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2105 Patentable Subject Matter — >Living Subject Matter<* [R-6]

The decision of the Supreme Court in *Diamond v. Chakrabarty*, 206 USPQ 193 (1980) held that microorganisms produced by genetic engineering are not excluded from patent protection by 35 U.S.C. 101. It is clear from the Supreme Court decision and opinion that the question of whether or not an invention embraces living matter is irrelevant to the issue of patentability. The test set down by the Court for patentable subject matter in this area is whether the living matter is the result of human intervention.

In view of this decision the Office >has issued<** these guidelines as to how 35 U.S.C. 101 will be interpreted.

The Supreme Court made the following points in the Chakrabarty opinion:

1. "Guided by these cannons of construction, this Court has read the term `manufacture' in § 101 in accordance with its dictionary definition to mean `the production of articles for use from raw materials prepared by giving to these materials new forms, qualities, properties, or combinations whether by hand labor or by machinery.' "

2. "In choosing such expansive terms as `manufacture' and `composition of matter,' modified by the comprehensive `any,' Congress plainly contemplated that the patent laws would be given wide scope."

3. "The Act embodied Jefferson's philosophy that `ingenuity should receive a liberal encouragement.' V Writings of Thomas Jefferson, at 75-76. See *Graham v. John Deere Co.*, 383 U.S. 1, 7-10 (1966). Subsequent patent statutes in 1836, 1870, and 1874 employed this same broad language. In 1952, when the patent laws were recodified Congress replaced the word `art' with `process,' but otherwise left Jefferson's language intact. The Committee Reports accompanying the 1952 act inform us that Congress intended statutory subject matter to `include any thing under the sun that is made by man.' S. Rep. No. 1979, 82d Cong. 2d Sess., 5 (1952) "

4. "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."

5. "Thus, a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity."

6. "His claim is not to a hitherto unknown natural phenomenon, but to a nonnaturally occurring manufacture or composition of matter — a product of human ingenuity `having a distinctive name, character [and] use.' "

7. "Congress thus recognized that the relevant distinction was not between living and inanimate things, but between products of nature, whether living or not, and human-made inventions. Here, respondent's microorganism is the result of human ingenuity and research."

8. After reference to *Funk Seed & Kalo Co.*, 333 U.S.127 (1948), "Here, by contrast, the patentee has produced a new bacterium with markedly different characteristics from any found in nature and one having the potential for significant utility. His discovery is not nature's handiwork, but his own; accordingly it is patentable subject matter under § 101."

A review of the Court statements above as well as the whole Chakrabarty opinion reveals:

(1) That the Court did not limit its decision to genetically engineered living organisms,

(2) The Court enunciated a very broad interpretation of "manufacture" and "composition of matter" in Section 101 (Note esp. quotes 1, 2, and 3 above),

(3) The Court set forth several tests for weighing whether patentable subject matter under Section 101 is present stating (in Quote 7 above) that:

> "The relevant distinction was not between living and inanimate things but between products of nature, whether living or not, and human-made inventions."

The tests set forth by the court are (note especially the italicized portions):

-"The laws of nature, physical phenomena and abstract ideas" are not patentable subject matter.

-"A nonnaturally occurring manufacture or composition of matter — a product of human ingenuity — having a distinctive name, character, [and] use." is patentable subject matter.

-"A new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated $E=mc^2$; nor could Newton have patented the law of gravity. Such discoveries are 'manifestations of . . . nature, free to all men and reserved exclusively to none.' "

-"However, the production of articles for use from raw materials prepared by giving to these materials *new forms, qualities, properties, or combinations whether by hand, labor or machinery* (emphasis added) is a manufacture under Section 101."

In analyzing the history of the Plant Patent Act of 1930, the Court stated: "In enacting the Plant Patent Act, Congress addressed both of these concerns [the belief that plants, even those artificially bred, were products of nature for purposes of the patent law . . . were thought not amenable to the written description]. It explained at length its belief that the work of the plant breeder 'in aid of nature' was patentable invention. S. Rep. No. 315, 71st Cong. 2d Sess. 6-8 (1930); H.R. Rep. No. 1129. 71st Cong. 2d Sess. 7-9 (1930)."

The Office will decide the questions as to patentable subject matter under 35 U.S.C. 101 on a case-by-case basis following the tests set forth in Chakrabarty, e.g., that "a nonnaturally occurring manufacture or composition of matter" is patentable, etc. It is inappropriate to try to attempt to set forth here in advance the exact parameters to be followed.

The standard of patentability has not and will not be lowered. The requirements of 35 U.S.C. 102 and 103 still apply. The tests outlined above simply mean that a rational basis will be present for any >35 U.S.C.<101 determination. In addition, the requirements of 35 U.S.C. 112 must also be met. In this regard, see >MPEP<§ 608.01(p).

>Following this analysis by the Supreme Court of the scope of 35 U.S.C. 101, the Board of Patent Appeals and Interferences has determined that plant subject matter or an animal may be protected under 35 U.S.C. 101. In *Ex Parte Hibberd*, 227 USPQ 443 (Bd PAI 1985) the Board held that plant subject matter may be the proper subject of a patent under 35 U.S.C. 101 even though such subject matter may be protected under the Plant Patent Act (35 U.S.C. 161 - 164) or the Plant Variety Protection Act (7 U.S.C. 2321 et seq.). In *Ex Parte Allen*, 2 USPQ2d 1425 (Bd PAI 1987), the Board decided that a polyploid Pacific coast oyster could have been the proper subject of a patent under 35 U.S.C. 101 if all the criteria for patentability were satisfied. Shortly after the *Allen* decision, the Commissioner of Patents and Trademarks issued a notice (Animals - Patentability, 1077 O.G. 24, April 21, 1987) that the Patent and Trademark Office would now consider non-naturally occurring, non-human multicellular living organisms, including animals, to be patentable subject matter within the scope of 35 U.S.C. 101.<

>2106< Patentable Subject Matter — Mathematical Algorithms or Computer Programs [R-6]

The U.S. Supreme Court decisions in *Diamond v. Diehr*, 450 U.S. 175, 209 USPQ 1 (1981) and *Diamond v. Bradley*, 450 U.S. 381, 209 USPQ 97 (1981) significantly affect an examiner's analysis under 35 U.S.C. 101 of patent applications involving mathematical equations, mathematical algorithms and computer programs.

In 35 U.S.C. 101, Congress has set forth the categories of inventions or discoveries which may be patentable as consisting of "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." Inventions involving mathematical equations, mathematical algorithms or computer programs, if statutory at all, would fall into the categories of statutory subject matter as processes, machines or manufactures. In construing 35 U.S.C. 101, the Supreme Court in *Diamond v. Diehr*, 450 U.S. 175, 209 USPQ 1, 6 (1981) and *Diamond v. Chakrabarty*, 447 U.S. 303, 206 USPQ 193 (1980), has applied a broad interpretation to statutory subject matter so as "to include anything under the sun that is made by man."

The Supreme Court also reiterated that certain categories of inventive activity should not be considered statutory subject matter. As set forth in *Diamond v. Diehr*, 209 USPQ 1, 7 (1981), "Excluded from such patent protection are laws of nature, physical phenomena, and abstract ideas." Citing *Parker v. Flook*, 437 U.S. 584, 198 USPQ 193 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ 673 (1972). A "scientific truth, or the mathematical expression of it, is not a patentable invention," *Mackay Radio Corp. & Telegraph Co. v. Radio Corp. of America*, 306 U.S. 86, 94, 40 USPQ 199, 202 (1939). In *Gottschalk v. Benson*,, supra, the Court concluded that an "algorithm, or mathematical formula, is like a law of nature, which cannot be the subject of a patent." Similarly, the Court in *Parker v. Flook*, held that an improved "method for computing 'an alarm limit'," where the application " did not purport to explain now the variables used in the formula were to be selected, nor did the application contain any disclosure relating to the chemical processes at work or the means of setting off an alarm or adjusting the alarm limit," is unpatentable subject matter under 35 U.S.C. 101.(See *Diamond v. Diehr*, 209 USPQ 1, 10 (1981)).

If the claims of an application are directed solely to one of the above judicially excluded areas of inventive activity, it is clear that a patent shall not issue. However, a claim is not unpatentable under 35 U.S.C. 101 merely because it includes a step(s) or element(s) directed to a law of nature, mathematical algorithm, formula or computer program so long as the claim as

a whole is drawn to subject matter otherwise statutory. In this regard, the following significant points of law may be gleaned from the *Diamond v. Diehr*, 209 USPQ 1 (1981) decision:

1. The "claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis." . . ."The 'novelty' of any element or steps in a process, or even of the process itself, is of *no relevance* in determining whether the subject matter of a claim falls within the 101 categories of possible patentable subject matter" (emphasis added).

2. "When a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101."

3. "When a claim recites a mathematical formula (or scientific principle or phenomenon of nature), an inquiry must be made into whether the claim is seeking patent protection for that formula in the abstract." (If the claim does seek protection for such a mathematical formula, it would be non-statutory under 35 U.S.C. 101).

4. "A mathematical formula as such is not accorded the protection of our patent laws . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." . . . "Similarly, insignificant post solution activity will not transform an unpatentable principle into a patentable process."

5. When a claim as in *Parker v. Flook*, 198 USPQ 193 (1978), is drawn "to a method for computing an 'alarm limit' (which) is simply a number," the claim is non-statutory under 35 U.S.C. 101 because *Flook* "sought to protect a formula for computing this number."

6. "It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." Citing *Funk Bros. Seed Co. v. Kalo Co.*, 333 U.S. 127, 76 USPQ 280 (1948); *Eibel Process Co. v. Minnesota and Ontario Paper Co.*, 261 U.S. 45 (1923); *Cochrane v. Deener*, 94 U.S. 780 (1876); *O'Reilly v. Morse*, 15 How. 62 (1853); and *Leroy v. Tatham*, 14 How. 156 (1852).

35 U.S.C. 101 CLAIM ANALYSIS

In determining eligibility for patent protection under 35 U.S.C. 101, the Supreme Court in *Diamond v. Diehr*, 209 USPQ 1 (1981), requires that the "claims must be considered as a whole." Consistent with this requirement, the Court concluded that "a claim drawn to subject matter otherwise statutory does not become non-statutory simply because it uses a mathematical formula, a computer program, or digital computer." Thus, the fact that a claim specifies that a computer performs certain calculation steps is irrelevant for the purpose of determining whether statutory subject matter has been recited. The fact that an application discloses that a mathematical formula is implemented solely by computer programming is likewise immaterial for this purpose.

The Court's requirement that the "claims must be considered as a whole" in effect leaves viable the CCPA's two-step procedure set forth in *In re Freeman*, 197 USPQ 464 (CCPA, 1978), as an appropriate test for determining if a claim involving mathematics and/or computer programming is in compliance with 35 U.S.C. 101. See also *In re Walter*, 205 USPQ 397 at 407 (CCPA, 1980), for clarification of the second *Freeman* step. In accordance with the first step of such analysis, each method or apparatus claim must be analyzed to determine whether a mathematical algorithm is either "directly" or "indirectly" recited. If the claim at issue fails to directly recite a mathematical algorithm, reference must be made to the specification in order to determine whether claim language indirectly recites mathematical calculations, formulas, or equations.

If a given claim directly or indirectly recites a mathematical algorithm, the second step of the analysis must be applied. Under this step, a determination must be made as to whether the claim as a *whole*, including all its steps or apparatus elements, merely recites a mathematical algorithm, or method of calculation. If so the claim does not recite statutory subject matter under 35 U.S.C. 101.

The Supreme Court in *Diamond v. Diehr*, 209 USPQ 1 (1981), provides some guidance in determining whether the claim as a whole merely recites a mathematical algorithm or method of calculation. The Court suggests that if "a *claim* containing a mathematical formula implements or applies that formula in a structure or process which, when *considered as a whole*, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101." (emphasis added)

Focusing on the application or implementation of a mathematical algorithm, the Supreme Court in *Diehr*, 209 USPQ 1 at 89 (1981), citing *Mackay Radio Corp. & Telegraph Co. v. Radio Corp. of America*, 306 US 86, 94, 40 USPQ 199, 202 (1939), explained that "while a scientific truth, or the mathematical expression of it, is not a patentable invention, a novel and useful structure created with the aid of a scientific truth may be." In this regard, the CCPA noted in *In re Walter*, 205 USPQ 397 at 407, (CCPA, 1980), that "If it appears that the mathematical algorithm is implemented in a specific manner to define structural relationship between the physical elements of the claim (in apparatus claims) or to refine or limit claim steps (in process claims), the claim being otherwise statutory, the claim passes muster under § 101."

The *Walter* analysis quoted above does not limit patentable subject matter to claims in which structural relationships or process steps are defined, limited, or refined by the application of the algorithm. In the post *Diehr* CCPA decision *In re Abele*, 214 USPQ 682 at 687 (CCPA, 1982), the court urged that *Walter* should be read broadly to require no more than that the "algorithm be applied in any manner to physical elements or process steps provided that its application is circumscribed by more than a field of use limitation or non-essential post-solution activity. Thus, if the claim would be otherwise statutory, id., albeit inoperative or less useful without the algorithm, the claim likewise presents statutory subject matter when the algorithm is

included". Also see *In re Pardo*, 214 USPQ 673 at 676 (CCPA, 1982).

In regard to post-solution activity, the Supreme Court in *Diehr* indicated that "insignificant post-solution activity will not transform an unpatentable principle into a patentable process." The claims in *Parker v. Flook*, which were held to be non-statutory, recited a post-solution activity of updating a number (i.e., an alarm limit), a step relating more to a method of calculation than to the physical process alluded to in the claim preamble. In *Diehr*, the Supreme Court characterized the post calculation activity of the type claimed in *Parker v. Flook* as being "token post-solution activity." In contrast, the post-solution activity in the *Diehr* claims consisted of automatically opening a rubber molding press, a step clearly tied in with the physical process of rubber molding. As stated by the CCPA in *In re Walter*, 205 USPQ 397 at 407, (CCPA, 1980), "if the end-product of a claimed invention is a *pure number*, as in *Benson* and *Flook*, the invention is non-statutory regardless of any post-solution activity which makes it available for use by a person or machine for other purposes."

It must also be recognized that even though a claim contains an application limiting preamble, even though it does not cover every conceivable application of a formula, or even though it does not totally preempt the formula, such a claim would be non-statutory, if, when considered as a whole, it merely recites a mathematical algorithm or method of calculation. As stated by the Supreme Court in *Diehr*, 209 USPQ 1 at 10, (1981), "A mathematical formula does not suddenly become patentable subject matter simply by having the applicant acquiesce to limiting the reach of that formula to a particular technological use." Similarly, the CCPA pointed out in *Walter*, 205 USPQ 397 at 409 (1980) that "Although the claim preamble relate the claimed invention to the art of seismic prospecting, the claims themselves are not drawn to methods of or apparatus for seismic prospecting; they are drawn to improved mathematical methods for interpreting the results of seismic prospecting. The specific end use recited in the preambles does not save the claims from the holding in *Flook*, since they are drawn to methods of calculation, albeit improved. Examination of each claim demonstrates that each has no substance apart from the calculations involved."

Also, in *Walter*, a Jepson preamble was not regarded as limiting the "subject matter as a whole," so as to avoid the >35 U.S.C.< 101 rejection. Similarly, preliminary data gathering steps may not affect the "subject matter as a whole" assessment. *In re Richman*, 195 USPQ 340, (CCPA 1977). Moreover, even the concluding step of building a bridge or dam may not suffice. *In re Sarker*, 200 USPQ 132 (CCPA, 1978). In other words, for purposes here, the "subject matter as a whole" must be viewed in context on a case by case basis.

In analyzing computer program related claims, it is essential to recognize that computer implemented "processes are encompassed within 35 U.S.C. 101 under the same principles as other machine implemented processes, subject to judicially determined exceptions, inter alia, mathematical formulas, methods of calculation, and mere ideas." *In re Johnson et al*, 200 USPQ 199 at 210, 211 (CCPA, 1978). Claims seeking coverage for a computer program implemented process have been held to be statutory by the CCPA in *In re Pardo*, 214 USPQ 673 (CCPA, 1982), *In re Toma*, 197 USPQ 852 (CCPA 1978), and *In re Chatfield*, 191 USPQ 730 (CCPA, 1976). In accordance with the two-step procedure outlined above, claims seeking coverage for a computer program would be non-statutory under 35 U.S.C. 101, only if, when considered as a whole, they merely recite a mathematical algorithm, or a method of calculation which is not applied in any manner to physical elements or process steps. Such an approach is the same as that contemplated for apparatus claims by the CCPA in *In re Pardo*, 214 USPQ 673 at 677 (CCPA, 1982). See also *In re Bradley and Franklin*, 202 USPQ 480 (CCPA, 1979).

Certain computer program related claims may be non-statutory under 35 U.S.C. 101 as falling within judicially determined exceptions outside the mathematics area. For example, consider the following claims:

(1) "A computer program comprising the steps of:

a) associating treatment rendered to a patient with a fee, and

b) billing said patient in accordance with the fee."

Here the computer program is claimed, not in terms of a specific instruction set, but alternatively as a series of steps broadly defining what the program is designed to accomplish. Such a claim should be viewed as non-statutory under 35 U.S.C. 101 as reciting a method of doing business.

(2) "A computer program for comparing array A(N) with array B(M) to generate array C comprising the steps of:

```
Do 70 N = 1,10
  Do 80 M = 1,20
    If A(N) = B(N) then C(M) = B(M)
      80 Continue
    70 Continue * * *"
```

This bare set of instructions fails to recite subject matter that falls within any statutory category. In this regard, a bare set of computer instructions does not set forth a sequence of steps which could be viewed as a statutory process. Such a computer language listing of instructions, when not associated with a computing machine to accomplish a specific purpose, would not constitute a machine implemented process, but would constitute non-statutory subject matter as the mere idea or abstract intellectual concept of a programmer, or as a collection of printed matter.

Further guidance on handling 35 U.S.C. 101 issues may also be gleaned from the CCPA's detailed claim analysis in the following decisions: *In re Chatfield*, 191 USPQ 730 (CCPA, 1976); *In re Johnson, Parrack and Lundsford*, 200 USPQ 199 (CCPA, 1979); *In re Sarker*, 200 USPQ 132 (CCPA, 1978); *In re Gelovatch and Arell*, 201 USPQ 136 (CCPA, 1979); *In re Bradley and Franklin*, 202 USPQ 480 (CCPA, 1979); *In re Walter*, 205 USPQ 397 (CCPA, 1980). *In re Taner*, 214 USPQ 678 (CCPA, 1982); *In re Pardo*, 214 USPQ 673 (CCPA, 1982); *In re Abele*, 214 USPQ 682 (CCPA, 1982); and *In re Meyer*, 215 USPQ 193 (CCPA, 1982).

In addition to handling 35 U.S.C. 101 issues in accordance

with the above analytical approach, it should be emphasized that examiners must also carefully examine mathematical algorithm or computer programming related applications to insure that they comply with the disclosure requirements of >35 U.S.C.<112 as well as the novelty and unobviousness requirements of >35 U.S.C.< 102 and 103.

>2106.01 Computer Programming and 35 U.S.C. 112, First Paragraph [R-6]

The requirements for sufficient disclosure of inventions involving computer programming is the same as for all inventions sought to be patented. Namely, there must be an adequate written description, the original disclosure should be sufficiently enabling to allow one to make and use the invention as claimed, and there must be presentation of a best mode for carrying out the invention.

The following guidelines, while applicable to a wide range of arts, are intended to provide a guide for analyzing 35 U.S.C. 112, first paragraph, issues in applications involving computer programs, software, firmware, or block diagram cases wherein one or more of the "block diagram" elements are at least partially comprised of a computer software component. It should be recognized that sufficiency of disclosure issues in computer cases necessarily will require an inquiry into both the sufficiency of the disclosed hardware as well as the disclosed software due to the interrelationship and interdependence of computer hardware and software.

Written Description

The function of the description requirement is to ensure that the inventor had possession of, as of the filing date of the application relied upon, the specific subject matter later claimed by him or her; how the specification accomplishes this is not material. *In re Herschler*, 200 USPQ 711, 717 (CCPA 1979) and further reiterated in *In re Kaslow*, 217 USPQ 1089 (CAFC 1983).

Best Mode

While the purpose of the best mode requirement is to "restrain inventors from applying for patents while at the same time concealing from the public the preferred embodiments of their inventions which they have in fact conceived", *In re Gay*, 135 USPQ 311, 315 (CCPA 1962); "There is no objective standard by which to judge the adequacy of a best mode disclosure. Instead, only evidence of concealment (accidental or intentional) is to be considered. That evidence, in order to result in affirmance of a best mode rejection must tend to show that the quality of an applicant's best mode disclosure is so poor as to effectively result in concealment". *In re Sherwood*, 204 USPQ 537, 544 (CCPA 1980). Also, see *White Consolidated Industries vs Vega Servo-Control*, 214 USPQ 796, 824 (S.D. Michigan, S. Div. 1982); affirmed on other grounds; 218 USPQ 961 (CCPA 1983).

Enablement

When basing a rejection on the failure of the applicant's disclosure to meet the enablement provisions of the first paragraph of 35 U.S.C. 112, the examiner must establish on the record that he has a *reasonable basis* for questioning the adequacy of the disclosure to enable a person of ordinary skill in the art to make and use the claimed invention without resorting to *undue experimentation*. See *In re Brown*, 177 USPQ 691 (CCPA 1973), *In re Ghiron*, 169 USPQ 723, (CCPA 1971). Once the examiner has advanced a reasonable basis for questioning the adequacy of the disclosure, it becomes incumbent on the applicant to rebut that challenge and factually demonstrate that his or her application disclosure is in fact sufficient. See *In re Doyle*, 179 USPQ at 232 (CCPA 1973), *In re Scarbrough*, 182 USPQ 298, 302 (CCPA 1974), *In re Ghiron, Supra.* <

>2106.02 Disclosure in Computer Programming Cases [R-6]

To establish a reasonable basis for questioning the adequacy of a disclosure, the examiner must present a factual analysis of a disclosure to show that a person skilled in the art would not be able to make and use the claimed invention without resorting to undue experimentation.

In computer cases, it is not unusual for the claimed invention to involve two areas of prior art or more than one technology, (*White Consolidated, Supra*, 214 USPQ at 821); e.g., an appropriately programmed computer and an area of application of said computer. In regard to the "skilled in the art" standard, in cases involving both the art of computer programming, and another technology, the examiner must recognize that the knowledge of persons skilled in both technologies is the appropriate criteria for determining sufficiency. See *In re Naquin*, 158 USPQ 317, (CCPA 1968); *In re Brown*, 177 USPQ 691 (CCPA 1973); and *White Consolidated, supra* at B22.

In a typical computer case, system components are often represented in a "block diagram" format, i.e., a group of hollow rectangles representing the elements of the system, functionally labelled and interconnected by lines. Such block diagram computer cases may be categorized into 1) systems which include but are more comprehensive than a computer and 2) systems wherein the block elements are totally within the confines of a computer.

BLOCK ELEMENTS MORE COMPREHENSIVE THAN A COMPUTER

The first category of such block diagram cases involves systems which include a computer as well as other system hardware and/or software components. In order to meet his burden of establishing a reasonable basis for questioning the adequacy of such disclosure, the examiner should initiate a factual analysis of the system by focusing on each of the individual block element components. More specifically, such an inquiry should focus on the diverse functions attributed to each block element as well as the teachings in the specification as to how such a component could be implemented. If based on such an analysis, the examiner can reasonably contend that more than routine experimentation would be required by one of ordinary skill in the art to implement such a component or

components, that component or components should specifically be challenged by the examiner as part of a 35 U.S.C. 112, first paragraph rejection. Additionally, the examiner should determine whether certain of the hardware or software components depicted as block elements are themselves complex assemblages which have widely differing characteristics and which must be precisely coordinated with other complex assemblages. Under such circumstances, a reasonable basis may exist for challenging such a functional block diagram form of disclosure. See *In re Ghiron, supra, In re Brown, supra.* Moreover, even if the applicant has cited prior art patents or publications to demonstrate that particular block diagram hardware or software components are old, it should not always be considered as self evident how such components are to be interconnected to function in a disclosed complex manner. See *In re Scarbrough,* supra, at 301 and *In re Forman,* 175 USPQ 12, 16 (CCPA 1972). Furthermore, in complex systems including a digital computer, a microprocessor, or a complex control unit as one of many block diagram elements, timing between various system elements may be of the essence and without a timing chart relating the timed sequences for each element, an unreasonable amount of work may be required to come up with the detailed relationships an applicant alleges that he has solved. See *In re Scarbrough, supra* at 302.

For example, in a block diagram disclosure of a complex claimed system which includes a microprocessor and other system components controlled by the microprocessor, a mere reference to a prior art, commercially available microprocessor, without any description of the precise operations to be performed by the microprocessor, fails to disclose how such a microprocessor would be properly programmed to either perform any required calculations or to coordinate the other system components in the proper timed sequence to perform the functions disclosed and claimed. If, in such a system, a particular program is disclosed, such a program should be carefully reviewed to insure that its scope is commensurate with the scope of the functions attributed to such a program in the claims. See *In re Brown, supra* at 695. If the disclosure fails to disclose any program and if more than routine experimentation would be required of one skilled in the art to generate such a program, the examiner clearly would have a reasonable basis for challenging the sufficiency of such a disclosure. The amount of experimentation that is considered routine will vary depending on the facts and circumstances of individual cases. No exact numerical standard has been fixed by the courts, but the "amount of required experimentation must, however, be reasonable" (*White Consolidated, Supra,* at 963. One court apparently found that the amount of experimentation involved was reasonable where a skilled programmer was able to write a general computer program, implementing an embodiment form, within four hours. (*Hirschfield, Supra,* at 279 et seq.). On the other hand, another court found that, where the required period of experimentation for skilled programmers to develop a particular program would run to 1 1/2 to 2 man) years, this would be "a clearly unreasonable requirement" (*White Consolidated, supra* at 963).

BLOCK ELEMENTS WITHIN A COMPUTER

The second category of block diagram cases occurs most frequently in pure data processing applications where the combination of block elements is totally within the confines of a computer, there being no interfacing with external apparatus other than normal input/output devices. In some instances, it has been found that particular kinds of block diagram disclosures were sufficient to meet the enabling requirement of 35 U.S.C. 112, first paragraph. See *In re Knowlton,* 178 USPQ 486 (CCPA 1973), *In re Comstock and Gilmer,* 178 USPQ 616 (CCPA 1973). Most significantly, however, in both the Comstock and Knowlton cases, the decisions turned on the appellants' disclosure of 1) a reference to and reliance on an identified prior art computer system and 2) an operative computer program for the referenced prior art computer system. Moreover, in Knowlton the disclosure was presented in such a detailed fashion that the individual program's steps were specifically interrelated with the operative structural elements in the referenced prior art computer system. The Court in *Knowlton* indicating that the disclosure did not merely consist of a sketchy explanation of flow diagrams or a bare group of program listings together with a reference to a proprietary computer in which they might be run. The disclosure was characterized as going into considerable detail into explaining the interrelationships between the disclosed hardware and software elements. Under such circumstances, the Court considered the disclosure to be concise as well as full, clear and exact to a sufficient degree to satisfy the literal language of 35 U.S.C. 112, first paragraph. It must be emphasized that because of the significance of the program listing and the reference to and reliance on an identified prior art computer system, absent either of these items, a block element disclosure within the confines of a computer should be scrutinized in precisely the same manner as the first category of block diagram cases discussed above.

Regardless of whether a disclosure involves block elements more comprehensive than a computer or block elements totally within the confines of a computer, the examiner, when analyzing method claims, must recognize that the specification must be adequate to teach how to practice the claimed method. If such practice requires particular apparatus, it is axiomatic that the application must therefore provide a sufficient disclosure of that apparatus if such is not already available. See *In re Ghiron, supra* at 727 and *In re Gunn,* 190 USPQ 402, 406 (CCPA 1976). When the examiner questions the adequacy of computer system or computer programming disclosures, the examiner's reasons for finding the specification to be non-enabling should be supported by the record as a whole. In this regard, it is also essential for the examiner to reasonably challenge evidence submitted by the applicant. For example, in *In re Naquin, supra,* an affiant's statement unchallenged by the examiner, that the average computer programmer was familiar with the subroutine necessary for performing the claimed process, was held to be a statement of fact which rendered the examiner's rejection baseless. In other words, unless the examiner presents a reasonable basis for challenging the disclosure in view of the record as a whole, a 35 U.S.C. 112, first paragraph rejection in a computer

system or computer programming case will not be sustained on appeal. See *In re Naquin, supra, In re Morehouse and Bolton*, 192 USPQ 29, 32 (CCPA 1976).

While no specific universally applicable rule exists for recognizing an insufficiently disclosed application involving computer programs, an examining guideline to generally follow is to challenge the sufficiency of such disclosures which fail to include either the computer program itself or a reasonably detailed flowchart which delineates the sequence of operations the program must perform. In programming applications whose software disclosure only includes a flowchart, as the complexity of functions and the generality of the individual components of the flowchart increase, the basis for challenging the sufficiency of such a flowchart becomes more reasonable because the likelihood of more than routine experimentation being required to generate a working program from such a flowchart also increases.

As stated earlier, once an examiner has advanced a reasonable basis or presented evidence to question the adequacy of a computer system or computer programming disclosure, the applicant must show that his or her specification would enable one of ordinary skill in the art to make and use the claimed invention without resorting to undue experimentation. In most cases, efforts to meet this burden involve submitting affidavits, referencing prior art patents or technical publications, arguments of counsel or combinations of these approaches

AFFIDAVIT PRACTICE (37 CFR 1.132)

In computer cases, affidavits must be critically analyzed. Affidavit practice usually initially involves analyzing the skill level and/or qualifications of the affiant, which should be of the routineer in the art. When an affiant's skill level is higher than that required by the routineer for a particular application, an examiner may challenge the affidavit since it would not be made by a routineer in the art, and therefore would not be probative as to the amount of experimentation required by a routineer in the art to implement the invention. An affiant having a skill level or qualifications above that of the routineer in the art would require less experimentation to implement the claimed invention than that for the routineer. Similarly, an affiant having a skill level or qualifications below that of the routineer in the art would require more experimentation to implement the claimed invention than that for the routineer in the art. In either situation, the standard of the routineer in the art would not have been met.

In computer systems or programming cases, the problems with a given affidavit, which relate to the sufficiency of disclosure issue, generally involve affiants submitting few facts to support their conclusions or opinions. Some affidavits may go so far as to present conclusions on the ultimate legal question of sufficiency. *In re Brandstadter, Kienzle and Sykes*, 179 USPQ 286 (CCPA 1973) illustrates the extent of the inquiry into the factual basis underlying an affiant's conclusions or opinions. In *Brandstadter*, the invention concerned a stored program controller (computer) programmed to control the storing, retrieving and forwarding of messages in a communications system. The disclosure consisted of broadly defined block diagrams of the structure of the invention and no flowcharts or program listings of the programs of the controller. The Court quoted extensively from the Examiner's Office Actions and Examiner's Answer in its opinion where it was apparent that the Examiner consistently argued that the disclosure was merely a broad system diagram in the form of labelled block diagrams along with statements of a myriad of desired results. Various affidavits were presented in which the affiants stated that all or some of the system circuit elements in the block diagrams were either well known in the art or "could be constructed" by the skilled design engineer, that the controller was "capable of being programmed" to perform the stated functions or results desired, and that the routineer in the art "could design or construct or was able to program" the system. The Court did consider the affiants' statements as being some evidence on the ultimate legal question of enablement but concluded that the statements failed in their purpose since they recited conclusions or opinions with few facts to support or buttress these conclusions. With reference to the lack of a disclosed computer program or even a flow chart of the program to control the message switching system, the record contained no evidence as to the number of programmers needed, the number of man-hours and the level of skill of the programmers to produce the program required to practice the invention.

It should be noted also that it is not opinion evidence directed to the ultimate legal question of enablement, but rather factual evidence directed to the amount of time and effort and level of knowledge required for the practice of the invention from the disclosure alone which can be expected to rebut a prima facie case of nonenablement. See *Hirschfield v. Banner, Commissioner of Patents and Trademarks*, 200 USPQ 276, 281 (D.D.C. 1978). It has also been held that where an inventor described the problem to be solved to an affiant, thus enabling the affiant to generate a computer program to solve the problem, such an affidavit failed to demonstrate that the application alone would have taught a person of ordinary skill in the art how to make and use the claimed invention. See *In re Brown, supra* at 695. The Court indicated that it was not factually established that the applicant did not convey to the affiant vital and additional information in their several meetings in addition to that set out in the application. Also of significance for an affidavit to be relevant to the determination of enablement is that it must be probative of the level of skill of the routineer in the art as of the time the applicant filed his application. See *In re Gunn, supra* at, 406. In this case each of the affiants stated what was known at the time he executed the affidavit, and not what was known at the time the applicant filed his application.

REFERENCING PRIOR ART DOCUMENTS

Earlier it has been discussed that citing in the specification the commercial availability of an identified prior art computer system is very pertinent to the issue of enablement. But in some cases, this approach may not be sufficient to meet the applicant's burden. Merely citing in an affidavit extracts from technical publications in order to satisfy the enablement requirement is not sufficient if it is not made clear that a person skilled in the art would know which, or what parts, of the cited circuits could be used to construct the claimed device or how they could be interconnected to act in combination to produce

the required results. See *In re Forman, supra* at 16. This analysis would appear to be less critical where the circuits comprising applicant's system are essentially standard components comprising an identified prior art computer system and a standard device attached thereto.

Prior art patents are often relied on by applicants to show the state of the art for purposes of enablement. However, these patents must have an issue date earlier than the effective filing date of the application under consideration. See *In re Budnick*, 190 USPQ 422, 424 (CCPA 1976). An analogous point was made in *In re Gunn, supra* where the court indicated that patents issued after the filing date of the applicant's application are not evidence of subject matter known to any person skilled in the art since their subject matter may have been known only to the patentees and the Patent and Trademark Office.

Merely citing prior art patents to demonstrate that the challenged components are old may not be sufficient proof since, even if each of the enumerated devices or labelled blocks in a block diagram disclosure were old per se, this would not make it self-evident how each would be interconnected to function in a disclosed complex combination manner. Therefore, the specification in effect must set forth the integration of the prior art, otherwise it is likely that undue experimentation, or more than routine experimentation would be required to implement the claimed invention. See *In re Scarbrough, supra* at 301. The Court also noted that any cited patents which are used by the applicant to demonstrate that particular box diagram hardware or software components are old must be analyzed as to whether such patents are germane to the instant invention and as to whether such components provide better detail of disclosure as to such components than an applicant's own disclosure. Also any patent or publication cited to provide evidence that a particular programming technique is well known in the programming art does not demonstrate that one of ordinary skill in the art could make and use correspondingly disclosed programming techniques unless both programming techniques are of approximately the same degree or complexity. See *In re Knowlton, supra* at 37 (CCPA 1974).

ARGUMENTS OF COUNSEL

Arguments of counsel may be effective in establishing that an examiner has not properly met his or her burden or has otherwise erred in his or her position. In these situations, an examiner may have failed to set forth any basis for questioning the adequacy of the disclosure or may have not considered the whole specification, including the drawings and the written description. However, it must be emphasized that arguments of counsel alone cannot take the place of evidence in the record once an examiner has advanced a reasonable basis for questioning the disclosure. See *In re Budnick, supra* at, 424;*In re Schulze*, 145 USPQ 716 (CCPA 1965); and *In re Cole*, 140 USPQ 230 (CCPA 1964). For example, in a case where the record consisted substantially of arguments and opinions of applicant's attorney, the Court indicated that factual affidavits could have provided important evidence on the issue of enablement. See *In re Knowlton, supra* at, 37 and *In re Wiseman*, 201 USPQ 658 (CCPA 1979).<

2120 The Statutory Bars of "Public Use" and "On Sale" (35 U.S.C.102(b)) [R-6]

35 U.S.C. 102(b). "A person shall be entitled to a patent unless * * *

(b) the invention was . . . 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 * * *."

INTRODUCTION

The legal standards applied in judicial decisions treating public use and on sale issues lack uniformity. Whatever may be advanced as a reason for this lack of uniformity, the Patent and Trademark Office is still confronted with the pragmatics of 37 CFR 1.56 (>MPEP< Chapter 2000) and the * active participation of "protestors" (>MPEP< Chapter 1900) in the patent examination process. One result has been the growing significance of public use and on sale issues to patent examiners.

The Office is mindful that public use and on sale questions

> "encompass . . . an infinite variety of factual situations which, when viewed in terms of the policies underlying § 102(b), present an infinite variety of legal problems wholly unsuited to mechanically-applied, technical rules." *Philco Corp. v. Admiral Corp.*, 131 USPQ 413, 419 (D.Del. 1961)

However, notwithstanding an infinite variety of factual situations, there are still decisions to be made by examiners regarding the particular view to adopt or the particular legal decision or decisions to follow in any one of the many facets of >35 U.S.C.< 102(b) activity.

Accordingly, guidance in this area is offered, short of "mechanically-applied, technical rules", so that patent applicants and examiners have a common reference point from which to foster uniformity and consistency of decision, at least within the framework of the patent examination process.

2121 General Overview [R-6]

THE DIFFERENCES BETWEEN PUBLIC USE AND ON SALE ACTIVITY

"Public use" and "on sale" activities are often referred to interchangeably. Although these activities have much in common, each has certain attributes which stand alone and relate to differing policy considerations. *Dart Industries v. E.I. duPont de Nemours & Co.*, 179 USPQ 392, 396 (7th Cir. 1973).

For example, there may be a public use of an invention absent *any* sales activity. Likewise, there may be a non-public, e.g., "secret", sale or offer to sell an invention which nevertheless constitutes a statutory bar. *Hobbs v. United States*, 171 USPQ 713, 720 (5th Cir. 1971).

In similar fashion, not all "public use" and "on sale" activities will necessarily occasion the identical result. Although both activities affect how an inventor may use an invention prior to the filing of a patent application, "non/commercial" >35 U.S.C.< 102(b) activity may not be viewed the same as similar "commercial" activity. Likewise, "public use" activity by an applicant may not be considered in the same light as similar

"public use" activity by one other than an applicant. Additionally, the concepts of "completion" and "experimental use" have differing significance in "commercial" and "non-commercial" environments.

THE POLICY CONSIDERATIONS

A basic policy consideration underlying >35 U.S.C.< 102(b) permits an inventor a one year grace period to finish his >or her< inventive work in order to avoid the filing of a patent application before his >or her< invention is complete or perfected. *Gen'l Elec. Co. v. United States*, 206 USPQ 260, 272 (Ct. Cl. 1979). There is an additional policy against premature "commercial exploitation":

> "[I]t is a condition upon an inventor's right to a patent that he shall not *exploit* his discovery *competitively* after it is ready for patenting; he must content himself with either secrecy, or legal monopoly . . . [I]f he goes beyond [the one year grace] period . . . he forfeits his right [to a patent] regardless of how little the public may have learned about the invention . . . ." *Metallizing Eng'g Co. v. Kenyon Bearing and Auto Parts Co.*, 68 USPQ 54, 58 (2d Cir. 1946) (emphasis supplied).

ACTIVITY BY ONE OTHER THAN AN APPLICANT

Public use or on sale activity of an invention, by anyone, with or without the consent or knowledge of a patent applicant claiming that invention, may constitute a statutory bar to that applicant under >35 U.S.C.< 102(b). *Electric Storage Battery Co. v. Shimadzu*, 307 U.S. 5, 19-20 (1939); *Andrews v. Hovey*, 123 U.S. 267, 275 (1887); *Lorenz v. Colgate-Palmolive Peet Co.*, 77 USPQ 138, 144 (3d Cir. 1948). Thus, a publicly used or sold invention of one other than an applicant may be "prior art" to that applicant *Gen'l Elec. Co. v. United States*, 206 USPQ 260, 272 (Ct. Cl. 1979), assuming the other requisites of >35 U.S.C.< 102(b) are present. See generally >MPEP< § 2124. However, in the case of public use activity by a party other than an applicant, and, absent evidence of a fiduciary or contractual relationship between the applicant and the "other party" (see *Smith and Griggs Mfg. Co. v. Sprague*, 123 U.S. 249, 257 (1887), the relevant inquiry is the extent that the public becomes "informed" of an invention from such public use activity. *Metallizing Eng'g Co. v. Kenyon Bearing and Auto Parts Co.*, 68 USPQ 54, 58 (2d Cir. 1946). This inquiry into the extent that the public becomes informed is not of initial concern to the examiner, since a prima facie case of public use (>MPEP< § 2124) may be established regardless of the "source" of >35 U.S.C.< 102(b) activity. *Electric Storage Battery Co., supra.* The burden to overcome the prima facie case in this regard rests with an applicant (>MPEP< § 2124).

The extent that the public becomes "informed" of an invention involved in public use activity by one other than an applicant depends upon the factual circumstances surrounding the activity. By way of *example only*, in an allegedly "secret" use by a party other than an applicant, if a large number of the employees of such a party, who are not under a promise of secrecy, are permitted unimpeded access to an invention, with affirmative steps by the party to educate others as to the nature of the invention, the public is "informed". *Chemithon Corp. v. Proctor & Gamble Co.*, 159 USPQ 139, 154 (D.Md. 1968), *aff'd.*, 165 USPQ 678 (4th Cir. 1970).

Even if public use activity by one other than an applicant is not sufficiently "informing", there may be adequate grounds upon which to base a rejection under >35 U.S.C.< 102(f) and 102(g). See *Dunlop Holdings v. Ram Golf Corp.*, 188 USPQ 481 (7th Cir. 1975).

2122 Preliminary Handling [R-6]

HOW THE QUESTIONS MAY ARISE

Questions involving >35 U.S.C.< 102(b) activity may arise during the patent examination process in a number of ways. An applicant or his >or her< appointed representative may raise the questions in compliance with the "duty of disclosure" responsibilities of 37 CFR 1.56 (>MPEP< Chapter 2000). One other than an applicant may present the questions by filing a protest under 37 CFR 1.291(a), 1.291(b) (>MPEP< Chapter 1900), or by petitioning for institution of public use proceedings under 37 CFR 1.292 (>MPEP< § 720). Additionally, the questions may become manifest from a Recommendation of the Board of Patent >Appeals and< Interferences (37 CFR 1.659) or from an interference record itself, e.g., a specific finding that an actual reduction to practice occurred more than one year prior to the filing date of an application, coupled with evidence of related commercial exploitation. Regardless of how the questions arise, the examiner must review thoroughly all the evidence of record before formulating a possible rejection of claimed subject matter under >35 U.S.C.< 102(b).

When questions of public use or on sale activity occur in a reissue application, the facts presented may raise issues relative to compliance with the "duty of disclosure" (37 CFR 1.56; >MPEP< Chapter 2000) during the pendency of the original patent. See *In re Altenpohl*, 198 USPQ 289 (Comm. Pat. 1976), *aff'd.*, *Altenpohl v. Diamond*, (D.D.C. 1980).

AFFIDAVIT OR DECLARATION UNDER 37 CFR 1.131

Affidavits or declarations submitted under 37 CFR 1.131 to swear behind a reference (>MPEP<§ 715.07) may constitute, among other things, an admission that an invention was "complete" (>MPEP<§ 2125.01) more than one year before the filing of an application. *In re Foster*, 145 USPQ 166, 173 (CCPA 1965); *Dart Industries v. E.I. duPont de Nemours & Co.*, 179 USPQ 392, 396 (7th Cir. 1973).

REQUIREMENT FOR INFORMATION

As an aid to the examiner in resolving public use or on sale issues, an applicant may be required to answer specific questions posed by the examiner and to explain or supplement any evidence already of record: 35 U.S.C. 132, 37 CFR 1.104(b); regarding reissue applications, see >37 CFR< 1.175(b). Questions can be posed to a protestor only where the protestor has access and protestor's participation in the application began prior to December 8, 1981 (see >MPEP<§ 1901.06). Information sought should be restricted to that which is *reasonably*

necessary for the examiner to render a decision on patentability.

A one or two month time period should be set by the examiner for any response to the requirement, unless the requirement is a part of an Office action having a shortened statutory period, in which case the period for response to the Office action will apply also to the requirement. If an *applicant* fails to respond in a timely fashion to a requirement for information, the application will be regarded as abandoned, 35 U.S.C. 133.

2123 Forms of Evidence [R-6]

Evidence and/or information submitted to examiners with regard to >35 U.S.C.< 102(b) activity may take the form of affidavits; declarations: depositions; answers to interrogatories; exhibits; transcripts of hearings or trials; stipulations; documents containing offers for sale, orders, invoices, receipts, delivery schedules; etc. Regardless of the form in which such evidence and/or information is submitted, examiners must resolve any related evidentiary issues of authenticity and probative value.

AUTHENTICITY AND PROBATIVE VALUE

Each item of >35 U.S.C.< 102(b) evidence must be evaluated by examiners with respect to *both* authenticity and the weight it should be accorded, i.e., probative value. Evidence in this regard submitted by an applicant which is adverse to his interests, i.e., not favorable to patentability, constitutes an implicit admission that such evidence is authentic, unless stated affirmatively to the contrary by the applicant. On the other hand, each item of submitted evidence favorable to patentability must be reviewed critically by the examiner for authenticity and probative value, bearing in mind the "uncompromising duty of candor and good faith" owned by an applicant to the Office with respect to such a submission and any representations made relative thereto: 37 CFR 1.56; >MPEP< Chapter 2000. Of course, affidavits or declarations identifying the source of each item of evidence and explaining its relevance and meaning would be helpful. However, despite such identifying affidavits or declarations, the examiner should note that even an applicant's good faith *adverse* testimony in this regard may be of little weight against substantial evidence to the contrary: *In re Theis*, 204 USPQ 188, 193 (CCPA 1979); *Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 581 (9th Cir. 1973).

If the authenticity of documentary evidence is contested by an applicant, or if alleged public use or on sale activity is by one other than an applicant or his >or her< assignee, the appropriate vehicle for determining >35 U.S.C.< 102(b) questions may be a public use proceeding under 37 CFR 1.292 (>MPEP<§ 720).

REQUIREMENT FOR INFORMATION

As an aid to resolving issues of authenticity, as well as to other related matters of >35 U.S.C.< 102(b) activity, an applicant may be required to answer specific questions posed by the examiner and to explain or supplement any evidence already of record: 35 U.S.C. 132, 37 CFR 1.104 (b); regarding reissue applications, see >37 CFR< 1.175 (b). Information sought should be restricted to that which is *reasonably necessary* for the examiner to render a decision on patentability.

A one or two month time period should be set by the examiner for any response to the requirement, unless the requirement is a part of an Office action having a shortened statutory period, in which case the period for response to the Office action will apply also to the requirement. If an *applicant* fails to respond in a timely fashion to a requirement for information, the application will be regarded as abandoned, 35 U.S.C. 133.

2124 Determination of the Prima Facie Case [R-6]

PREPONDERANCE V. CLEAR AND CONVINCING

Upon resolution of any evidentiary issues of authenticity and/or probative value (>MPEP< § 2123), the examiner must first determine whether there is a "*prima facie* case" under 35 U.S.C. 102(b): *In re Dybel*, 187 USPQ 593, 598 (CCPA 1975); *In re Blaisdell*, 113 USPQ 289, 293 (CCPA 1957). In order to make this determination, the examiner must ascertain if the 35 U.S.C. 102(b) evidence appears to be sufficient in the absence of rebuttal evidence: *In re Lintner*, 173 USPQ 560, 562 (CCPA 1972); *In re Freeman*, 177 USPQ 139, 142 (CCPA 1973).

Many judicial decisions have articulated varying statements *in litigation* regarding the standard of proof necessary to overcome the statutory presumption of validity (35 U.S.C. 282) after a patent issues. See *Hobbs v. United States*, 171 USPQ 713, 717-18 (5th Cir. 1971). However *in the examination* of an application before a patent issues, the standard by which the examiner should be guided is the "preponderance of the evidence test", that is, it is more likely than not from the evidence of record that >35 U.S.C.< 102(b) activity was present. See *Dickstein v. Seventy Corp.*, 187 USPQ 138, 139-40 (6th Cir. 1975), *cert. denied*, 423 U.S. 1055 (1976); *Bergstrom v. Sears, Roebuck & Co.*, 199 USPQ 269, 276 (D. Minn. 1978). This test is essentially synonymous with the standards enunciated in *Lintner and Freeman, supra*. In this regard, the examiner is reminded that an application of doubtful patentability should not be allowed unless and until issues pertinent to such doubt have been raised and overcome in the course of examination and prosecution, >MPEP< § 706.

Thus, if the examiner determines that a *prima facie* case exists, a rejection under >35 U.S.C.< 102(b) should be made. In response to this rejection, it is incumbent upon an applicant to come forward with "objective evidence": *In re Rinehart*, 189 USPQ 143, 147 (CCPA 1976); *In re Fielder*, 176 USPQ 300, 302 (CCPA 1973) to >rebut or overcome<**, the *prima facie* case. Rebuttal evidence is submitted to contradict or disprove the *prima facie* case. For example, an applicant may seek to show that alleged >35 U.S.C.< 102(b) activity (1) took place within the one year grace period (>MPEP< § 2126), or (2) was not "public", in the case of "public use" activity (>MPEP< § 2125.02). Contrasted to this is evidence alleging ** "experimental use" (>MPEP< § 2128.01), where the existence of the *prima facie* case is **>denied since as advanced by applicant the circumstances attending >35 U.S.C.< 102(b) activity were in

fact experimental in nature, see *T.P. Laboratories Inc. v. Professional Positions, Inc.*, 220 USPQ 577 (Fed. Cir., 1984).<

In determining whether the *prima facie* case exists, the examiner should *not* be concerned initially with **>allegations that the public use activity is permissible since it involves testing, experimentation, etc. Evidence of permissible< conduct becomes relevant only *after* the establishment of the *prima facie* case, when the burden shifts to an applicant to show ** by clear and convincing evidence >, that the use is experimental or otherwise the type of activity permitted under 35 U.S.C. 102(b).< *In re Dybel*, 187 USPQ 593, 598 (CCPA 1975); *Strong v. Gen'l Electric Co.*, 168 USPQ 8, 9 (5th Cir. 1970); >MPEP< § 2128. This does not mean, of course, that *>permitted< conduct should be overlooked entirely in evaluating evidence of >35 U.S.C.< 102(b) activity. However, *before* the evidence that such conduct was *>permitted< is scrutinized by the examiner, the *initial* step of determining the existence of the *prima facie* case must be taken. **

Determination by the examiner of the existence of a *prima facie* case must also be made in light of the different aspects of "public use", "on sale", and activity by one other than an applicant; as well as the import of evidence of "commercial exploitation", >MPEP< § 2121.

Documentary evidence is normally presented with respect to the *prima facie* case. However, testimony alone, if convincing and corroborated, may be sufficient. *Anderson Co. v. Trico Products Corp.*, 122 USPQ 52 (2d Cir. 1959). In the context of the patent examination process, testimony may take the form of depositions, interrogatories, court transcripts or other similar evidence. See >MPEP< § 2123 for a discussion of the related problems of authenticity and probative value. Although testimony of an applicant's subjective intent may be probative if adequately corroborated, it is of little weight against substantial evidence to the contrary: *In re Theis*, 204 USPQ 188, 193 (CCPA 1979); *Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 581 (9th Cir. 1973) >;*In re Smith and McLaughlin*, 218 USPQ 976, 983 (Fed. Cir. 1983)<.

ESTABLISHING PRIMA FACIE CASE

The principal inquiry with respect to the *prima facie* case (>MPEP< §§ 2125-2127) will cause the examiner to determine from the evidence: (1) exactly *what* was in public use or on sale in the United States; (2) when public use or on sale activity took place; and (3) whether any pending *claims* are anticipated by what was found to be in public use or on sale.

With regard to (3) directly above, even if some or all of the claims of an application are not deemed by the examiner to be anticipated by an invention found to have been in public use or on sale, a claimed invention must also be considered with respect to obviousness: *In re Foster*, 145 USPQ 166, 174 (CCPA 1965); *In re Corcoran*, 208 USPQ 867, 870 (CCPA 1981); *In re Kaslow*, 217 USPQ 1089 (Fed. Cir. 1983). A rejection may be based upon the obviousness of claimed subject matter in view of a >35 U.S.C.< 102(b) invention, since such an invention becomes part of the prior art for purposes of >35 U.S.C.< 103: *Timely Products Corp. v. Akron*, 187 USPQ 257, 267 (2d Cir. 1975); *n re Kaslow*, 217 USPQ 1089 (Fed. Cir. 1983). Furthermore, evidence of public use activity by one other than an applicant may also constitute sufficient grounds to support a rejection of claimed subject matter under >35 U.S.C.< 102(a), 102(f), or 102(g). See *Dunlop Holdings v. Ram Gulf Corp.*, 188 USPQ 481 (7th Cir. 1975).

2125 Determination of What Was in Public Use or on Sale in the United States

In order to determine what was in public use or on sale the examiner must look to the primary components of the *prima facie* case, i.e., "the invention [which] was . . . in public use or on sale in this country . . .". 35 U.S.C. 102(b).

2125.01 "The Invention" [R-6]

35 U.S.C. 102(b). "A person shall be entitled to a patent unless— * * *

(b) *the invention* was. . . 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 * * *."

"THE INVENTION" GENERALLY

As a general proposition, an invention cannot be considered in public use or on sale until it has been reduced "to a reality", i.e., until a working model or prototype has been made. *In re Theis*, 204 USPQ 188, 193 (CCPA 1979); *Hobbs v. United States*, 171 USPQ 713, 720 (5th Cir. 1971). Many courts equate reduction "to a reality" with an "actual" reduction to practice, as that test is normally used in interference proceedings, 35 U.S.C. 102(g). Reduction to practice in this context usually requires testing under actual working conditions in such a way as to demonstrate the practical utility of an invention for its intended purpose beyond the probability of failure, unless by virtue of the very simplicity of an invention its practical operativeness is clear. *Field v. Knowles*, 86 USPQ 373, 379 (CCPA 1950); *Steinberg v. Seitz*, 186 USPQ 209, 212 (CCPA 1975). >But see *UMC Electronics Company v. United States*, 228 USPQ 396 (U.S. Cls. Ct. 1985), where the court concluded that reduction to practice is not an absolute requirement of the on-sale bar.<

Although the test of an "actual" reduction to practice may be applicable to >35 U.S.C.< 102(b) activity, as where the nature of a particular invention requires development over a considerable period of time (*In re Josse-rand*, 89 USPQ 371 (CCPA 1951)), the better test is whether or not an invention is "complete." See also *Gen'l Elec. Co. v. United States*, 206 USPQ 260, 271 (Ct. Cl. 1979) >and *Barmag Barmer Maschinenfabrik v. Murata Machinery Ltd.*, 221 USPQ 561 (Fed. Cir. 1984). In *Barmag* the Court found that since each element of the claimed invention is embodied in the device placed in public use or on sale then the invention was complete at that time (note page 566 of the decision in Barmag)<.

The test for "completeness" of an invention is basically a matter of evaluating the subjective intent of an inventor, as manifested by the objective factual circumstances surrounding the development of the invention. However, an inventor's testimony alone with regard to such intent may be of little weight against substantial evidence to the contrary. *In re Theis*,

204 USPQ 188, 193 (CCPA 1979); *Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 581 (9th Cir. 1973). Since the test for "completeness" is often so intimately related to the **>question of experimental use< and its component parts, the examiner should also refer to >MPEP< § 2128.01 in this regard.

THE "COMPLETE" INVENTION

The nature of many inventions is such that an "actual" reduction to practice prior to the filing of a patent application never takes place. For inventions of this nature, the filing of the application serves as a "constructive" reduction to practice of the invention, >MPEP< § 715.07. Although there may be no reduction "to a reality" in this situation, objective factors are identifiable to indicate the degree of confidence and certainty which an inventor has in the nature, usefulness, and operability of his >or her< invention, i.e., whether or not the invention is "complete". *Philco Corp. v. Admiral Corp.*, 131 USPQ 413, 430 (D. Del. 1961). For example, where the evidence establishes that an inventor's confidence in an invention is shared by a party to whom the inventor has shown specific drawings, which in turn precipitated initial commercial activity relative to the invention by the other party, "completeness" is present. *Langsett v. Marmet Corp.*, 141 USPQ 903, 910-11 (W.D. Wisc. 1964). However, where parties enter into a contract to construct a device to meet certain performance factors, "completeness" may not be present until there is reasonable agreement that the performance factors have in fact been met.

Even if an invention *has* been reduced "to a reality", the invention is not necessarily "complete" unless one would know how the invention would work upon installation, *In re Dybel*, 187 USPQ 593, 598 (CCPA 1975). Such knowledge is not synonymous with a lack of *any* expectation of "problems" upon installation, as long as the "problems" are not due to "fundamental defects" in the invention. *In re Theis*, 204 USPQ 188, 195 n. 11 (CCPA 1979); *Nat'l Biscuit Co. v. Crown Baking Co.*, 42 USPQ 214, 215 (1st Cir. 1939).

The entire question of "completeness" may be mooted, however, where an affidavit or declaration is submitted by an applicant under 37 CFR 1.131 to swear behind a reference, >MPEP< § 715. Such an affidavit or declaration may constitute, among other things, an admission that an invention was "complete" more than one year before the filing of an application. *In re Foster*, 145 USPQ 166, 173 (CCPA 1965); Dart *Industries v. E.I. duPont de Nemours & Co.*, 179 USPQ 392, 396 (7th Cir. 1973).

2125.02 "In Public Use" [R-6]

35 U.S.C. 102(b).

"A person shall be entitled to a patent unless — * * * (b) the invention was . . . 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 * * *."

The phrase "in public use" is often referred to in its entirety, without careful delineation between its component parts — "public" and "use".

The "public" aspect of "public use" would seem to connote some impartation of knowledge to the public regarding the workings of an invention. Accordingly, there is a "public use" of an invention when it is used by the public (*Pennock v. Dialogue*, 27 U.S. 1 (1829)) or by an inventor himself in public (*City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126 (1877)). A single "public use" of an invention is within the meaning of the statutory terms. *Egbert v. Lippmann*, 104 U.S. 333, 336 (1881). >Mere knowledge of the invention by the public does not warrant rejection under 35 U.S.C. 102(b), as stated in *T.P. Laboratories, Inc. v. Professional Positions, Inc.* 220 USPQ 577, 581 (Fed. Cir. 1984), however such public knowledge may provide grounds for rejection under 35 U.S.C. 102(a)<.

However, an invention does not have to be "knowingly" exposed to the public in order to constitute a public use. There is a "public use" within the meaning of >35 U.S.C.< 102(b) even though by its very nature an invention is completely hidden from view as part of a larger machine or article, if the invention is otherwise used in public in its natural and intended way. *Hall v. Macneale*, 107 U.S. 90, 96-97 (1882); *In re Blaisdell*, 113 USPQ 289, 292 (CCPA 1957).

"Public" is not necessarily synonymous with "non-secret". Accordingly, a "secret" *or* a "non-secret" use of an invention by an inventor or his or her assignee in the ordinary course of a business for trade or profit is a "public use" of the invention (*Manning v. Cape Ann Isinglass & Glue Co.*, 108 U.S. 462, 465 (1983)), whether or not the invention could have been ascertained by a member of the public as a result of that use (*Metallizing Eng'g Co. v. Kenyon Bearing & Auto-Parts Co.*, 68 USPQ 54, 58 (2d Cir. 1946)). In similar fashion any "nonsecret" use of an invention by one other than an inventor in the ordinary course of a business for trade or profit may be a "public use", *Bird Provisions Co. v. Owens Country Sausage*, 197 USPQ 134, 138-40 (5th Cir. 1978). Additionally, even a "secret" use by one other than an inventor of a machine or process to make a product is "public" if the details of the machine or process are ascertainable by inspection or analysis of the product that is sold or publicly displayed, *Gillman v. Stern*, 46 USPQ 430 (2d Cir. 1940); *Dunlop Holdings v. Ram Golf Corp.*, 188 USPQ 481, 483-484 (7th Cir. 1975). However, a purely private use of an invention by an inventor and his immediate family for their own enjoyment and pleasure is not necessarily "public". *Bergstrom v. Sears, Roebuck & Co.*, 199 USPQ 269 (D. Minn. 1978).

2125.03 "On Sale" [R-6]

35 U.S.C. 102(b). "A person shall be entitled to a patent unless — * * *

(b) the invention was . . . 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 * * *."

Unlike questions of public use, there is no requirement that "on sale" activity be "public", *Hobbs v. United States*, 171 USPQ 713, 720 (5th Cir. 1971). "Secret" on sale activity is still within the statutory terms.

INTRODUCTION

An invention is "on sale" if it is sold, whether the patent owner has knowledge that the sale actually includes the invention (*C.T.S. Corp. v. Electro Mat'ls.*, 202 USPQ 22, 38 (S.D. N.Y. 1979)), or whether the sale is for profit (*Strong v. Gen'l Electric Co.*, 168 USPQ 8, 12 (5th Cir. 1970)) or conditional (*Henry v. Francestown Soap-Stone Co.*, 2 F. 78 (C.C.N.H. 1880)). Furthermore, the sale of even a single device may constitute a statutory bar. *Consolidated Fruit-Jar Co. v. Wright*, 94 U.S. 92, 94 (1876); *In re Theis*, 204 USPQ 188, 192 (CCPA 1979).

An outright sale of an invention is not the only act within the ambit of >35 U.S.C.< 102(b). Since the statute creates a bar when an invention is placed "on sale", a mere offer to sell is sufficient commercial activity (*In re Theis*, 204 USPQ 188, 192 (CCPA 1979); *Akron Brass Co. v. Elkhart Brass Mfg. Co.*, 147 USPQ 301, 305 (7th Cir. 1965); *Gen'l Elec. Co. v. United States*, 206, USPQ 260, 271 (Ct. Cl. 1979), even though the offer is never actually received by a prospective purchaser (*Wende v. Horine*, 225 F. 501 (7th Cir. 1915)). While some cases >have followed<* what has been termed the "on-hand doctrine" (*see, E.G., McCreery Eng'g Co. v. Mass. Fan Co.*, 195 F. 498 (1st Cir. 1912)), this doctrine is not followed by the Office. >The "on hand" doctrine is referred to by the Court in Barmag (supra at 565) as being "... no more than a factor to be taken into consideration."< Thus, actual delivery or present ability to deliver commercial quantities of an invention is not a prerequisite to a *prima facie* case under >35 U.S.C.< 102(b), *Johns-Manville Corp. v. Certain-Teed Corp.*, 146 USPQ 152, 157 (C.D. Cal. 1977).

SIGNIFICANT FACTORS INDICATIVE OF "COMMERCIAL EXPLOITATION"

As discussed in >MPEP< § 2121, a policy consideration in questions of >35 U.S.C.< 102(b) activity is premature "commercial exploitation" of a "completed" invention (>MPEP< § 2125.01). The extent of commercial activity which constitutes >35 U.S.C.< 102(b) "on sale" status is dependent upon the circumstances of the activity — the basic indicator being the subjective intent of the inventor. However, because an inventor's intent may be manifested in a multitude of ways, no one or particular combination of which is necessarily determinative of "commercial exploitation", the following activities should be used by the examiner as indicia of this subjective intent:

(1) preparation of various contemporaneous "commercial" documents, e.g., orders, invoices, receipts, delivery schedules, etc. (>MPEP< § 2123);

(2) preparation of price lists (*Akron Brass v. Elkhart Brass Mfg.*, 147 USPQ 301, 305 (7th Cir. 1965)) and distribution of price quotations (*Amphenol Corp. v. Gen'l. Time Corp.*, 158 USPQ 113, 117 (7th Cir. 1968));

(3) display of samples to prospective customers (*Cataphote Corp. v. DeSoto Chemical Coatings*, 148 USPQ 527, 529 (9th Cir. 1966); *Chicopee Mfg. Corp. v. Columbus Fiber Mills Co.*, 118 USPQ 53, 65-67 (M.D.Ga. 1958));

(4) demonstration of models or prototypes (*Gen'l Elec. Co. v. United States*, 206 USPQ 260, 266-67 (Ct. Cl. 1979); *Red Cross Mfg. v. Toro Sales Co.*, 188 USPQ 241, 244-45 (7th Cir. 1975); *Philco Corp. v. Admiral Corp.*, 131 USPQ 413; 429-30 (D.Del. 1961)), especially at trade conventions (*Interroyal Corp. v. Simmons Co.*, 204 USPQ 562, 563-65 (S.D. N.Y. 1979)), and even though no orders are actually obtained (*Monogram Mfg. v. F. & H. Mfg.*, 62 USPQ 409, 412 (9th Cir. 1944));

(5) use of an invention where an admission fee is charged (*In re Josserand*, 89 USPQ 371, 376 (CCPA 1951); *Greenewalt v. Stanley*, 12 USPQ 122 (3d Cir. 1931)); and

(6) advertising in publicity releases, brochures, and various periodicals (*In re Theis*, 204 USPQ 188, 193 n. 6 (CCPA 1979); *Interroyal Corp. v. Simmons Co.*, 204 USPQ 562, 564-66 (S.D.N.Y. 1979); *Akron Brass v. Elkhart Brass Mfg.*, 147 USPQ 301, 305 (7th Cir. 1965); *Tucker Aluminum Products v. Grossman*, 136 USPQ 244, 245 (9th Cir. 1963)).

The above activities may be determinative of "commercial exploitation" even though (1) prices are estimated rather than established, (2) no commercial production runs have been made, and (3) the invention is never actually sold, *Chromalloy American Corp. v. Alloy Surfaces Co.*, 173 USPQ 295, 301-02 (D.Del. 1972).

2125.04 "In This Country" [R-6]

35 U.S.C. 102(b). "A person shall be entitled to a patent unless — * * *

(b) the invention was. . . 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 * * *."

For purposes of judging the applicability of the >35 U.S.C.< 102(b) bars, public use or on sale activity must take place in the United States. While the "on sale" bar does not generally apply where both manufacture and delivery occur in a foreign country (*Gandy v. Main Belting Co.*, 143 U.S. 587, 593 (1892)), "on sale" status can be found if "substantial activity prefatory to a sale" occurs in the United States. *Robbins v. Lawrence Mfg. Co.*, 178 USPQ 577, 583 (9th Cir. 1973). An offer for sale, made or originating in this country, may be sufficient prefatory activity to bring the offer within the terms of the statute, even though sale and delivery take place in a foreign country. The same rationale applies to an offer by a foreign manufacturer which is communicated to a prospective purchaser in the United States prior to the "critical date" (>MPEP< § 2126.01) *C.T.S. Corp. v. Piher Int'l Corp.*, 201 USPQ 649 (7th Cir. 1979).

2126 Determination of When Public Use or On Sale Activity Took Place

In determining when public use or on sale activity took place, the time period which must be considered is one year before the filing date of an application.

2126.01 "More Than One Year Prior to the Date of the Application for Patent in the United States" [R-6]

35 U.S.C. 102(b). "A person shall be entitled to a patent unless — * * *

(b) the invention was . . . 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* * * *."

The "critical date" for purposes of activity under 35 U.S.C. 102(b) is one year prior to the effective filing date in the United States of an application for patent. In computing the one year period, the general rule of excluding the day on which the event occurs applies. Regarding the termination point, 35 U.S.C. 21 is dispositive. See >MPEP< § 201.13; *Ex parte Olah*, 131 USPQ 41 (Ed. App. 1960).

Of course, an application for patent may be entitled to the benefit of an earlier foreign filing date pursuant to the provisions of 35 U.S.C. 119, >MPEP< § 201.13. However, for purposes of >35 U.S.C.< 102(b), the "critical date" of an application claiming the benefit of foreign priority is one year before the *actual filing date* of the application in the United States, and *not* the foreign priority date to which the application may be entitled. 35 U.S.C. 104; 119, first paragraph.

The determination of the "critical date" of an application for purposes of >35 U.S.C.< 102(b) is not always a matter of merely looking to the application filing date. Continuing applications filed under >35 U.S.C.< 120, especially continuation-in-part applications, require extra care in determining the earliest effective filing date to which *particular claimed subject matter* is entitled. See generally >MPEP< § 201.07.

LATE CLAIMING

Under certain circumstances, the filing date of an amendment which includes subject matter found to have been in public use or on sale can affect the determination of the "critical date". This is the result of *Muncie Gear Works v. Outboard Motor Co.*, 315 U.S. 759, 53 USPQ 1, 5 (1942), where the Court invalidated claims because

> "there was public use, or sale, of devices embodying the asserted invention, . . . before it was *first presented* to the Patent Office." (Emphasis added.)

In invalidating the claims in question, the Court noted that

> "the amendments of December 8, 1928, like the original application, *wholly failed to disclose* the invention now asserted." (Emphasis supplied.)

The above quotations from *Muncie Gear* should be, and most often have been, read as merely involving an issue of "new matter", prohibited by what is now 35 U.S.C. 132. See *Cardinal of Adrian v. Peerless Wood Products*, 185 USPQ 712, 715-16 (6th Cir. 1975); *Faulkner v. Baldwin Piano & Organ Co.*, 195 USPQ 410, 413-15 (7th Cir. 1977); *Chicopee Mfg. Corp. v. Kendall Co.*, 129 USPQ 90, 93 (4th Cir. 1961); *Azoplate Corp. v. Silverlith*, 180 USPQ 616, 631 (D. Del. 1973).

The examiner should be guided by the "new matter" reading. *In re Goldman*, 205 USPQ 1086, 1089 (Comm. Pat. 1980). Accordingly,

> "'where the invention has been continuously disclosed in the application, an intervening public use or sale prior to the claiming of the invention will not constitute a bar.' "

Thus, in determining the "critical date" for all circumstances of >35 U.S.C.< 102(b) activity, the examiner should ascertain the effective U.S. filing date to which specific claimed subject matter is entitled in view of the original disclosure, >MPEP< §§ 201.07, 608.04. The date which particular subject matter was "first claimed" in a given application is not determinative.

2127 Determination of Whether Any Pending Claims Are Anticipated by or Obvious Over an Invention Found To Be in Public Use or on Sale [R-6]

All pending *claims* of an application must be compared by the examiner with the invention found to have been in public use or on sale. If any one claim of the application is anticipated by this invention, there is a *prima facie* case with respect to that particular claim.

Evidence of public use activity by one other than an applicant may also constitute sufficient grounds to support a rejection of claimed subject matter under >35 U.S.C.< 102(a), 102(f), or 102(g). See *Dunlop Holdings v. Ram Golf Corp.*, 188 USPQ 481 (7th Cir. 1975). Furthermore, even if some or all of the claims of an application are not deemed by the examiner to be anticipated by an invention found to have been in public use or on sale, a claimed invention should also be considered with respect to obviousness, *In re Foster*, 145 USPQ 166, 174 (CCPA 1965). A rejection may be based upon the obviousness of claimed subject matter in view of a >35 U.S.C.< 102(b) invention, since such an invention becomes part of the prior art for purposes of >35 U.S.C.< 103. *Timely Products Corp. v. Akron*, 187 USPQ 257, 267 (2d Cir. 1975). Thus, a public use or placing on sale under >35 U.S.C.< 102(b) is prior art which may support an obviousness rejection under >35 U.S.C.< 103, either alone or in combination with prior art or other information. See *In re Concoran*, 208 USPQ 867 (CCPA 1981); *In re Kaslow*, 217 USPQ 1089 (Fed. Cir. 1983).

2128 >Permitted Activity<* [R-6]

Once the examiner determines that a *prima facie* case exists, a rejection under >35 U.S.C.< 102(b) should be made. As discussed in >MPEP< § 2124, it is incumbent upon an applicant, in response to this rejection, to come forward with "objective evidence" (*In re Rinehart*, 189 USPQ 143, 147 (CCPA 1976); *In re Fielder et al.*, 176 USPQ 300, 302 (CCPA 1973)) to **>rebut or overcome< the *prima facie* case. Thus, evidence of *>permitted< activity becomes relevant only after the establishment of the *prima facie* case, when the burden shifts to an applicant to show such activity by clear and convincing evidence. *In re*

Dybel, 187 USPQ 593, 598 (CCPA 1975); *Strong v. Gen'l Electric Co.*, 168 USPQ 8, 9 (5th Cir. 1970). ** >In *Barmag* the Court granted summary judgment for the defendant since a prima facie public use by plaintiff was shown and plaintiff (Barmag) did not come forth with evidence to rebut the prima facie case. At page 568 of *Barmag* the Court states:

> In a summary judgment proceeding, the patent owner need, of course, only appropriately put forth facts indicating an ability to come forward with necessary evidence. *D.L. Auld Co. v. Chroma Graphic Corp.*, 714 F 2d at 1150, 219 USPQ at 17.
>
> Before the trial court and before this court Barmag was unable to point to proffered evidence supporting an inference that the offer for sale was for experimental purposes."<

The basis for*>permitted< activity under >35 U.S.C.< 102(b) is >for example,< that a public use or sale was for "experimental" purposes.

2128.01 * Experimental Use* [R-6]

INTRODUCTION

As a general rule, a *prima facie* case under 35 U.S.C. 102(b) cannot be found by the examiner unless an invention is "complete", >MPEP< § 2125.01. Experimental activity is quite often conducted by an inventor to determine "completeness", that is, operability and/or usefulness, as well as to ascertain if further modifications or refinements to an invention may be necessary. However, the extent of experimental activity permissible under >35 U.S.C.< 102(b) depends upon the nature of an invention and the scope and circumstances of the particular activity conducted, viewed in light of the subjective intent of an inventor, and *not* the intent or motives of a prospective customer or present user. *In re Theis*, 204 USPQ 188, 193 (CCPA 1979); *Tool Rsch. & Eng'g Co. v. Honcor Corp.*, 145 USPQ 249, 252 (S.D.Cal. 1964), *aff'd.*, 151 USPQ 236 (9th Cir. 1966), *cert. denied*, 387 U.S. 919 (1967).

SIGNIFICANT FACTORS INDICATIVE OF AN EXPERIMENTAL PURPOSE

Various judicial decisions have enunciated "tests" which are considered indicative of experimental purpose. These "tests" look to whether alleged * activity was "solely" experimental (*Dart Industries v. E.I. duPont de Nemours & Co.*, 179 USPQ 392, 397 n. 13 (7th Cir. 1973)), "primarily" experimental (*Robbins Co. v. Lawrence Mfg Co.*, 178 USPQ 577, 582 (9th Cir. 1973)), or experimental from a "weighing of the motives" of an inventor (*In re Yarn Processing Patent Validity Litigation*, 183 USPQ 65 (5th Cir. 1974)). Since these decisions all emanate from the same source — *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126 (1878) — careful analysis of that source is instructive.

The Court in *City of Elizabeth* found several factors persuasive of * experimental activity:

(a) the *nature of the invention* was such that any testing had to be to some extent public;

(b) testing had to be for a *substantial period of time*;

(c) testing was conducted under the *supervision and control* of the inventor; and

(d) the inventor *regularly inspected* the invention during the period of experimentation.

Some lower court decisions have highlighted the lack of any apparent "profit motive" in *City of Elizabeth* for the proposition that true experimental activity cannot reveal *any* evidence of profit. However, *bona fide* experimental activity may involve some incidental income. *In re Dybel*, 187 USPQ 593, 597 n. 5 (CCPA 1975). Of course, the extent and circumstances precipitating the incidental income may be indicative of the *bona fide* nature of the experimental activity.

Supreme Court decisions subsequent to *City of Elizabeth* identify other significant factors which may be determinative of experimental purpose:

(e) extent of any *obligations or limitation* placed on a user during a period of experimental activity, as well as the extent of an testing actually performed during such period (*Egbert v. Lippmann*, 104 U.S. 333 (1881));

(f) *conditional nature* of any sale associated with experimental activity (*Hall v. Macneale*, 107 U.S. 90 (1882)); and

(g) length of *time and number of cases* in which experimental activity took place, viewed in light of what was reasonably necessary for an alleged experimental purpose (*Int'l Tooth Crown Co. v. Gaylord*, 140 U.S. 55 (1891)).

Other judicial opinions have supplemented these factors by looking to the extent of any:

(h) explicit or implicit obligations placed upon a user to supply an inventor with the *results of any testing* conducted during an experimental period and the *extent of inquiry* made by the inventor regarding the testing (*Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 583 (9th Cir. 1973));

(i) disclosure by an inventor to a user regarding what the inventor considers as *unsatisfactory operation* of the invention (*In re Dybel*, 187 USPQ 593, 599 (CCPA 1975)); and

(j) effort on the part of an inventor to *retrieve* any "experimental samples" at the end of an experimental period (*Omark Industries v. Carlton Co.*, 201 USPQ 825, 830 (D.Ore. 1978)).

Summarizing the above, once alleged experimental activity is advanced by an applicant to *>explain< a *prima facie* case under >35 U.S.C.< 102(b), the examiner must determine whether the scope and length of the activity were reasonable in terms of the experimental purpose intended by the applicant and the nature of the subject matter involved. No one or particular combination of "factors" (a) through (j) are necessarily determinative of this purpose.

In the case of "public use" activity, if the examiner finds clear and convincing evidence of reasonableness, then any profit or commercial advantage achieved as a result of experimental activity may be viewed as merely incidental to the primary purpose of experimentation. *Smith & Griggs Mfg. Co. v. Sprague*, 123 U.S. 249, 256 (1887); *In re Theis*, 204 USPQ 188, 194, (CCPA 1979). On the other hand, in the case of "on sale" activity, or of public use activity with commercial overtones, if the examiner finds that the circumstances of any alleged experimental activity went beyond what was reasonable, than

the *>rejection< would not *>be overcome<. In these latter situations, the examiner should be guided by the "primarily for experimental purpose" test of *Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 582 (9th Cir. 1973); *In re Theis*, 204 USPQ 188, 194 (CCPA 1979). Accordingly, alleged experimental activity in these latter situations

> ". . . must be so limited as not to interfere with the effectuation of the policy underlying the general rule of early disclosure. An inventor may not be permitted to use a period of experimentation as a competitive tool." *Koehring Co. v. Nat'l Automatic Tool Co.*, 149 USPQ 887, 890 (7th Cir. 1966)

EXPERIMENTAL ACTIVITY SUBSEQUENT TO "COMPLETION" OF AN INVENTION

Whether experimental activity can continue after an invention is "complete" (>MPEP< § 2125.01) is a matter of scrutiny of the subjective intent of an inventor, viewed in light of the objective factual circumstances surrounding the particular activity.

Once an invention passes out of the experimental stage and becomes a "reality" for purposes of >35 U.S.C.< 102(b), later refinements or improvements will not ordinarily *>overcome< the *prima facie* case. *In re Theis*, 204 USPQ 188, 193-94 (CCPA 1979); *Gould v. United States*, 198 USPQ 156 (Ct. Cl. 1978). However, if an invention requires testing over a considerable period of time and the evidence shows no attempt by an inventor to use the invention for commercial purposes during this period, the testing may *>overcome the prima facie case<. *In re Josserand*, 89 USPQ 371 (CCPA 1951)

Regardless of intent, any "continued" experimental activity must relate to the *same* invention which was found to have been "complete". *In re Blaisdell*, 113 USPQ 289, 293 (CCPA 1957). The examiner is cautioned that an inventor's testimony in this regard may have little probative value against substantial evidence to the contrary. *In re Theis*, 204 USPQ 188, 193 (CCPA 1979); *Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 581 (9th Cir. 1973).

EXPERIMENTAL ACTIVITY IN AN ATMOSPHERE OF "COMMERCIAL EXPLOITATION"

If an applicant's purpose with regard to alleged experimental activity has commercial overtones, the policy against "commercial exploitation" is paramount, >MPEP< § 2121. Thus, even if there is *bona fide* experimental activity, an inventor may not commercially exploit an invention more than one year prior to the filing date of an application. *in re Theis*, 204 USPQ 188, 194 (CCPA 1979)

As the degree of commercial exploitation surrounding >35 U.S.C.< 102(b) activity increases, the burden on an applicant to establish clear and convincing evidence of experimental activity with respect to a *public use* becomes more difficult. Where the examiner has found a *prima facie* case of a *sale* or an *offer to sell*, this burden will rarely be met unless clear and convincing necessity for the experimentation is established by the applicant. This does not mean, of course, that there are *no* circumstances which would *>permit< alleged experimental activity in an atmosphere of "commercial exploitation". In certain circumstances, even a sale may be necessary to legitimately advance the experimental development of an invention if the "primary" purpose of the sale is experimental. *In re Theis*, 204 USPQ 188, 194 (CCPA 1979); *Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 582 (9th Cir. 1973). However, careful *scrutiny* by the examiner of the objective factual circumstances surrounding such a sale is essential. See *Ushakoff v. United States*, 140 USPQ 341 (Ct.Cl. 1964); *Cloud v. Standard Packaging Corp.*, 153 USPQ 317 (7th Cir. 1967).

2128.02 *>Experimentation< and the Development of Prototypes [R-6]

The construction of a prototype, or model, of an invention is not necessarily determinative of "completion". As discussed at >MPEP< § 2125.01, the nature of many inventions is such that an "actual" reduction to practice prior to the filing of a patent application never takes place. Thus, where a prototype has not been made or tested, commercial activity regarding such an invention may well constitute permissible solicitation of suggestions regarding modifications or refinements not significant under >35 U.S.C.< 102(b). >MPEP< § 2128.05

However, where an inventor has confidence in the utility and operability of an invention, which confidence is shared by a potential purchaser who begins commercialization based upon information or drawings supplied by the inventor, prohibitive >35 U.S.C.< 102(b) activity is present. *Langsett v. Marmet Corp.*, 141 USPQ 903, 910-11 (W.D.Wisc. 4); >MPEP< § 2125.01.

Where a prototype of an invention *has* been constructed, inquiry by the examiner should be upon the general requisites of "completion" (>MPEP< § 2125.01), which do *not* require that the invention be at a stage of development for full scale commercial production. *Johns-Manville Corp. v. Certain-Teed Corp.*, 196 USPQ 152, 157 (C.D.Cal. 1977). In similar fashion, if the examiner concludes from the evidence of record that an applicant was satisfied that an invention was in fact "complete", awaiting approval by the applicant from an organization such as Underwriters' Laboratories will not normally overcome this conclusion. *Interroyal Corp. v. Simmons Co.*, 204 USPQ 362, 366 (S.D.N.Y. 1979); *Skill Corp. v. Lucerne Products*, 178 USPQ 562, 565 (N.D.Ill. 1973), *aff'd.*, 183 USPQ 396, 399 (7th Cir. 1974), *cert. denied*, 183 USPQ 65 (1975).

DISPOSAL OF PROTOTYPES

Where a prototype of an invention has been disposed of by an inventor before the "critical date", inquiry by the examiner should focus upon the intent of the inventor and the reasonableness of the disposal under all circumstances. The fact that an otherwise reasonable disposal of a prototype involves incidental income is not necessarily fatal. *In re Dybel*, 187 USPQ 593, 597 n. 5 (CCPA 1975). However, if a prototype is considered "complete" by an inventor and all experimentation on the underlying invention has ceased, unrestricted disposal of the prototype constitutes a bar under >35 U.S.C.< 102(b). *In re*

Blaisdell, 113 USPQ 289 (CCPA 1957); *contra, Watson v. Allen*, 117 USPQ 68 (D.C.Cir. 1957).

2128.03 * >Experimentation< and the Degree of Supervision and Control Maintained by an Inventor over an Invention [R-6]

As discussed with reference to *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126 (1878) (>MPEP< § 2128.01), a significant determinative factor in questions of experimental purpose is the extent of supervision and control maintained by an inventor over an invention during an alleged period of experimentation See also *Root v. Third Avenue R.R. Co.*, 146 U.S. 210 (1982). When an inventor relinquishes supervision and control, subsequent activity with an invention must be scrutinized carefully by the examiner to determine whether there is clear and convincing evidence that such activity is reasonably consistent with the experimental purpose advanced by the inventor. *Magnetics v. Arnold Eng'g Co.*, 168 USPQ 392, 394 (7th Cir. 1971). However, once a period of experimental activity has ended and supervision and control has been relinquished by an inventor without any restraints on subsequent use of an invention, an unrestricted subsequent use of the invention is a >35 U.S.C.< 102(b) bar. *In re Blaisdell*, 113 USPQ 289, 293 (CCPA 1957).

2128.04 *>Permitted< Experimental *>Activity< and the Testing of an Invention [R-6]

Testing of an invention in the normal context of its technological development is generally within the **>realm of permitted experimental activity<. Likewise, experimentation to determine "utility", as that term is applied in 35 U.S.C. 101, may also constitute permissible activity. See *Gen'l Motors Corp. v. Bendix Aviation Corp.*, 102 USPQ 58, 69 (N.D.Ind. 1954) For example, where an invention relates to a chemical composition with no known utility, i.e., a patent application for the composition could not be filed (>35 U.S.C.< 101; 112, first paragraph), continued testing to find utility would likely be permissible under >35 U.S.C.< 102(b), absent a sale of the composition or other evidence of commercial exploitation.

On the other hand, experimentation to determine product acceptance, i.e., "market testing", is typical of a "trader's and not an inventor's experiment" and is thus not within the **>area of permitted experimental activity<. *Smith & Davis Mfg. Co. v. Mellon*, 58 F. 705, 707 (8th Cir. 1893) Likewise, testing of an invention for the benefit of appeasing a customer, *In re Theis*, 204 USPQ 188, 193 (CCPA 1979); *Cataphote Corp. v. DeSota Chem. Coatings*, 143 USPQ 292, 231-32 (N.D.Cal), *aff'd.*, 148 USPQ 229 (9th Cir.), *mod. on other grounds*, 149 USPQ 159 (9th Cir.), *cert. denied*, 385 U.S. 832 (1966) or to conduct "minor 'tune up' procedures not requiring an inventor's skills, but rather the skills of a competent technician . . ." (*In re Theis, supra*, at 194 n. 8), are also not within the exception.

2128.05 >Permitted< *Experimental >Activity<* Vis-a-Vis Modifications and Refinements to an Invention [R-6]

The fact that alleged experimental activity does not lead to specific modifications or refinements to an invention is evidence, although not conclusive evidence, that such activity is not within the *>realm permitted by the statute<. This is especially the case where the evidence of record clearly demonstrates to the examiner that an invention was considered "complete" by an inventor at the time of the activity. See >MPEP< § 2125.01. Nevertheless, any modifications or refinements which *did* result from such experimental activity must at least be a feature of the *claimed* invention to be of any probative value. *In re Theis*, 204 USPQ 188, 194 (CCPA 1979); *Minn., Mining & Mfg. o. v. Kent Industries*, 161 USPQ 321, 322-23 (6th Cir. 1969).

2128.06 Activity of an Independent Third Party Inventor [R-6]

The statutory bars of >35 U.S.C.< 102(b) are applicable even though public use or on sale activity is by a party other than an applicant, >MPEP< § 2121. Where an applicant presents evidence of experimental activity by such *other party*, the evidence will not *>overcome< the *prima facie* case under >35 U.S.C.< 102(b) based upon the activity of such party unless the activity was under the supervision and control of the applicant. *Magnetics v. Arnold Eng'g Co.*, 168 USPQ 392, 394 (7th Cir. 1971), *Bourne v. Jones*, 98 USPQ 206, 210 (S.D. Fla. 1951). aff'd., 98 USPQ 205 (5th Cir. 1953), *cert. denied*, 99 USPQ 490 (1953); *contra, Watson v. Allen*, 117 USPQ 68 (D.C.Cir. 1957). Accordingly, the *experimental use *>activity< is personal to an applicant.

2128.07 Evidence in Support of *>Permitted< Activity [R-6]

The examiner must always look to the objective factual circumstances surrounding alleged *>permitted< activity. In this regard, caution should be exercised when experimental intent is mainfested by an affidavit or declaration filed by an applicant. While such evidence may be probative if adequately corroborated, it is of little weight against substantial evidence to the contrary. *In re Theis*, 204 USPQ 188, 193 (CCPA 1979); *Robbins Co. v. Lawrence Mfg. Co.*, 178 USPQ 577, 581 (9th Cir. 1973).

2129 The Written Action by the Examiner >including a § 102(b) rejection< [R-6]

After consideration of all the evidence of record, the legal authorities cited by an applicant and any other party to the proceeding (>MPEP< § 1901.01), and the guidelines set forth in this chapter of the Manual, the examiner must determine whether or not there is a *prima facie* case under >35 U.S.C.< 102(b), >MPEP< § 2124. If the *prima facie* case exists, the examiner must *then* consider whatever evidence has been submitted to * overcome** the *prima facie* case, >MPEP< §§ 2124 and 2128.

If an applicant fails to meet his or her burden with regard to

**>rebutting or overcoming< the *prima facie* case; or, in the absence of *any* rebuttal evidence to the *prima facie* case, all the claims so affected should be rejected under 35 U.S.C. 102(b), >MPEP< § 2127. Even if some or all of the claims are not deemed by the examiner to be anticipated by an invention found to have been in public use or on sale, a claimed invention should also be considered with respect to obviousness. *In re Foster*, 145 USPQ 166, 174 (CCPA 1965); *In re Corcoran*, 208 USPQ 867, 870 (CCPA 1981). A rejection may be based upon the obviousness of claimed subject matter in view of a >35 U.S.C.< 102(b) invention, since such an invention becomes part of the prior art for purposes of >35 U.S.C.< 103. *Timely Products Corp. v Arron*, 187USPQ 257, 267 (2d Cir. 1975). *In re Kaslow*, 217 USPQ 1089 (Fed. Cir. 1983). If the rejection relies upon a public use or placing on sale under >35 U.S.C.< 102(b) as prior art to support a >35 U.S.C.< 103 rejection, an appropriate discussion of any other prior art or other information should be set forth to explain how the prior art or other information in combination with the subject matter asserted to be in public use or on sale renders the claims obvious.

In addition to citing the statutory bases, the written action by the examiner in cases involving a rejection founded upon >35 U.S.C.< 102(b) activity must explain why the evidence is sufficient to support the *prima facie* case, and must particularly point out the deficiencies in the evidence presented to rebut ** the *prima facie* case. Even if a rejection is not made, the examiner's written action should reflect that the evidence of >35 U.S.C.< 102(b) activity *has in fact been considered.* Likewise, if the examiner concludes that a *prima facie* case (1) has not been established, >or< (2) has been established and rebutted (>MPEP< § 2124)** then the examiner's written action should so indicate. Strict adherence to this format should cause the rationale employed by the examiner in the written action to be self evident. In this regard, the use of reasons for allowance pursuant to 37 CFR 1.109 may also be appropriate, >MPEP< §1302.14.

>2153 Prior Art Under 35 U.S.C. 102(e) [R-6]

Although the changes resulting from enactment of Public Law 98-622 did not affect 35 U.S.C. 102(e), its impact has been heightened as a result of Public Law 98-622. This is so because prior art under 35 U.S.C.102(e) is not disqualified because of common ownership at the time the later invention was made. The following example is illustrative of the applicability of 35 U.S.C.102(e) prior art as it applies through 35 U.S.C. 103:

Statement of Principle:

The disclosure of an earlier filed patent application which issues as a patent continues to be prior art under 35 U.S.C. 102(e) against a later invented and filed application of another inventor even though the patent and the later invention were owned by, or subject to an obligation of assignment to, the same person at the time the later invention was made.

Assumption: Employees A and B work for C, each with knowledge of the other's work, and with obligation to assign inventions to C while employed.

SITUATIONS	RESULTS
1. A invents X and later files application.	This is permissible
2. B modifies X to XY. B files application after A's filing.	No § 102(f)/103 or § 102(g)/103 rejection; provisional § 102(e)/103 rejection applies.
3. A's patent issues.	B's claims rejected under § 102(e)/103.
4. B files 37 CFR 1.131 affidavit to swear behind A's filing date.	Provisional or actual rejection under §102(e)/103 may be overcome if B made invention before A's filing date.

In situation (2.) above, the result is a provisional rejection by the examiner under 35 U.S.C. 102(e)/103.The rejection is provisional since the subject matter and the prior art are pending applications. The significant advantage to a patent applicant in making such a provisional rejection should be obvious. It cautions the applicant that an actual rejection will lie if the first filed application issues as a patent. This gives the applicant the chance to analyze the propriety of the rejection and possibly avoid the loss of rights to desired subject matter. This can be done in one of several ways after analyzing the provisional rejection.

The applicant may:

1) Argue patentability over the earlier filed application,

2) Consider the possibility of filing a 37 CFR 1.131 affidavit to swear behind the *filing date* of the earlier application, and

3) Consider abandoning *both* applications and combining the subject matter into a single continuation-in-part application. If this option is chosen, and the resulting application is restricted, Office policy based upon 35 U.S.C. 121 is that a rejection under 35 U.S.C. 102(e)/103 will not lie based upon the other divisional application or patents issuing thereon. Additionally, the resulting continuation-in-part application is entitled to 35 U.S.C. 120 benefit of each of the prior applications. The latter option is illustrated in the following example:

Assumption: Employees A and B work for C, each with knowledge of the other's work, and with obligation to assign inventions to C while employed.

SITUATIONS	RESULTS
1. A invents X and files application	
2. B modifies X to XY after A's application is filed, B files application establishing that A and B were both under obligation to assign inventions to C at the time the inventions were made.	Provisional §102(e)/103 rejection made; provisional double patenting rejection made; no §102(f)/103 or no §102(g)/103 made.
3. A and B file continuing application claiming priority to their earlier applications and abandon the earlier applications.	Assume it is proper that restriction be required between X and XY
4. X is elected and patent issues on X with divisional application being timely filed on XY	No rejection of divisional application under §102(e)/103 in view of §121.<

>2185 102(f)/103 and 102(g)/103 Practice, In General [R-6]

35 U.S.C. 103 Conditions of patentability; non-obvious subject matter

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Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. (Added November 8, 1984, Public Law 98-622, sec. 103, 98 Stat. 3384)

Public Law 98-622 was enacted on November 8, 1984 and resulted in some significant changes relating to patentability.

Public Law 98-622 changed a complex body of case law which discouraged communication among members of research teams working in corporations, universities or other organizations. It amended 35 U.S.C. 103 by adding a new sentence which provides that subject matter developed by another which qualifies as "prior art" only under subsections 102(f) or (g) of 35 U.S.C. is not to be considered when determining whether an invention sought to be patented is obvious under 35 U.S.C. 103, ***provided the subject matter and the claimed invention were commonly owned at the time the invention was made.***

"Prior art" is the existing body of technical information against which the patentability of an invention is judged. Prior publicly known information is always considered in determining whether an invention would have been obvious. However, under *In re Bass*, 474 F2d 1276, 177 USPQ 178 (CCPA 1973), and *In re Clemens*, 622 F.2d 1029, 206 USPQ 289 (CCPA 1980), an earlier invention which is not public could have been treated under 35 U.S.C. 102(g), and possibly under 35 U.S.C.102(f), as prior art with respect to a later invention made by another employee of the same organization.

New technology often is developed by using background scientific or technical information known within an organization but unknown to the public. 35 U.S.C. 103, second paragraph, by disqualifying such background information from prior art when making obviousness determinations, encourages communication among members of research teams, and leads to more public dissemination through patents of the results of team research.

The subject matter that is disqualified as prior art under 35 U.S.C. 103, second paragraph, is strictly limited to subject matter that qualifies as prior art only under 35 U.S.C. 102(f) or 102(g). If the subject matter qualifies as prior art under any other subsection) e.g., 35 U.S.C. 102(a), 102(b) or 102(e)), it will not be disqualified as prior art under the amendment to 35 U.S.C. 103.

The contents of a patent of the same or different ownership as an application, continues to be available as prior art against the application under 35 U.S.C. 103 by virtue of 35 U.S.C. 102(e) as of the application filing date of the patent. If subject matter becomes potential prior art under 35 U.S.C. 102(e) because a patent application is filed on such subject matter before a commonly owned claimed invention is made the subject matter of a later application the two pending applications may be combined (under 35 U.S.C. 116 and 120) into a single application and such subject matter (with the abandonment of the two applications) would no longer constitute potential prior art under 35 U.S.C. 102(e) or under 35 U.S.C. 102(e)/103 since it would not be "described in a patent granted on an application for patent by another."

It is important to recognize that 35 U.S.C. 103, second paragraph, applies only to consideration of prior art for purposes of 35 U.S.C. 103. It does not apply to or affect subject matter which qualifies as the basis of a rejection under 35 U.S.C. 102 alone. A patent applicant urging that subject matter is disqualified has the burden of establishing that such subject matter was commonly owned at the time the claimed invention was made.

Information learned from or transmitted to persons outside the organization is not disqualified as prior art. The term "subject matter" will be construed broadly, in the same manner the term is construed in the remainder of 35 U.S.C. 103. The term "another" as used in 35 U.S.C. 103 means any inventive entity other than the inventor and would include the inventor and any other persons. The term "developed" is to be read broadly and is not limited by the manner in which the development occurred. The term "commonly owned" means wholly owned by the same person, persons, or organization at the time the invention was made.<

>2186 Guidelines As to Implementation of 35 U.S.C. 103, second paragraph [R-6]

A. Applications considered under 35 U.S.C. 103, second paragraph

(1) 35 U.S.C. 103, second paragraph, does not "affect any final decision made by the court or the Patent and Trademark Office before the date of enactment [November 8, 1984] ... with respect to a patent or application for patent, if no appeal from such decision is pending and the time for filing an appeal has expired."

(2) 35 U.S.C. 103, second paragraph, is not considered to apply to:

(a) Any application which has been abandoned prior to November 8, 1984, unless such application is revived pursuant to the provisions of 37 CFR 1.137(a) or (b) and is pending on or after November 8, 1984;

(b) Any application in which all the claims have been allowed and in which prosecution has been closed prior to November 8, 1984, e.g., by an *Ex parte Quayle* action, a Notice of Allowability, or a Notice of Allowance. However, a continuing application would obtain the benefit of 35 U.S.C. 103, second paragraph, if filed prior to the abandonment or issuance of the application; and

(c) Any application in which an appeal has been filed and is no longer pending or in which the time for filing an appeal has expired prior to November 8, 1984. However if the application contains allowed claims on or after November 8, 1984, the allowed claims are subject to 35 U.S.C. 103, second paragraph.

(3) 35 U.S.C. 103, second paragraph, will be applied to any application

(a) which is before the examiner for action and in which all the claims have not been allowed and the prosecution closed or

(b) in which prosecution has been closed and is being reopened to reject the allowed claims on grounds other than 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103.

B. Conflicting Co-pending Applications of Different Inventive Entities With No Indication That They Are Commonly Owned

(1) If the application files do not establish that they are owned by, or subject to an obligation of assignment to, the same person, the examiner will:

(a) assume that the applications are not commonly owned;

(b) examine the applications on all grounds other than any conflict between the applications;

(c) consider the applicability of 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103 if one application refers to the other (if there is no cross-reference between the applications it would be inappropriate for the examiner to refer to one application in the other in view of 35 U.S.C. 122);

(d) consider interference if appropriate;

(e) suspend the later filed application if it is otherwise allowable until the earlier filed application is abandoned or issues as a patent and then reject the later filed application under 35 U.S.C. 102(e)/103, if appropriate; and

(f) proceed under item C below if at any time during the examination a statement is made that the applications are commonly owned.

C. Conflicting Co-pending Applications Of Different Inventive Entities Which Are Commonly Owned

(1) Co-pending applications will be considered by the examiner to be owned by, or subject to an obligation of assignment to, the same person if:

(a) the application files refer to assignments recorded in the Patent and Trademark Office in accordance with 37 CFR 1.331 which convey the entire rights in the applications to the same person(s) or organization(s); or

(b) copies of unrecorded assignments which convey the entire rights in the application to the same person(s) or organization(s) are filed in each of the applications; or

(c) an affidavit or declaration by the common owner is filed which states that there is common ownership and explains why the affiant believes there is common ownership; or

(d) other evidence is submitted which establishes common ownership of the applications in question, e.g., a court decision determining the owner. In circumstances where the common owner is a corporation or other organization an affidavit or declaration averring common ownership may be signed by an official of the corporation or organization empowered to act on behalf of the corporation or organization.

(2) If the application files establish that they are owned by, or subject to an obligation of assignment to, the same person, the examiner will:

(a) examine the applications as to all grounds except 35 U.S.C. 102(f) and (g) as they apply through 35 U.S.C. 103 if the application files establish common ownership at the time the later invention was made.

(b) examine the applications for double patenting, including double patenting of the obviousness type, and make a provisional rejection, if appropriate, (see *In re Mott*, 190 USPQ 536 (CCPA 1976);

(c) examine the later filed application under 35 U.S.C. 102(e) as it applies through 35 U.S.C. 103 and make a provisional rejection under 35 U.S.C. 102(e)/103 in the later filed application, if appropriate;

(d) permit applicant of the later filed application to file an affidavit under 37 CFR 1.131 to overcome the provisional or actual 35 U.S.C. 102(e)/103 rejection, if appropriate, and a terminal disclaimer to overcome the provisional or actual rejection on double patenting of the obviousness type.

Attention is directed to the following significant features of the amendment to 35 U.S.C. 103, second paragraph:

(1) The only prior art which is disqualified is prior art under 35 U.S.C. 102(f) or (g) where the subject matter, i.e., the prior art, and the invention "were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." (Person includes organization)

(2) If the subject matter (prior art) qualifies as prior art under any other section, e.g., 35 U.S.C. 102(a), (b), or (e), it is still prior art and can be used.

(3) 35 U.S.C. 103, second paragraph, applies only to subject matter which qualifies as prior art under 35 U.S.C. 103; it does not affect subject matter which qualifies as prior art under 35 U.S.C. 102, i.e., anticipatory prior art.

(4) The term "another person" means any inventive entity other than the inventor and includes the inventor and any other person.

(5) The term "developed" is to be read broadly and is not limited to any particular manner of development.

(6) Subject matter derived from another under 35 U.S.C. 102(f) is prior art under 35 U.S.C. 103 unless the derived subject matter and the claimed invention are owned by, or subject to an obligation of assignment to, the same person at the time the claimed invention was made.

(7) The disclosure of an earlier filed patent application which issues as a patent is prior art under 35 U.S.C. 102(e) against a later invented and filed application of another inventor even though the patent and the later application are owned by, or subject to an obligation of assignment to, the same person.

(8) Commonly owned applications, i.e., applications owned by the same person, may be refiled as a single application to avoid one or more of them becoming prior art against another under 35 U.S.C. 102(e) and 103.

(9) The phrase "owned by the same person" requires that the same person, persons, or organization own 100% of the subject matter (prior art) and 100% of the claimed invention. A license to another would not defeat ownership.

(10) The phrase "subject to an obligation of assignment to the same person" requires that a legal obligation of assignment

exist and not merely a moral or unenforceable obligation.

(11) As long as the same person owns the subject matter and the invention at the time the claimed invention was made, a license to another may be made without the subject matter becoming prior art.

(12) 35 U.S.C. 103, second paragraph, requires actual ownership (or obligation to assign) be in existence at the time the claimed invention is made for the subject matter to be disqualified as prior art; acquiring one or the other later is not sufficient.

(13) The burden of establishing that subject matter is disqualified as prior art is placed on patent applicant and not on the patent examiner once the examiner establishes a prima facie case of obviousness based on the prior art.

(14) A double patenting rejection may be made in an application in view of a commonly owned patent of a different inventive entity and a double patenting rejection of the obviousness type can be overcome by filing an appropriate terminal disclaimer.

(15) A double patenting rejection may be made in a later filed application where the application/patent on which the rejection is based and the later filed application are not commonly owned, as long as one of the inventors is common between the later filed application and the application/patent. Such a rejection cannot be overcome by terminal disclaimer in view of the lack of common ownership.

(16) The Commissioner's Notice of January 9, 1967, "Double Patenting", 834 O.G. 1615 (Jan. 31, 1967) has been withdrawn to the extent that it does not authorize a double patenting rejection where different inventive entities are present.

(17) Inventors of subject matter not commonly owned at the time of the invention, but currently commonly owned, may file as joint inventors in a single application. However, the claims in such an application are not protected from a 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103 rejection.

(18) Common ownership at the time the invention was made for purposes of obviating a 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103 rejection may be established irrespective of whether the invention was made in the U.S. or abroad and irrespective of where the inventor and/or the common owner reside.

It is important to recognize that, when considering these features, certain prior art is not affected. This includes

a) 35 U.S.C. 102(f) or 35 U.S.C. 102(g) prior art which anticipates the invention,

b) 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103 prior art which was not at the time invention was made, owned by, or subject to an obligation of assignment to, the person who owned the invention, and

c) 35 U.S.C. 102 or 35 U.S.C. 103 prior art which qualifies under any other paragraph of 35 U.S.C. 102 or 35 U.S.C. 103 prior art which qualifies under any other paragraph of 35 U.S.C. 102, e.g., (a), (b), or (e)

Accordingly, the only prior art which is disqualified under 35 U.S.C. 103, second paragraph, is 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103 prior art which was, at the time the invention was made, owned by or subject to an obligation of assignment to, the person who owned the invention.

Example 1 - Multiple applications - plural inventions

Inventors A and B, both employees of Company E, with obligation to assign all their inventions to E, develop inventions X and Y with Y being developed by B after knowledge of A's development of X. A files application on X before B's development of Y and B later files application. Both applications establish they are owned by Company E.

Situation 1.

The claims to X and Y are not patentably distinct.

Examiner's Action:

(a) Examine the applications as to all grounds except 35 U.S.C. 102(f) and (g) as they apply through 35 U.S.C. 103;

(b) Make a provisional rejection of the later filed application on the grounds of double patenting of the obviousness type, if appropriate. If a terminal disclaimer is filed in accordance with 35 U.S.C. 1.321(b), the provisional double patenting rejection of the obviousness type will be overcome;

(c) Examine the later filed application under 35 U.S.C. 102(e)/103 and make a provisional rejection based on 35 U.S.C. 102(e)/103, if appropriate.

Situation 2.

After receiving the examiner's action in situation 1, A and B, along with inventor C, who is another employee of E, filed a continuation-in-part application and claim A's invention, B's invention and an improvement they jointly developed with C. A and B abandon their prior applications.

Examiner's Action:

Examine the application in the normal manner; no double patenting or 35 U.S.C.102(e)/103 problems now exist.

Example 2 - Two copending applications with no indication in the record of common ownership

Inventor A files an application with claims to invention X. Another copending application is filed by inventor B claiming invention Y. There is no indication of common ownership.

Situation 1.

The claims in the two applications are directed to patentably distinct inventions.

Examiner's Action:

If the claims are otherwise allowable, the applications are both allowed.

Situation 2.

The claims in the two applications are not patentably distinct.

Examiner's Action:

The applications are prosecuted until one application is allowable. If the time difference between the two applications is too large to declare an interference, action on the later filed application is suspended until the earlier filed application issues as a patent. At that time the later filed application is rejected over the earlier filed application under 35 U.S.C. 102(e)/103.

If the filing dates of the applications are sufficiently close to declare an interference, claims for an interference should be suggested. If the applications are commonly owned, the common owner must make the ownership known. When such common ownership is made known, a provisional double patenting rejection should be made in the later filed application. If the double patenting rejection is of the obviousness type, a terminal disclaimer under 37 CFR 1.321(b) may be filed. The later filed application should be examined under 35 U.S.C. 102(e)/103 and a provisional rejection based on 35 U.S.C. 102(e)/103 should be made in the later filed application, if appropriate. An affidavit under 37 CFR 1.131 can be filed to overcome a rejection based on 35 U.S.C. 102(e)/103.

Example 3 - Claims in single application by different inventors.

An application for patent is filed in the Patent and Trademark Office in which the owner E sets forth the following information.

"The subject matter of claim 1 was invented by inventor A. The subject matter of claim 2 was invented by inventor B. Inventor B knew of the invention of inventor A at the time he made his invention. Both A and B made their inventions while working for owner E with a duty to assign". The inventions are different but not patentably distinct.

Examiner's Action:

If the claims are patentable over the prior art, the application should be allowed.

>2187 Ownership At the Time The Invention Was Made [R-6]

In order to be disqualified as prior art under 35 U.S.C. 103, second paragraph, the subject matter which would otherwise be prior art to the claimed invention and the claimed invention must be commonly owned at the time the claimed invention was made. The term "commonly owned" is intended to mean that the subject matter which would otherwise be prior art to the claimed invention and the claimed invention are entirely or wholly owned by the same person, persons, or organization at the time the claimed invention was made. If the person, persons, or organization owned less than 100 percent of the subject matter which would otherwise be prior art to the claimed invention, or less than 100 percent of the claimed invention, then common ownership would not exist. Common ownership requires that the person, persons, or organization own 100 percent of the subject matter and 100 percent of the claimed invention. As long as principal ownership rights to either the subject matter or the claimed invention reside in different persons or organizations common ownership does not exist. A license of the claimed invention to another by the owner where basic ownership rights are retained would not defeat ownership. The requirement for common ownership at the time the claimed invention was made is intended to preclude obtaining ownership of subject matter after the claimed invention was made in order to disqualify that subject matter as prior art against the claimed invention. The question of whether common ownership exists at the time the claimed invention was made is to be determined on the facts of the particular case in question. Actual ownership of the subject matter and the claimed invention by the same individual or organization or a legal obligation to assign both the subject matter and the claimed invention to the same individual or organization must be in existence at the time the claimed invention was made in order for the subject matter to be disqualified as prior art. A moral or unenforceable obligation would not evidence common ownership.

Under 35 U.S.C. 103, second paragraph, an applicant's admission that subject matter was developed prior to applicant's invention would not make the subject matter prior art to applicant if the subject matter qualifies as prior art only under sections 102(f) or (g) of title 35 U.S.C. and if the subject matter and the claimed invention were commonly owned at the time the invention was made. See *In re Fout*, 213 USPQ 532 (CCPA 1982), for a decision involving an applicants' admission which was used as prior art against their application. If the subject matter and invention were not commonly owned, an admission that the subject matter is prior art would be usable under 35 U.S.C. 103.

The burden of establishing that subject matter is disqualified as prior art under the section is intended to be placed and reside upon the person or persons urging that the subject matter is disqualified. For example, a patent applicant urging that subject matter is disqualified as prior art under 35 U.S.C. 103, second paragraph, would have the burden of establishing that it was commonly owned at the time the claimed invention was made. The patentee in litigation would likewise properly bear the same burden placed upon the applicant before the Patent and Trademark Office. To place the burden upon the patent examiner or the defendant in litigation would not be appropriate since evidence as to common ownership at the time the claimed invention was made might not be available to the patent examiner or the defendant in litigation, but such evidence, if it exists, should be readily available to the patent applicant or the patentee.

In view of 35 U.S.C. 103, second paragraph, the Commissioner has reinstituted in appropriate circumstances the practice of rejecting claims in commonly owned applications of different inventive entities on the grounds of double patenting. Such rejections can be overcome in appropriate circumstances by the filing of terminal disclaimers. This practice has been judicially authorized. See *In re Bowers*, 149 USPQ 57 (CCPA 1966). The use of double patenting rejections which then could be overcome by terminal disclaimers preclude patent protection from being improperly extended while still permitting inventors and their assignees to obtain the legitimate benefits from their contributions.

The following examples are provided for illustration only:

- Ownership of both inventions must be 100% the same

- Parent Company owns 100% of Subsidiaries A and B
  - inventions of A and B are commonly owned.

- Parent Company owns 100% of Subsidiary A and 90% of subsidiary B
  - inventions of A and B not commonly owned.

-If same person owns subject matter and invention at time invention was made, license to another may be made without the subject matter becoming prior art.

- Different Government inventors retaining certain rights (e.g. foreign filing rights) in separate inventions owned by Government precludes common ownership of inventions.

- **Joint Venture**

Situation

- Company A and Company B form Joint Venture Company C. Employees of A while working for C with an obligation to assign inventions to C, invent invention #1, Employees of B while working for C with an obligation to assign inventions to C, invent invention #2, with knowledge of #1.

Question: Are #1 and #2 commonly owned at the time the later invention was made so as to preclude a rejection under 35 U.S.C. 102(f) or (g) in view of 35 U.S.C. 103?

Answer: Yes-An official of company C can sign an affidavit that C owned both inventions.

Common ownership must have existed at the time the later invention was made. An invention is "made" when conception is complete as defined in *Mergenthaler v. Scudder*, II App. D.C. 264, 1897 C.D. 724 (C.A.D.C. 1897); *In re Tansel*, 117 USPQ 188 (CCPA 1958).Common ownership at the time the invention was made for purposes of obviating a 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103 rejection may be established irrespective of whether the invention was made in the United States or abroad. The provisions of 35 U.S.C. 104, however, will continue to apply to other proceedings in the Patent and Trademark Office, e.g. in an interference proceeding, with regard to establishing a date of invention by knowledge or use thereof, or other activity with respect thereto, in a foreign country. The foreign filing date will continue to be used for interference purposes under 35 U.S.C. 119 and 35 U.S.C. 365.<

>2188 Establishing Common Ownership At The Time The Invention Was Made [R-6]

It is important to recognize just what constitutes sufficient evidence to establish common ownership at the time the invention was made.

Where the application file(s) establishes common ownership, the examiner must examine the application as to all grounds except 35 U.S.C. 102(f) and (g) as they apply through 35 U.S.C. 103 only if the application file(s) establishes common ownership at the time the later invention was made. Thus, it is necessary to look to the time at which common ownership exists. If common ownership does not exist at the time the later invention was made, the earlier invention is not disqualified as potential prior art under 35 U.S.C. 102(f) and (g) as they apply through 35 U.S.C. 103.

The submission of copies of assignment agreements that were filed in the Office and that were executed at the time the application was filed would not be sufficient to disqualify the earlier invention as potential prior art against the later invention unless the assignment document itself contained language which indicate the relevant dates involved and established that the inventions were commonly owned at the time the later invention was made. Absent specific language in the assignment document which would establish that the inventions claimed in the applications were commonly owned at the time the later invention was made, the attorney/applicants would have to supply additional evidence or showings establishing common ownership at the time the later invention was made. This additional evidence or showing might take the form of an affidavit or declaration by the common owner which refers to the assignment and further avers that the inventors of the subject matter of the applications were all under an obligation to assign the inventions to the common owner at the time the later invention was made, e.g., by virtue of employment agreements. The affidavit or declaration might also include copies of the employment agreements although the submission of the copies of the employment agreements would not be essential as long as unqualified averments are made that the inventions were commonly owned at the time the later invention was made.

It is expected that the most common form of submission to establish common ownership at the time the later invention was made will be verified statements, i.e., oaths or declarations from the common owner. It should be emphasized that such oaths or declarations must be executed by the common owner or someone empowered to act or behalf of the common owner. Mere powers of attorney to prosecute an application will not make an individual an official of a corporation or organization or empower the individual to act on behalf of the corporation or organization.

Copending Applications

37 CFR 1.104 Nature of examination; examiner's action.

* * * * * *

(c) Co-pending applications will be considered by the examiner to be owned by, or subject to an obligation of assignment to, the same person if (1) the application files refer to assignments recorded in the Patent and Trademark Office in accordance with §1.331 which convey the entire rights in the applications to the same person or organization; or (2) copies of unrecorded assignments which convey the entire rights in the applications to the same person or organization are filed in each of the applications; or (3) an affidavit or declaration by the common owner is filed which states that there is common ownership and states

facts which explain why the affiant or declarant believes there is common ownership; or (4) other evidence is submitted which establishes common ownership of the applications. In circumstances where the common owner is a corporation or other organization an affidavit or declaration may be signed by an official of the corporation or organization empowered to act on behalf of the corporation or organization.

37 CFR 1.104 specifies the nature of the showing necessary before the examiner would consider copending applications to be owned by, or subject to an obligation of assignment to, the same person for purposes of 35 U.S.C. 102(f)/103, 35 U.S.C. 102(g)/103 and 37 CFR 1.106(d). The rule permits the necessary showing to be made in different alternative ways. The necessary showing will be considered by the examiner to be present if the application files refer to assignments which are recorded in the Patent and Trademark Office in accordance with 37 CFR 1.331 as long as the assignments conveyed the entire rights in the applications to the same person or organization. A second alternative which can be used, if assignments have not been recorded, permits the examiner to consider copies of unrecorded assignment filed in each of the applications by the applicants as long as the unrecorded assignments convey the entire rights in the applications to the same person or organization. A third alternative permits an affidavit or declaration to be filed by the common owner stating that there is common ownership and stating facts which explain why the affiant or declarant believes there is common ownership. Under this alternative, sufficient facts will have to be presented in order to enable the examiner to conclude that a prima facie case of common ownership exists. The fourth alternative permits other evidence to be used which would establish common ownership of the applications, e.g., a court decision determining the owner. The terms "person" and "organization" in the rule would include circumstances where the ownership resided in more than one person and/or organization as long as the applications are owned jointly by the same owners. Paragraph (e) also provides that where the common owner is a corporation or other organization an affidavit or declaration averring common ownership may be signed by an official of the corporation or organization who is empowered to act on behalf of the corporation or organization. A mere power of attorney to prosecute a patent application will not make an individual an official of the corporation or organization or empower the individual to act on behalf of the corporation or organization.<

>2188.01 Examination of Applications of Different Inventive Entities Where Common Ownership Is Not Established [R-6]

Where the applications do not establish common ownership, the examiner

1) Assumes that common ownership does not exist,

2) Considers the applicability of 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103 if one application refers to the other. If there is no cross-reference between the applications and no inventor in common to both applications, it would be inappropriate for the examiner to refer to one application in the other in view of 35 U.S.C. 122,

3) Considers interference if appropriate, and

4) suspends the later filed application if it is otherwise allowable until the earlier filed application is abandoned or issues as a patent and then rejects the later application under 35 U.S.C. 102(e)/103, if appropriate.

A telephone call, for example, from the applicant stating that there is common ownership or a declaration signed by the attorney of record stating that there is common ownership are insufficient to preclude consideration of the applicability of 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103. Further, the fact that there may be a common inventor or even identical inventive entities between the applications does not evidence common ownership.

Examination of Pending Applications Having Different Inventive Entities Claiming Benefit Under 35 U.S.C.120 Without Common Ownership of The Applications.

In order to be permitted to claim 35 U.S.C.120 benefit, common ownership is not a consideration. If the applications and patents are not commonly owned, a double patenting rejection, if appropriate, is entered in the later filed application and cannot be overcome by a terminal disclaimer since the ownership of the subject matter being claimed belongs to someone other than the owner of the later application.

The following example is illustrative:

ASSUMPTION: Employee A, with obligation to assign inventions to C while employed, invents X.

SITUATIONS	RESULTS
1. A leaves C and later A and B, who is not employed by C, modify X to XY.	This is permissible.
2. C asks A to execute application on X, but A refuses; C files application under 37 CFR 1.47 naming A as inventor.	This is permissible.
3. A and B then file application claiming §120 benefit to the sole application of A and claiming both X and XY.	Examiner may make provisional rejections of A and B's application on grounds of double patenting and §102(e)/103 in view of A's sole application.
4. A and B file 37 CFR 1.131 affidavit to swear behind A's filing date and attempt to file terminal disclaimer in joint application.	Examiner accepts 37 CFR 1.131 affidavit, but refuses terminal disclaimer. Double Patenting rejection of joint application stands unless XY can be shown to be patentably distinct from X.<

>2188.02 Examination of Applications of Different Inventive Entities Where Common Ownership Is Established [R-6]

Once the examiner checks the applications and it is established from the record that common ownership existed at the time the later invention was made, he or she should:

1) examine the applications as to all grounds except 35 U.S.C. 102(f) and (g) as they apply through 35 U.S.C. 103,

2) examine the applications for double patenting, including double patenting of the obviousness type, and make a provisional double patenting rejection, if appropriate (See *In re Mott*, 190 USPQ 536 (CCPA 1976),

3) examine the later filed application under 35 U.S.C. 102(e) as it applies through 35 U.S.C. 103 and make a provisional rejection under 35 U.S.C. 102(e)/103 in the later filed application, if appropriate, and

4) permit the applicant of the later filed application to file an affidavit under 37 CFR 1.131 to overcome the provisional or actual 35 U.S.C. 102(e)/103 rejection, if appropriate, and a terminal disclaimer to overcome the provisional or actual rejection on double patenting of the obviousness type.

The practice of rejecting claims on the ground of double patenting in commonly owned applications of different inventive entities is in accordance with existing case law and prevents an organization from obtaining two or more patents with different expiration dates covering nearly identical subject matter. See *In re Zickendraht*, 319 F.2d 225, 138 USPQ 22 (CCPA 1963) ("The doctrine is well established that claims in different applications need be more than merely different in form or content; and that patentable distinction must exist to entitle applicants to a second patent") and In re Christensen, 330 F2d 652, 141 USPQ 295 (CCPA 1964) ("— the correct procedure for double patenting cases is to analyze the claims to determine the inventions defined therein, and then decide whether such inventions, as claimed are patentably distinct and therefore qualified to be claimed in separate patents"). In accordance with established patent law doctrines, double patenting rejections can be overcome in certain circumstances by disclaiming, pursuant to the existing provisions of 37 CFR 1.321, the terminal portion of the term of the later patent and including in the disclaimer a provision that the patent shall be enforceable only for and during the period the patent is commonly owned with the application or patent which formed the basis for the rejection, thereby eliminating the problem of extending patent life.

The example below is illustrative:

ASSUMPTION: Employees A and B work for C, each with knowledge of the other's work, and with obligation to assign inventions to C while employed.

SITUATIONS	RESULTS
1. A invents X and files application with assignment to C recorded in PTO showing C's ownership at the time the invention X was made.	This is permissible.
2. A and B modify X to XY and file application with assignment recorded in PTO showing C's ownership at the time the invention XY was made.	Provisional double patenting rejections of the obviousness type may be made. Provisional rejection under §102(e)/103 may be made in later filed application.
3. A and B file terminal disclaimers to overcome provisional double patenting and insufficient 37 CFR 1.131 affidavit to overcome provisional §102(e)/103 rejection.	Examiner finds 37 CFR 1.131 affidavit insufficient; accepts terminal disclaimers.
4. A and B file continuing application disclosing and claiming both X and XY and claiming §120 benefit of both prior applications; both prior applications are then abandoned.	This is permissible.

Examination of Continuing Application Commonly Owned With Abandoned Parent Application To Which Benefit is Claimed Under 35 U.S.C. 120.

An application claiming the benefit of a prior filed copending national or international application under 35 U.S.C. 120 must name as an inventor at least one inventor named in the prior filed application. The prior filed application must also disclose the named inventor's invention claimed in at least one claim of the later filed application in the manner provided by the first paragraph of 35 U.S.C. 112. This practice contrasts with the practice in effect prior to November 8, 1984 (the date of enactment of Public Law 98-622) where the inventorship entity in each of the applications was required to be the same for benefit under 35 U.S.C. 120.

So long as the applications have at least one inventor in common and the other requirements are met, the Office will permit a claim for 35 U.S.C. 120 benefit without any additional submissions or notifications from applicants regarding inventorship differences.

In addition to the normal examination conducted by the examiner, he or she must examine the earlier filed application to determine if the earlier and later applications have at least one inventor in common and that the other 35 U.S.C. 120 requirements are met. The claim for 35 U.S.C. 120 benefit will be permitted without examination of the earlier application for disclosure and support of at least one claim of the later filed application under 35 U.S.C. 112, first paragraph unless it becomes necessary to do so, for example, because of an intervening reference.

Examination of Commonly Owned Pending Applications Having Different Inventive Entities Claiming Benefit Under 35 U.S.C. 120

Commonly owned applications of different inventive entities may be rejected on the ground of double patenting. Despite the fact that a later filed application claims 35 U.S.C. 120 benefit to an earlier application, a double patenting rejection may also be appropriate so long as at least one inventor is common to each application. The rejection based on a pending application would be a provisional rejection since no patent has issued.

If the applications are commonly owned, a rejection of the applications on the ground of double patenting can be overcome by an appropriate terminal disclaimer as long as the identical invention is not being claimed. See *In re Robeson*, 141 USPQ 485 (CCPA 1964) and *In re Kaye*, 141 USPQ 829 (CCPA 1964).

The following example is illustrative:

ASSUMPTION: Employees A and B work for C, each with knowledge of the other's work, and with obligation to assign inventions to C while employed.

SITUATIONS	RESULTS
1. A invents X, A and B together modify X to XY.	This is permissible
2. A later files application on X with assignment to C.	This is permissible
3. A and B later file application on XY with assignment to C.	Examiner may make provisional rejection of A and B's application on grounds of double patenting and §102(e)/103 in view of A's application.
4. A and B file 37 CFR 1.131 affidavit to swear behind A's filing date and terminal disclaimers in both applications.<	This is permissible

>2189 Examination of Joint Applications Under §103 and §116 [R-6]

If an application is filed with joint inventors, the examiner should assume that the subject matter of the various claims was commonly owned at the time the inventions covered therein were made, unless these is evidence to the contrary. If inventors of subject matter, not commonly owned at the time of the later invention, file a joint application, applicants have an obligation pursuant to 37 CFR 1.56 to point out the inventor and invention dates of each claim and the lack of common ownership at the time the later invention was made in order that the examiner may consider the applicability of 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/103. The examiner will assume unless there is evidence to the contrary, that applicants are complying with their duty of disclosure.

The following example is illustrative:

ASSUMPTION: A on his own behalf develops X and discloses it in confidence to B who is employed by C with an obligation to assign inventions to C while employed.

SITUATIONS	RESULTS
1. B modifies X to XY; C later buys X from A and employs A; application is filed claiming X and XY, naming inventors A, B, and E, who is the supervisor of A and B; facts involving ownership are disclosed.	Examiner may require restriction between X and XY, reminding applicants of the necessity to correct the inventorship pursuant to 37 CFR 1.48 if the claims to one or more inventors are canceled.
2. Applicants argue that restriction is not proper for various reasons.	Examiner withdraws restriction requirement, may reject claims under §102(f) after determining that E did not contribute to the claimed inventions; may reject claims to XY under §102(f)/103, §102(g)/103 in view of X.
3. Application is amended pursuant to 37 CFR 1.48 to remove E as an inventor.	Examiner continues to reject XY under §102(f)/103, §102(g)/103 in view of X.
4. Claims to XY are canceled and application is amended pursuant to 37 CFR 1.48 to remove B as an inventor.	This is permissible.

Foreign applicants will sometimes combine the subject matter of two or more related applications with different inventors into a single U.S. application naming joint inventors. The examiner will make the assumption, absent contrary evidence, that the applicants are complying with their duty of disclosure if no information is provided relative to invention dates and common ownership at the time the later invention was made. Such a claim for 35 U.S.C. 119 benefit based upon the foreign filed applications is appropriate and 35 U..S.C. 119 benefit can be accorded based upon each of the foreign filed applications.<

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