

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
(Alexandria Division)

TRIANAFYLLOS TAFAS,  
  
Plaintiff,  
  
- against -  
  
JON. W. DUDAS, et al., et al.,  
  
Defendants.

1:07cv846 JCC/TRJ  
Judge Cacheris

SMITHKLINE BEECHAM CORPORATION, et al.,  
  
Plaintiff,  
  
- against -  
  
JON. W. DUDAS, et al., et al.,  
  
Defendants.

1:07cv1008 (JCC/TRJ)  
Judge Cacheris

**DECLARATION OF DEAN ALDERUCCI IN SUPPORT OF  
BRIEF OF *AMICUS CURIAE* CFPH, LLC**

I, Dean Alderucci, declare as follows:

1. I make this declaration on behalf of CFPH, LLC (Cantor Fitzgerald Patent Holdings, “CFPH”) in support of the Brief of *Amicus Curiae* Cantor Fitzgerald Patent Holdings In Support of Plaintiffs’ Summary Judgment Motions (“CFPH Brief”), and the accompanying motion seeking leave to have the brief filed. I have personal knowledge of the facts set forth herein, and if called as a witness could and would testify competently to the facts under oath.

2. I am a Vice President and Assistant General Counsel of Cantor Fitzgerald, L.P. I manage a group of patent attorneys and other legal professionals. This group is responsible for all patent application filings, patent prosecution and other matters related to patents for Cantor Fitzgerald, L.P., its affiliate CFPH, and its affiliated companies (collectively "Cantor").

3. I received a B.S. summa cum laude in Computer Engineering from Boston University. I received a M.S. in Computer Engineering from Boston University. I received a J.D. from the University of Connecticut School of Law. I received an M.B.A. from the University of Connecticut.

4. I spent several years in various positions engaged in software design and systems design at Draper Laboratory and at the Sikorsky Aircraft Corporation.

5. I am admitted to practice before the courts of Connecticut and Massachusetts, the U.S. Patent and Trademark Office ("PTO") and the Court of Appeals for the Federal Circuit.

6. For twelve years I have practiced patent law at Cantor, Walker Digital Management, LLC, and McCormick, Paulding & Huber obtaining (and supervising and assisting others to obtain) numerous U.S. and foreign patents for a wide variety of technologies in a variety of technical fields.

7. I am named as an inventor on several issued patents and pending patent applications.

8. Over the years I have spoken at a variety of bar and academic conferences, including those hosted by the American Intellectual Property Law Association, on different aspects of patent law and of patent practice.

9. I am very familiar with the rules of practice before the PTO, codified at 37 CFR Parts 1, 10, and 40, which govern application drafting, filing, and prosecution before the PTO, attorney conduct, and appeals. I am also intimately familiar with the Changes to Practice for Continued

Examination Filings, Patent Applications Containing Patentably Indistinct Claims, and Examination of Claims in Patent Applications; Final Rule. 72 Fed. Reg. 46,715 (Aug. 21, 2007) (“the Final Rules”). I filed extensive comments (Attachment A hereto) on behalf of Cantor on the PTO’s proposed rules in the instant proceeding, in which the PTO purported to provide reasons for issuing some aspects of the Final Rules.

10. Cantor is a global financial services provider. Cantor is a recognized leader in the specialized areas of equity and fixed income capital markets, offering products and services to more than 5000 institutional clients around the world. Cantor operates trading desks in every major financial center in the world with 41 offices and more than 3000 employees. Cantor also operates in other areas including investment banking, merchant banking, asset management, clearing and market data services, and energy emissions.

11. Cantor invests significant resources in the patent system. I am involved in decisions to invest significant financial and human resources in research and development for new technologies, and in decisions to enter new business directions. Many such decisions are made on the basis of patent protection that may be available, on the scope of such patent protection, on the speed with which such patent protection can be acquired, and on the likelihood of the U.S. Patent and Trademark Office will grant such patent protection.

12. Cantor has dozens of applications pending before the PTO and foreign patent offices. Cantor spends extensive amounts of money for salaries and to hire law firms and other consultants to prosecute its patent applications in order to protect the extensive investments that Cantor makes in developing and implementing new inventions. Decisions regarding Cantor’s ability to obtain patent protection, and the time by which such protection might be obtained, dramatically affect Cantor’s decisions to invest in developing and implementing new inventions.

13. Cantor (like many other financial services entities and other patent applicants) relies on the ability to file multiple, related applications addressing the many different aspects of the new inventions that it develops. Separate applications addressing “independent and distinct inventions” are required by the PTO’s rules and contemplated by the Patent Act. See 35 U.S.C. § 121; 37 CFR § 1.141(a). By filing separate applications addressing related but distinctly claimed inventions, Cantor assures that its patent application attorneys, PTO examiners, and others focus on the specific nature of the inventions actually claimed in the separate applications. This not only assists understanding of what is “particularly pointed out and distinctly claimed” in any application (as required by 35 U.S.C. § 112, second paragraph), but also helps to expedite and simplify application drafting, examination, and prosecution.

14. Multiple applications containing claims drawn to only one of many distinctive but related inventions are examined significantly faster than applications containing all such claims in a single application. Not only are such applications easier to understand, but also they are not subject to restriction requirements (under 35 U.S.C. § 121) that require the PTO to take initial office actions and applicants to respond with an election of the claims to be pursued in the initial application and the filing of a continuation (divisional) application or applications (filed under 35 U.S.C. § 120) in order to continue to obtain patent protection for the non-elected distinctively claimed invention (under 35 CFR § 1.141(b) (three-way restrictions for claims addressing products, methods of making, and methods of use) and 37 CFR § 1.142(a)&(b) (requirements for restriction and withdrawal of non-elected claims).

15. Cantor (like many other financial services entities and other patent applicants) seeks protection for its related but distinctive inventions by claiming them in different ways in different applications (that could trigger restriction requirements if contained in a single application). The

additional means of claiming inventions assure that Cantor is better able to fully protect the inventions, and thus to assure that Cantor's investments in new inventions can achieve their licensing and competitive revenue potentials. Cantor pays the required fees for filing and examination of each separate and distinctive application.

16. By filing multiple applications drawn to related but distinctively claimed aspects of the inventions, Cantor may obtain patents that issue separately and thus may be sold or retained (and licensed) separately to different entities. The ability to separately sell or license distinctive inventions increases the revenue that can be obtained from sale and licensing of patented inventions. Further, it minimizes the risk that distinctive but related inventions may be invalidated. The separate patents either may not be challenged or, because they are in separate patents, there will be less risk of common prosecution errors or judicial mistakes assuming that issues unique to particular distinctive claims apply to other claims.

17. By filing multiple applications drawn to related but distinctively claimed aspects of the inventions, Cantor may obtain patents on distinctive inventions earlier. Further, because of variations in the time it takes for the PTO to examine patents, these distinctive inventions will be subject to different term extensions under 35 U.S.C. § 156(c). By placing the distinctive inventions in separate applications, the later-obtained patents will not be subject to the duration limits established for the earlier-granted distinctive inventions. In some cases, later expiration dates are valuable. More importantly, because such later-granted applications contain distinctively claimed inventions, their terms are not limited to those of the earlier-granted applications (but rather receive term extensions providing for the full amount of excessive delays in the PTO), and they do not require terminal disclaimers that would limit their term to those of the earlier-granted patents. In contrast, if applicants were required to include distinctively

claimed inventions in the same application, they could not issue until all of the claims were resolved, and when they did they would be subject to the same term extensions for all claims.

18. Cantor (like many other financial services entities and other patent applicants) files many individual applications that contain multiple independent claims (in excess of five) and total claims (in excess of twenty-five), seeking to protect different features of patentably indistinct (as well as patentably distinct) new inventions. Cantor must consider when filing claims to protect its inventions and to preclude competition from using its inventions including the many different entities (such as manufacturers, distributors, and end users, the many kinds of people who interact with financial services providers, the many ways that people can provide financial services, etc.), the many different technologies (such as software, communications technologies, personal interactions, etc.), and the many different methods (such as advising, calculating, investing, pooling, etc.) that are used in financial service operations. Additional claims help to avoid problems with so-called “divided infringement,” where one entity uses or performs part of a claimed invention and another entity (sometimes in a different country) uses or performs the rest of the claimed invention.

19. Cantor invests millions of dollars in particular inventions, and seeks diligently to protect those investments by obtaining full protection for all distinctive and indistinct patentable aspects of those investments. Such extensive claiming is necessary because of the scale of financial services operations and the potential revenues that can be generated in licensing of inventions or can be recovered in infringement actions. Because of these extensive revenues, competitors diligently attempt to avoid patents by seeking to design around particular claims or to find prior art that might invalidate broad claims. For this reason, Cantor (like many other financial services entities and other patent applicants) seeks to file many dependent claims drawn to all of the

specific ways that its inventions can be implemented and additional features that may be added to the broadest concepts on which its inventions operate. This is also one reason why Cantor (like many other financial services entities and other patent applicants) needs to file additional claims after the first applications have been filed, often many years later, as Cantor is unable to determine at the earlier times which of the many variations of the disclosed invention competitors will adopt when entering the market (employing trivial changes or substitutions to the patented technology).

20. Different types of infringing activity are encompassed by different types of claims. For example, in a complicated system where the invention is intended to be made, distributed, and used by different types of entities, it is often impossible to encompass the activities of these different classes of entity with a single type of claim because they use the invention or aspects of the invention in different manners. Thus, for such inventions it is known at the outset that several types of claims will be necessary to obtain adequate protection. Typically, each such entity requires its own independent claim and a large number of corresponding dependent claims addressed to particular features that such entities might employ (or that might be employed by other entities in conjunction with the target entity).

21. Cantor (like many other financial services entities and other patent applicants) not only seeks to patent the broadest claims available for an invention, on the theory that the broadest claims will cover competitors' making, using, and selling of the invention, but also seeks to patent many narrower independent and additional dependent claims. In many circumstances, especially in areas where sophisticated parties negotiate for licenses to different aspects of technology, it is imprudent to license broad claims that confer more than a licensee desires and which may preclude other licensees from obtaining that claim. Thus, several specific and precise

claims allow a business to conduct more sophisticated technology transactions by matching desired technology with licensees. Further, broad claims are more likely to be found invalid in light of prior art of which applicants are not aware, and thus it is imprudent to seek only the broadest claims that can legitimately and in good faith be drafted based on known prior art. And when additional prior art becomes known, additional independent and dependent claims are routinely filed to assure the maximum protection for inventions, rather than abandoning all value due to reliance on simplistically broad claims.

22. By claiming additional dependent features of the invention, such as the invention when incorporated into a larger product or wider service, Cantor also may increase the royalty base or lost profits used to calculate licensing revenue or to obtain damages in an infringement action. Under existing law, the revenue base for inventions in damage awards is often calculated based on the product actually claimed, and not the inventive contribution to the claim, when the invention is what results in sales of the invention. Thus, by claiming a product in which the new invention is incorporated (as well as the invention itself), the patent will generate significant additional licensing and infringement damages revenue.

23. Cantor (like many other financial services entities and other patent applicants) seeks diligently to protect its inventions as soon as possible, and bases its decisions to invest in those inventions on its ability to file continuation applications. Such applications permit claims that have been allowed by an examiner to be issued, while continuing to dispute or appeal examiner rejections of (or objections to) other claims in the application. Further, continuation applications are often needed to assure that Cantor obtains the full scope of patent protection that is available under the patent laws. Continuing applications are especially important in three areas:



(a) obtaining the full range of claims to which an invention is entitled, especially those inventions which are complicated or which have many variations, and therefore are capable of being made and used by copyists in a variety of manners,

(b) preventing deadlock in prosecution before examiners at the U.S. Patent and Trademark Office, and

(c) ameliorating the negative effects of the persistent backlog at the U.S. Patent and Trademark Office.

24. With respect to (a), an invention that is complicated or amenable to many variations typically requires several claims since no single claim may encompass, or adequately encompass, all or most such variations. Each variation requires a set of claims, and accordingly requires a significant amount of resources from inventors and lawyers in designing and drafting such claims. Although it is known at the filing of the application what those areas are, it is unknown which variation will actually survive examination (particularly in light of prior art discovered by examiners and brought to the attention of applicants for the first time long after the original application or a continuation application was filed). Similarly, it is unknown at the time of filing which areas of protection copyists will capitalize on. Thus, although many claims can be and typically are directed at encompassing all variations, Cantor rationally elects to invest significant resources to claims to particular variations only after time has passed and the direction of copyists are easier to predict or, unfortunately, to actually witness.

25. With respect to (b), it is important to be able (for the reasons discussed above) to permit allowed claims to issue while continuing to dispute rejections (or objections) to other claims in the same application. By filing a continuation application to address only the disputed claims, the applicant not only receives a patent faster on claims not in dispute but also helps to focus

examination attention and achieve faster resolution of the claims that remain in dispute (for reasons similar to those discussed above for multiple applications addressing patentable distinct claims). Further, it permits the claims not in dispute to avoid the lengthy and costly appeals process (regardless of the merits of the disputes regarding the rejected claims), delaying a final decision on the allowed claims for years, and permits appeals to focus solely on the claims that are actually in dispute.

26. With respect to (c), the persistent backlog at the U.S. Patent and Trademark Office causes great uncertainty in the whether patent protection will be available for an invention, the scope of such patent protection, and the speed with which such patent protection can be acquired. With continuing applications, these risks can be spread out over several applications directed to patentable variations of an invention or of related but distinctive inventions. For example, if it is unknown whether a particular variation will be deemed patentable by an examiner or will instead require protracted appeals, that variation can be encapsulated in the claims of a single application. Meanwhile another variation of that invention, which may be unrelated enough to merit confidence that its patentability is high, or at least that its patentability rests on different decisions altogether, can be encapsulated in the claims of a single application. Though the technology of both applications is related, the decision processes during examination are unrelated so the decisions need not be wed together naively by a single application.

27. Because of the needs discussed above to file (and to obtain prompt issuance of) multiple applications containing patentably distinct claims, applications containing more than five independent and twenty-five total claims (as well as application families containing more than fifteen independent and seventy-five total claims), and more than two continuing applications, the Final Rules will have a dramatic adverse effect on Cantor's ability to obtain patents, to obtain

them in as prompt a fashion as possible, to assure that their terms last as long as possible, and to obtain them with the least costs of prosecution. The Final Rules, if allowed to go into force, would require Cantor to dramatically change its application drafting and prosecution practices, resulting in dramatically increased costs of prosecution. In order to seek to obtain as much protection as possible under the Final Rules, Cantor would have to draft and file as many claims as it could initially and in the same applications, even though it will later turn out that acquiring such claims was not needed to effectively protect the invention. Cantor also will bear (without being able to spread over time) the costs of these additional new claims and the extensive costs associated with Examination Support Documents required under new Rule 1.78(b)(1) & 1.265(a), including the costs of new searches of prior art, of explanation of patentability for the claims that Cantor files, and of explanations of written description support for each claim that Cantor files.

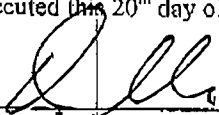
28. Cantor will remain subject to 37 CFR § 1.141(a), restricting patentably distinct claims from being filed in a single application. For the patentably distinct claims that must be filed in separate applications, Cantor will now incur dramatic new costs of making arguments regarding the patentable distinctness of the claims seeking to rebut under new Rule 1.78(f)(2)(ii)(A) the new Rule 1.78(f)(2)(i) presumption of patentable indistinctness, which claims would previously have been found patentably distinct without a double patenting rejection (on the same evidence, based solely on the new presumption). Because Cantor may be unsuccessful in such rebuttals, Cantor will also lose patent term for such claims by being required to file terminal disclaimers under new Rule 1.78(f)(2)(ii)(B). Further, Cantor may incur substantial additional costs of prosecution by being required to cancel the claims found to be patentably indistinct and add them to other applications under new Rule 1.78(f)(3).

29. Cantor will lose patent rights by being unable to file more than two continuing applications under new Rule 1.78(d)(1). Cantor also will have its applications delayed from issue because, to avoid the result of lost patent rights, Cantor will need to file many more claims in initial and earlier continuation applications (although in many cases Cantor may be unable to anticipate all of the claims it otherwise might have filed through continuation applications that no longer will be permitted). Cantor also will bear the costs of filing new petitions to permit the filing of continuation applications where it meets the limited petition showing requirement of new Rule 1.78(d)(1)(vi), but under the vague standards for granting such petitions in many cases may not be successful in obtaining a grant of the petition and again will lose patent rights as a result. Even when such petitions are granted, Cantor will lose much of the commercial value of the patents by the delays that result from their issuance. Finally, Cantor will need to bear the additional costs of providing Examination Support Documents as a result of filing additional claims in initial and earlier continuation applications.

30. As a result of the Final Rules, Cantor may no longer seek to file many of the claims it would otherwise have found cost-effective and needed for protection, because of the likelihood that they will not issue or will not issue in a timely fashion, which will exceed the expected value of prosecuting those claims (considering the costs of doing so). As a result, Cantor will no longer be able to fully protect its inventions and its competitors will find ways to avoid the protection that Cantor in fact obtains, to Cantor's substantial financial detriment.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed this 20<sup>th</sup> day of December 2007 at New York, New York.

A handwritten signature in black ink, appearing to read 'D. Alderucci', written over a horizontal line.

Dean Alderucci