

Exhibit E

Revision F - 4/29/02

A PUBLIC-SUBMITTED PROPOSAL FOR A COMBINED PUBLIC SEARCH FACILITY (CPSF)

Introduction

In recent years, the U.S. Patent and Trademark Office (USPTO) has been considering the elimination of the public's hard copy (paper) collections of patents and trademarks which are heavily used and depended upon by public searchers. It is the consensus of a working group of senior intellectual property (IP) searchers that this action would be a colossal blunder that would cause serious damage to the country's IP system. The proposal presented herein addresses the key issues involved from the public user's perspective, and provides a sensible plan whereby the USPTO's drive to eliminate the hard copy collections can be reconciled with a process to mitigate the expected damage to patent and trademark quality as the office proposes proceeding towards automating all of its major functions.

Background

After several years of contemplation, the USPTO in April 2002 published a Federal Register notice¹ requesting public comment on their proposal to eliminate the classified paper patents and trademark registrations from their Crystal City, Virginia facilities. In a nutshell, the USPTO plans to begin removal of these collections at the earliest time permitted by law. The Congress has already spoken on this issue when it passed the American Inventors Protection Act (AIPA) in 1999². In fact, section 4804(d)(2) of the AIPA states that "the Director of the PTO shall not...cease to maintain, for use by the public, paper or microform collections of United States Patents, foreign patent documents, and United States trademark registrations..." There have been a number of representations by serious and responsible members of the public, including presentations at hearings convened by the USPTO and by the House Subcommittee on Courts, the Internet and Intellectual Property, which have stressed the importance for continued maintenance of the classified patent and trademark hard copy collections.

In a 1997 paper in the Journal of the Patent and Trademark Office Society (JPTOS)³, the only science-based public presentation of the relative efficacy of patentability searching of the classified hard copy collection vs. automated patentability searching arrived at clear cut conclusions. The principal finding in that paper was that "at least four venerable types of patent searching, when artfully used so as to reinforce each other rather than as substitutes for each other, produce quantifiably superior results." The statistics employed in that paper have not been refuted by the USPTO, and have been used as the basis for further presentations to the USPTO⁴ and the House

Subcommittee.^{5,6} Many other members of the public and their firms have reached strikingly similar conclusions. Oddly, the USPTO has not sought to refute the accumulating conclusions that their automated searching systems are not yet ready to displace manual searching of the hard copy collections, and instead continues to recite the line that their automated search systems provide "equivalent functionality" - a clearly erroneous criterion. A more pertinent criterion to invoke would be: our (the USPTO's) automated search systems provide "equivalent quality results for both issued patents and registered trademarks," once this has been substantiated by objective evidence. A sound path towards reconciling these fundamentally distinct criteria is the heart of the proposal presented herein.

The Plan

Briefly, it is proposed to expand the existing public's hard copy search facilities, now housed in the Crystal City Public Search Room (PSR) and environs, into a new combined facility, the CPSF, that would establish and maintain collections of all U.S. and foreign patents and trademark documents, searchable in U.S. classification order. As a starting point, consider a few specifics. Looking forward to the scheduled space consolidation move to the new Carlisle Campus, the plan calls for the CPSF to remain in Crystal City to house these expanded hard copy collections. The facility would include complete copies of all U.S. patents, all foreign patent documents with English language abstracts, alpha subclasses, digests and published technical literature, as well as all U.S. trademark documents (registered and pending) - all housed in the first and second floors of Crystal Plaza buildings 3, 34 and 4. The CPSF would support the needs of all searchers: public, USPTO and other government agency personnel. Its foreign art collection would be initially seeded with all foreign patents, alpha subclasses, digests and technical publications as quickly as they become available from the examining corps. Subsequently, on an accelerated schedule, these collections are to be added to so as to provide complete and up to date collections of their respective materials.

There are sound reasons for not only continuing full maintenance of the publicly available hard copy collections, but for expanding their content as well. First, they provide a *statistically independent search medium*, which significantly improves the quality of searching, and hence the quality and validity of issued U.S. patents and registered trademarks. As a practical matter, they are available 24 hours a day, 365 days a year with virtually zero down time. They are dirt cheap to maintain compared to automated files, and provide an ultra reliable and secure back up search medium which is virtually 100% failure resistant to the problems or threats of power outages, computer crashes and hacker/terrorist attacks.

Because of the unique watchdog role public searchers play in the worldwide IP system, they are relied upon by all parties having an interest in IP. So it's absolutely crucial for the health of the

U.S. IP system that these publicly available hard copy collections continue to be made available so as to provide rapid and unhindered access to patent and trademark information. The quality implications of these collections - both for issued patents and registered trademark - can hardly be over emphasized. It is also crucial that the information the USPTO disseminates via these collections be of the highest possible accuracy, completeness and retrievability. For the foreseeable future, only the classified hard copy collections provide the quality control check against the well known systemic weaknesses in the automated search systems.

First, to assure that the public interest will not be harmed by the proposed hard copy collection elimination, a three year side-by-side comparison study of newly issued patents and newly registered trademarks is to be carried out by knowledgeable and independent outside referees. The study would compare the equivalency and sufficiency of the automated search results to those obtained by *combined* hard copy and online searching (the present system) for a sustained three year evaluation period under a well defined quality measuring protocol. Following successful completion of the study stage, then a second stage contemplating the building down of these collections may be considered. Presuming objective proof of the equivalent quality results is clearly demonstrated, then this second stage should be incremented slowly over a few year period so as to detect and respond to any unintended adverse side effects. Responsible risk management demands nothing less for such a historic transition, because once the hard copy collections are gone, they will be gone forever. A higher degree of responsibility is called for especially in view of previous experiences at the USPTO in implementing their automation plans. See, for example, any one of a series of GAO reports⁷ on continuing USPTO automation problems and extensive delays.

While the above plan sounds deceptively simple, it would , when implemented, provide a much needed safety net for the USPTO and the worldwide IP community during the few years that the CPSF is envisioned to be needed. Simply put, the quality of the USPTO's work product would never be needlessly put in jeopardy while their automated search systems evolve to achieve their advertized capabilities wherein these hard copy collections are no longer needed for public reference "because of the availability of mature and reliable in-house electronic search systems in its public search facilities."

Technical Considerations

Three technical considerations to the above basic plan are presented to clarify and strengthen the plan's overall viability - quality, costs and space. Consider first quality-related matters:

There are a host of reasons why the elimination of the hard copy collections will seriously damage the quality of issued patents and registered trademarks. Consider first the basic fact that current patents, examined electronically, are routinely invalidated by public searchers via thorough

hard copy collection searching.

In the 1980's many public searchers and patent examiners had an opportunity to start using electronic database searching using key word search strategies. Their initial enthusiasm was often blunted as they found that they could not locate, electronically, the references that they personally knew were there from their previous manual searching of the hard copy collections. Others who were expert in the various technologies also came to much the same conclusion. This finding was further buttressed by scientific evaluations such as the March 1985 paper by David C. Blair et al.⁸

In the opinion and experience of many professional IP searchers, the use of electronic database searching is problematic, particularly when dealing with the unique nature of patent specification disclosures (and drawings), and trademark designs. Hard copy collections, properly classified, are the only serious means by which prior art may be retrieved in an effective, efficient manner. While electronic database searching gives many who use it a great illusion of 'finding everything,' this is true only to people unfamiliar with the particular technology. The reality is that this is indeed just an illusion, especially when dealing with the unique nature of IP subject matter.

Further, as was previously pointed out (see endnote 3), Figure 4 therein shows that in a well maintained hard copy digest, one "...can reasonably expect to find all the best art in well under three hours of search." Actually, an 80% confidence level of uncovering the best prior art could be achieved in 1½ to 2 hours of searching. Costwise, it was estimated that every dollar spent by the USPTO in establishing and maintaining these digests can replace about one or two orders of magnitude of expense in attempting to provide equivalent results via an electronic database. Thus, from both practical experience and scientific points of view, the use of large electronic database searching as a replacement for a properly classified hard copy collections has yet to be fully validated, and the present hard copy collections- especially the PSR and trademark collections - need not only to be well maintained, but expanded to include all foreign patents, technical publications and the like in order to rebuild the patent community's eroding confidence in the U.S. IP system.

Automated searching of published technical literature also presents unique and formidable problems. All electronic publications have a problem as to when, exactly, they were published and became prior art under 35 U.S.C. § 102 and 103. The electronic versions of published documents are often redacted or modified versions of the originally printed paper copy. The prestigious journal *Nature* only has parts of its journal online; the *Washington Post*, for instance, routinely omits valuable drawings in its electronic online version which appeared in print. Which is the real version and when did it become useable? Also, the electronic version can be altered or deleted at a future time. Due to these uncertainties, it is often difficult to authenticate an electronic document and the legal basis and case law for accepting electronic documents at face value is lacking.

Additionally, many U.S. patents - some which have been open to public scrutiny for years are mysteriously and instantaneously "withdrawn" electronically. Some of these have been cited in other patents as prior art; yet, electronically, they do not now exist. Paper copies often still survive in at least the examiner's hard copy collections, however. After a U.S. patent is published, for the electronic collections to be complete, that patent must stay available and completely intact without any alteration to the public forever. This must be so regardless of any possible reasons as to why the status of an issued patent is questioned. Hard copy collections prevent the alteration and falsification of information since it is self-authenticating; electronic data, which can be and which has been manipulated, cannot.

All of these issues severely affect the searching ability not only of the public but of patent examiners. The destruction of the existing classified paper file libraries would severely and negatively impact the patent quality needs of both. The hard copy collections need to be retained and the collections improved for U.S. patents and trademarks to continue be presumed to be valid.

While not a quality issue, elimination of the hard copy collections will effectively preclude lay members of the public from gaining access to patent and trademark information by placing an insurmountable barrier between them and their ability to carry out a thorough search of their own inventions or trademarks. The USPTO asserts "there are a steady new stream of customers who use the facilities for a very limited time and for purposes of a fairly narrow scope. There are approximately 300 new users every month." The assertion is also made that these electronic search systems are "user friendly." However the USPTO frequently and readily admits that considerable training is necessary for proper use of their electronic search systems. Yet due to the extremely arcane, non-intuitive, and difficult interface used for these electronic search systems, these systems are *de facto* inaccessible to the lay inventor or searcher. Even after training, the new user (as well as the experienced user) will not know if he has formulated his inquiry properly; if the automated search system is performing properly; if all of the data is available to the search system; or if all of the data hits developed will be available to him. He cannot look at the complete set of data, even assuming that the automated search system has all the relevant data at that moment at hand.

The tone of the Federal Register notice (of endnote 1) suggests that the USPTO fully intends to eliminate the hard copy collections at the earliest time permitted by law, even while requesting public comment. This process must be carefully scrutinized, because for the USPTO to act without due regard to the public comments would be unlawful. In making such a determination of disposing of the hard copy collections, the USPTO has to consider all the evidence, or its action can be held an abuse of discretion under 5 U.S.C. § 706 of the Administrative Procedures Act.⁹

A useful cost-to-benefit ratio analysis for the plan must necessarily rely on credible cost data. So, consider now cost-related matters. In his April 11, 2002 testimony before the House subcommittee, the USPTO Director asserted that the paper search libraries (hard copy collections) *can* be eliminated due to the availability of mature and reliable electronic search systems and *must* be eliminated as they occupy considerable space and require funding that could be better utilized for other agency requirements. On close review of the most recent USPTO budget and occupancy leases, it appears that the search libraries, both patent and trademark, are not a burden on the agency. Quite the opposite, they are self-supporting; the cost of their operation being borne by the public users and their direct fee income, and are not subsidized by application fees.

Further, the USPTO Chief Information Officer (CIO) in testimony before the Trademark Public Advisory Committee on February 11, 2002 asserted that the elimination of the hard copy collections will save the agency between two and six million dollars annually. USPTO officials have not explained how that broad range of cost savings was determined, nor what factors were or were not being figured into that estimate. Similarly, the USPTO has not detailed whether that alleged cost savings includes allocated costs that will not be actually saved but merely distributed across other agency operations. Likewise, the USPTO has not addressed whether that cost savings is effected by the need to purchase additional computer workstations to accommodate heavier public use of the electronic systems as the hard copy collections are allowed to degrade, or whether it includes the higher computer software and hardware maintenance contracts, site licenses and required peripherals that will accompany the installation of the additional workstations.

In Fiscal Year 2001 the public search facilities generated \$5,116,277.00 of fee income through self service copy charges and an additional \$1,173,612.00 of fee income through computer records copy charges for a total of \$6,289,889.00.¹⁰ This direct income does not include the additional fee income that comes as a result of the public's use of the patent and trademark hard copy collections in the form of new applications filed, certified copies, cancellations, oppositions, maintenance fees, and the like.

Given that the CIO's cost savings are based on the current search library logistics involving multiple locations, a *combined patent and trademark facility* would result in fewer duplicate staffing requirements, centralized computer networking, lower computer and copier maintenance costs, diminished contractor costs, reduced square footage of leased space and other cost savings. Lastly, if the USPTO consolidated the various search operations into the Crystal Plaza buildings 3, 34 and 4, it would save \$5.13 per square foot over the costs for the presently occupied space for the trademark collections in the South Tower location.¹¹ In any event, as the public search facilities continue to provide in excess of six million dollars annually of fee income (a reasonable expectation), an income

level higher than the upper limit of cost savings provided by the CIO, the hard copy collections will continue to be self-supporting, and indeed may actually provide a net income generating function for the USPTO.

Finally, we arrive at considerations of space - where and how the proposed CPSF materials will be housed. The PSR presently contains just over three quarters of all 6 and a half million U.S. patents in approximately 50 thousand square feet in Crystal Plaza buildings 3, 34 and 4. Of those U.S. patents not presently available for searching in the PSR, many are searchable in the examiner's search areas scattered over some eight buildings in Crystal City. The remaining patents have been moved to storage locations and are no longer considered accessible. On completion of a preliminary survey, it has been estimated (in round numbers) that to integrate the foreign patent documents, digests, etc. and the classified technical literature presently searchable only in the examiner's search areas, would involve the equivalent of 2,700 shoe cases of space. At about eight square feet per shoecase (the fill factor is higher in the PSR than in the examining areas), this calls for an additional 21,600 square feet to accomplish full integration. At \$24.62 per square foot, the additional cost to house all of the new materials would be just over half million dollars per year. This is probably less than the cost of just one modestly-sized legal patent challenge. A very small price to pay for such a powerful facility that would go a long way towards having all prior art searchable in one combined facility. Expansion into the second floors of buildings 3 and 4 would readily accommodate these additional materials.

Conclusions

Because of the critical importance of maintaining, if not improving, the quality of issued U.S. patents and registered trademarks as we seek to lead the world into a greater recognition of the economic value of IP, it is of special importance that the USPTO proceeds judiciously in the hard copy collection matter - while remaining an agent of change. That's a really tough balance to strike. So, in the context of achieving a wise balance between goals, risks, costs and benefits, what could be more reasonable than to establish a short evaluation interval - *three years is not a very long time* - during which an independent, science-based evaluation can be carried out thereby enabling a more sure-footed decision and proper post-evaluation actions by the USPTO?

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Endnotes

- 1 . Federal Register/Vol. 67, No. 68/Tuesday, April 9, 2002/Notices, pp. 17055-17060.
- 2 . S.1948, Pub. L. No. 106-113 (Nov. 1999)
- 3 . James F. Cottone, "Online Patent Searching: a Good News Story, but not the Whole Story." *Journal of the Patent and Trademark Office Society*, (April 1997, vol. 79, No. 4), pp. 233-240.
- 4 . Public Hearing on Issues Related to the Identification of Prior Art During Examination Of A Patent Application, July 14, 1999 PTO, Patent Theater.
- 5 . See NIPRA testimony provided to the Oversight Hearing on the USPTO by the Subcommittee on Courts and Intellectual Property of the House Judiciary Committee, March 9, 2000.
- 6 . Testimony of James F. Cottone, NIPRA Past President, before the House Judiciary Subcommittee on Courts, the Internet, and Intellectual Property, May 10, 2001.
- 7 . Trademark Automation, Information on System Problems and Planned Improvements, GAO/IMTEC-91-1.
- 8 . David C. Blair and M. E. Maron, An Evaluation of Retrieval Effectiveness for a Full-Text Document Retrieval System, *Communications of the ACM*, (March 1985, vol. 28, No. 3), pp. 289-298.
- 9 . See *Brown vs. Barbacid*, C.A.F.C. Docket 00-1590, decided January 11, 2002.
- 10 . United States Patent and Trademark Office FY 2003 Budget Submission of the President, FY 2001 Fee Income Report.
- 11 . GSA Public Buildings Service Bill for Space and Services for the South Tower and Crystal Plaza buildings 3 and 4.