10.48 Sharing legal fees.

A practitioner or a firm of practitioners shall not share legal fees with a non-practitioner except that:

(a) An agreement by a practitioner with the practitioner's firm, partner, or associate may provide for the payment of money, over a reasonable period of time after the practitioner's death, to the practitioner's estate or to one or more specified persons.

(b) A practitioner who undertakes to complete unfinished legal business of a deceased practitioner may pay to the estate of the deceased practitioner that proportion of the total compensation which fairly represents the services rendered by the deceased practitioner.

(c) A practitioner or firm of practitioners may include non-practitioner employees in a compensation or retirement plan, even though the plan is based in whole or in part on a profit-sharing arrangement, providing such plan does not circumvent another Disciplinary Rule.

163 37 CFR § 10.23 Misconduct.

(a) A practitioner shall not engage in disreputable or gross misconduct.

(b) A practitioner shall not:

    (1) Violate a Disciplinary Rule.
    (2) Circumvent a Disciplinary Rule through actions of another.
    (3) Engage in illegal conduct involving moral turpitude.
    (4) Engage in conduct involving dishonesty, fraud, deceit, or misrepresentation.
    (5) Engage in conduct that is prejudicial to the administration of justice.
    (6) Engage in any other conduct that adversely reflects on the practitioner's fitness to practice before the Office.

(c) Conduct which constitutes a violation of paragraphs (a) and (b) of this section includes, but is not limited to:

    (1) Conviction of a criminal offense involving moral turpitude, dishonesty, or breach of trust.
    (2) Knowingly giving false or misleading information or knowingly participating in a material way in giving false or misleading information, to:

        (i) A client in connection with any immediate, prospective, or pending business before the Office.

        (ii) The Office or any employee of the Office.

    (3) Misappropriation of, or failure to properly or timely remit, funds received by a practitioner or the practitioner's firm from a client to pay a fee which the client is required by law to pay to the Office.
    (4) Directly or indirectly improperly influencing, attempting to improperly influence, offering or agreeing to improperly influence, or attempting to offer or agree to improperly influence an official action of any employee of the Office by:

        (i) Use of threats, false accusations, duress, or coercion,

(ii) An offer of any special inducement or promise of advantage, or

(iii) Improperly bestowing of any gift, favor, or thing of value.

(5) Suspension or disbarment from practice as an attorney or agent on ethical grounds by any duly constituted authority of a State or the United States or, in the case of a practitioner who resides in a foreign country or is registered under § 10.6(c), by any duly constituted authority of:

(i) A State,

(ii) The United States, or

(iii) The country in which the practitioner resides.

(6) Knowingly aiding or abetting a practitioner suspended or excluded from practice before the Office in engaging in unauthorized practice before the Office under § 10.158.

(7) Knowingly withholding from the Office information identifying a patent or patent application of another from which one or more claims have been copied. *See* §§ 1.604(b) and 1.607(c) of this subchapter.

(8) Failing to inform a client or former client or failing to timely notify the Office of an inability to notify a client or former client of correspondence received from the Office or the client's or former client's opponent in an inter partes proceeding before the Office when the correspondence

(i) could have a significant effect on a matter pending before the Office,

(ii) is received by the practitioner on behalf of a client or former client and

(iii) is correspondence of which a reasonable practitioner would believe under the circumstances the client or former client should be notified.

(9) Knowingly misusing a "Certificate of Mailing or Transmission" under § 1.8 of this chapter.

(10) Knowingly violating or causing to be violated the requirements of § 1.56 or § 1.555 of this subchapter.

(11) Knowingly filing or causing to be filed an application containing any material alteration made in the application papers after the signing of the accompanying oath or declaration without identifying the alteration at the time of filing the application papers.

(12) Knowingly filing, or causing to be filed, a frivolous complaint alleging a violation by a practitioner of the Patent and Trademark Office Code of Professional Responsibility.

(13) Knowingly preparing or prosecuting or providing assistance in the preparation or prosecution of a patent application in violation of an undertaking signed under § 10.10(b).

(14) Knowingly failing to advise the Director in writing of any change which would preclude continued registration under § 10.6.

(15) Signing a paper filed in the Office in violation of the provisions of § 10.18 or making a scandalous or indecent statement in a paper filed in the Office.

(16) Willfully refusing to reveal or report knowledge or evidence to the Director contrary to § 10.24 or paragraph (b) of § 10.131.

(17) **Representing before the Office in a patent case either a joint venture comprising an inventor and an invention developer or an inventor referred to the registered practitioner by an invention developer when**

(i) the registered practitioner knows, or has been advised by the Office, that a formal complaint filed by a federal or state agency, based on any violation of any law relating to securities, unfair methods of competition, unfair or deceptive acts or practices, mail fraud, or other civil or criminal conduct, is pending before a federal or state court or federal or state agency, or has been resolved unfavorably by such

ethical difficulties for a registered U.S. patent agent/attorney practicing in a foreign jurisdiction.

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court or agency, against the invention developer in connection with invention development services and

(ii) the registered practitioner fails to fully advise the inventor of the existence of the pending complaint or unfavorable resolution thereof prior to undertaking or continuing representation of the joint venture or inventor.

"Invention developer" means any person, and any agent, employee, officer, partner, or independent contractor thereof, who is not a registered practitioner and who advertises invention development services in media of general circulation or who enters into contracts for invention development services with customers as a result of such advertisement. "Invention development services" means acts of invention development required or promised to be performed, or actually performed, or both, by an invention developer for a customer. "Invention development" means the evaluation, perfection, marketing, brokering, or promotion of an invention on behalf of a customer by an invention developer, including a patent search, preparation of a patent application, or any other act done by an invention developer for consideration toward the end of procuring or attempting to procure a license, buyer, or patent for an invention. "Customer" means any individual who has made an invention and who enters into a contract for invention development services with an invention developer with respect to the invention by which the inventor becomes obligated to pay the invention developer less than $5,000 (not to include any additional sums which the invention developer is to receive as a result of successful development of the invention). "Contract for invention development services" means a contract for invention development services with an invention developer with respect to an invention made by a customer by which the inventor becomes obligated to pay the invention developer less than $5,000 (not to include any additional sums which the invention developer is to receive as a result of successful development of the invention).

(18) In the absence of information sufficient to establish a reasonable belief that fraud or inequitable conduct has occurred, alleging before a tribunal that anyone has committed a fraud on the Office or engaged in inequitable conduct in a proceeding before the Office.

(19) Action by an employee of the Office contrary to the provisions set forth in § 10.10(c).

(20) Knowing practice by a Government employee contrary to applicable Federal conflict of interest laws, or regulations of the Department, agency or commission employing said individual.

(d) A practitioner who acts with reckless indifference to whether a representation is true or false is chargeable with knowledge of its falsity. Deceitful statements of half-truths or concealment of material facts shall be deemed actual fraud within the meaning of this part.

EXPLOITING FOREIGN CORPORATION U.S. PRESENCE

It is important to realize that the disclosed cost reduction methodologies may be equally applied to foreign corporations that have a U.S. presence. Since foreign corporations currently receive 44% of the issued U.S. patents.[164] As illustrated in Table 2, the majority of these foreign interests come from Japan, but there are also significant numbers of companies in Europe that have a U.S. patent presence. Given that most of the foreign corporations filing for U.S. patents have a tax presence in the United States, the logical conclusion is that the IP shifting methodologies illustrated in this paper can be applied to these U.S. subsidiaries in order to reduce their U.S. tax liability and thus increase profits for their overseas parent corporations.

Table 2: Foreign Corporate U.S. Patent Issue Statistics[165]

Rank	# Patents	All Patents	Country	(Rank in 1998)	(# Patents)	(Change in # Patents)
1	32,515	19.2%	Japan	(1)	(32,119)	(+ 1.2%)
2	9,896	5.9%	Germany	(2)	(9,582)	(+ 3.3%)
3	4,526	2.7%	Taiwan	(4)	(3,805)	(+18.9%)
4	4,097	2.4%	France	(3)	(3,991)	(+ 2.7%)
5	3,900	2.3%	United Kingdom	(5)	(3,726)	(+ 4.7%)
6	3,679	2.2%	South Korea	(7)	(3,362)	(+ 9.4%)
7	3,678	2.2%	Canada	(6)	(3,537)	(+ 4.0%)
8	1,686	1.0%	Italy	(8)	(1,820)	(- 7.4%)
9	1,542	0.9%	Sweden	(11)	(1,346)	(+14.6%)
10	1,396	0.8%	Netherlands	(9)	(1,382)	(+ 1.0%)

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164 *See* Brigid Quinn and Kim Byars, "1999 PATENT STATISTICS ANNOUNCED", USPTO PRESS RELEASE #00-16, 703-305-8341 (March 2, 2000).

165 These statistics may be obtained from the USPTO website at http://www.uspto.gov/web/offices/com/speeches/00-16.htm.

CONCLUSION

In summary, it has been shown that there is a window within the current patent statute that permits bifurcation of ownership in U.S. intellectual property patent rights that is not available for either copyright or trademark forms of intellectual property. This bifurcation can occur using Provisional and/or Utility Patent Applications which constitute constructive reduction to practice and under current tax law permit legal ownership of the intangible patent asset to be split between U.S. corporations and foreign hybrid entities. This results in a plethora of potential tax savings opportunities, from relicensing the intangible back to the U.S. corporation under an exclusive basis to purchasing the intangible from the U.S. corporation prior to the asset significantly appreciating. In all these cases the system described herein results in lower tax costs, reduced fees, and faster processing of patent applications for the U.S. corporation.

While this technique is not currently known to be exploited by tax practitioners, it is surmised that the complexities of the associated patent matters and general ignorance of U.S. patent law have been the primary reasons this technique has not been previously exploited. Given the widespread growth of the Internet this technique is now technically feasible, as the placement of U.S. registered patent agent/attorneys overseas with high-speed communication links to U.S. corporations is now both practical and inexpensive. It is expected that once a foreign hybrid as explained herein is off the ground it will be possible to service a large number of U.S. corporations with little change in overhead. Furthermore, the widespread availability of educated labor in many foreign markets makes this and economically preferable solution to patent prosecution for U.S. companies irrespective of the tax savings presented herein.