

THE UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
JACKSONVILLE DIVISION

PARKERVISION, INC.,

Plaintiff,

v.

QUALCOMM INCORPORATED,

Defendant.

Civil Action No. 3:11-cv-719-J-37TEM

QUALCOMM INCORPORATED,

Counterclaim Plaintiff,

v.

PARKERVISION, INC., and
STERNE, KESSLER, GOLDSTEIN & FOX PLLC

Counterclaim Defendants.

**Defendant Qualcomm's First Amended
Answer, Counterclaim, and Demand for Jury Trial**

Defendant/Counterclaim Plaintiff Qualcomm Incorporated

("Qualcomm") hereby answers the Complaint of Plaintiff ParkerVision, Inc.

("ParkerVision"):

ANSWER

1. Qualcomm denies the allegations of paragraph 1, but admits that ParkerVision purports to seek damages and injunctive relief.
2. Qualcomm denies the allegations of paragraph 2.
3. Qualcomm admits the allegations of paragraph 3.

4. Qualcomm admits that Qualcomm is a Delaware corporation with its principal place of business at 5775 Morehouse Drive, San Diego, California, 92121. Qualcomm admits that it conducts business in the Middle District of Florida. Qualcomm denies the remaining allegations of paragraph 4.

5. Qualcomm denies the allegations of paragraph 5.

6. Qualcomm admits the allegations of paragraph 6.

7. Qualcomm denies the allegations of paragraph 7, but does not assert lack of personal jurisdiction as a defense to this action.

8. Qualcomm denies the allegations of paragraph 8, but does not assert lack of venue as a defense to this action.

9. Qualcomm lacks knowledge or information sufficient to form a belief about the truth of the allegations of paragraph 9, except that Qualcomm denies that the cited patents are valid or enforceable.

10. Qualcomm admits that ParkerVision has not granted Qualcomm a license to practice the patents-in-suit. Qualcomm lacks knowledge or information sufficient to form a belief about the truth of the allegations of ownership of the patents-in-suit. Qualcomm denies the remaining allegations of paragraph 10.

11. Qualcomm denies the allegations of paragraph 11.

12. Qualcomm denies the allegations of paragraph 12.

13. Qualcomm denies the allegations of paragraph 13.

Affirmative Defenses

Qualcomm asserts the following affirmative defenses.

Failure To State A Claim

ParkerVision's complaint fails to state a claim upon which relief can be granted.

Non-Infringement

Qualcomm has not infringed, and currently does not infringe, any valid claim of any of U.S. Patent Nos. 6,061,551 (the "551 Patent"), 6,266,518 (the "518 Patent"), 6,370,371 (the "371 Patent"), 7,496,342 (the "342 Patent"), 7,515,896 (the "896 Patent"), 7,724,845 (the "845 Patent"), and 7,822,401 (the "401 Patent") (collectively, the "Patents-in-Suit"), directly, indirectly, contributorily, by inducement, or in any other manner.

Invalidity

Each claim of the Patents-in-Suit is invalid for failure to comply with one or more provisions of 35 U.S.C. §§ 101, 102, 103, and 112. ParkerVision's complaint does not identify which of the 438 claims contained in the seven Patents-in-Suit it asserts are infringed by Qualcomm and ParkerVision has to date refused to identify its asserted claims in response to Qualcomm's request that it do so. Accordingly, it would be unfair, unprecedented and wasteful to require Qualcomm to provide a complete and binding invalidity analysis at this stage of the litigation, particularly since ParkerVision has not provided any details concerning its allegations that Qualcomm has infringed the Patents-in-Suit.

Despite ParkerVision's refusal to identify the claims it is asserting against Qualcomm and ParkerVision's failure to particularize its infringement allegations in the complaint, it is apparent that most, if not all, of the claims of the Patents-in-Suit are

invalid as anticipated or rendered obvious by the prior art, including the five references discussed in the Counterclaim below (Fisher 1981, Williams 1996, Schiltz 1994, Faulkner 1983 and Parssinen 1997). Moreover, several dependent claims of the Patents-in-Suit are invalid under 35 U.S.C. § 112 because terms contained therein are indefinite or because they lack adequate descriptive support in the specification, including the following:

- Claim 5 of the '551 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because the term "the frequency of the energy transfer signal" lacks an antecedent basis in claims 1 and 2;
- Claim 156 of the '551 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "the energy control signal" lacks an antecedent basis in any of claims 23, 149, 150 and 155;
- Claim 30 of the '518 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "N" lacks an antecedent basis in claim 29;
- Claim 31 of the '518 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "the frequency of the second signal" lacks an antecedent basis in claim 29;
- Claims 35-41 of the '518 Patent are invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "N" lacks an antecedent basis in claim 29;
- Claims 6, 8, 12, 14, 17-19, 40-44, 46, 52-54 and 56-66 of the '371 Patent are invalid as indefinite under 35 U.S.C. § 112, second paragraph, because the meaning of "represents" is unclear;
- Claims 6, 8, 12, 14, 17-19, 40-44, 46, 52-54 and 56-66 of the '371 Patent are also invalid because the specification does not contain written description of the claimed inventions, and the manner and process of making and using them, in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same;
- Claim 6 of the '342 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because an input impedance is a value, not an impedance device; and

- Claim 4 of the '845 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because the function is undefined.

Qualcomm will provide additional details concerning its invalidity defenses after ParkerVision particularizes its infringement allegations.

Laches

The '551 Patent, the '518 Patent and the '371 Patent are unenforceable, in whole or in part, against Qualcomm under the doctrine of laches, because ParkerVision knew or reasonably should have known of Qualcomm's direct conversion receiver technology since at least December 2000, when Qualcomm announced its Zero Intermediate Frequency (*i.e.* "ZIF" or direct conversion) architecture for the wireless handset market. Indeed, immediately after Qualcomm's announcement, ParkerVision was telling its investors that Qualcomm would need a license from ParkerVision to sell ZIF technology. ParkerVision, however, waited until July 2011, over 10 years after the issuance of these patents, to sue Qualcomm. This 10 year delay is presumed to be, and is, both unreasonable and prejudicial to Qualcomm.

Inequitable Conduct

The Patents-in-Suit are unenforceable because, as discussed *infra* at Counterclaim ¶¶ 8 - 69, individuals owing a duty of candor to the United States Patent and Trademark Office (the "PTO"), including applicants for the Patents-in-Suit, the attorneys prosecuting those patents, and others associated with ParkerVision and/or its predecessors in title, engaged in inequitable conduct through concealment and affirmative misstatements made to the PTO during prosecution. This inequitable conduct renders the Patents-in-Suit unenforceable.

Unclean Hands

As discussed *infra* at Counterclaim ¶¶ 8 - 69, ParkerVision’s claims of patent infringement against Qualcomm are barred in whole or in part by the doctrine of unclean hands.

Prayer For Relief

WHEREFORE, Qualcomm respectfully requests that this Court enter a Judgment and Order dismissing the Complaint, and each count thereof, with prejudice and denying ParkerVision any relief whatsoever, and awarding Qualcomm any such other costs and further relief as the Court may deem just and proper.

COUNTERCLAIM

Defendant/Counterclaim Plaintiff Qualcomm Incorporated (“Qualcomm”), for its Counterclaim against Plaintiff/Counterclaim Defendant ParkerVision, Inc. (“ParkerVision”) and Counterclaim Defendant Sterne, Kessler, Goldstein & Fox PLLC (“Sterne Kessler”), upon knowledge as to matters relating to itself and upon information and belief as to all other matters, alleges as follows:

Background

ParkerVision’s brief, bare-bones complaint alleging that Qualcomm infringes seven patents represents the culmination of a course of improper and unethical patent practice that spans more than a decade. Beginning in 1998, ParkerVision began applying for a series of patents generally focused on methods of “down-converting” electromagnetic radio waves from the very high frequencies at which they are wirelessly transmitted. Although they may be daunting to a person not skilled in the field of radio-frequency (“RF”) technology, the patents in fact cover and claim technologies long

known to the field, and, to the extent useful, they are certainly not novel. To obtain these patents ParkerVision repeatedly concealed the fact that what it was claiming to have invented was, in fact, old technology by describing its alleged inventions using new and confusing terminology. These patents should never have issued.

But they did, in large part because ParkerVision perpetrated a fraud on the U. S. Patent and Trademark Office (the "PTO"). Undoubtedly mindful of the fatal defects in its patent applications, ParkerVision procured the patents through a dual campaign of distraction and deception. Distraction, by "burying" the PTO with numerous - not fewer than 1200 - references, including such plainly irrelevant items as ParkerVision press releases concerning changes in management, ParkerVision quarterly financial results, and scientific articles discussing the relative rates of rainfall and distribution of rain-droplet size in temperate and tropical regions. *See, e.g.,* Vilar, E. *et al.*, "Scattering and Extinction: Dependence Upon Raindrop Size Distribution in Temperate (Barcelona) and Tropical (Belem) Regions," 10th International Conf. On Antennas and Propagation, April 14-17, 1997, pp. 2.230-2.233. And deception, by badly misstating to the examiner what several plainly relevant and invalidating references disclosed, so that the PTO would not pay any attention to them in considering whether to grant ParkerVision the patents it sought.

Then, having succeeded in procuring the patents through breaches of their duty of candor to the PTO, ParkerVision turned to enforce them against Qualcomm with the aid of its long-time patent counsel, Sterne, Kessler, Goldstein & Fox PLLC ("Sterne Kessler"), the same firm that had prosecuted the Patents-in-Suit in the PTO. In doing so, ParkerVision caused Sterne Kessler to breach its duty of loyalty to one of its

other longstanding clients: Qualcomm. Over the past decade and longer, during the same period over which Sterne Kessler prosecuted the seven Patents-in-Suit, Sterne Kessler represented Qualcomm in over 100 patent matters – including the prosecution of patents for Qualcomm in the same field as the Patents-in-Suit– and continued to represent Qualcomm until its unilateral withdrawal from all Qualcomm matters on October 14, 2011. In breach of the most fundamental of legal ethical duties, Sterne Kessler assisted ParkerVision in suing Sterne Kessler’s own client, Qualcomm, in this action.

To oppose this improper course of conduct on the part of ParkerVision and its longstanding patent counsel, Qualcomm asserts the following counterclaim against ParkerVision and joins as an additional counterclaim-defendant Sterne Kessler:

Parties

1. Qualcomm is a Delaware corporation with its principal place of business at 5775 Morehouse Drive, San Diego, California. Qualcomm is a corporation engaged in the design, manufacture, and sale of wireless communication equipment and technology, including, primarily, cell phone technology. Qualcomm is the world’s largest supplier of cell phone chips. Since its formation in 1985, Qualcomm has invested billions of dollars in research and development.

2. ParkerVision is a Florida corporation with its principal place of business at 7915 Baymeadows Way, Jacksonville, Florida.

3. Sterne Kessler is a limited liability partnership law firm headquartered in Washington, D.C., and specializing in patent law.

Jurisdiction

4. This Court has jurisdiction over these counterclaim pursuant to 28 U.S.C. §§ 1331, 1332, 1338(a), 1367, and 2201.

5. Qualcomm seeks, *inter alia*, declaratory relief pursuant to 28 U.S.C. §§ 2201-2202 and Rule 57 of the Federal Rules of Civil Procedure.

6. ParkerVision is a resident of the State of Florida and, by filing this action, has submitted to this Court's exercise of personal jurisdiction.

7. This Court may exercise personal jurisdiction over Sterne Kessler because by counseling and assisting ParkerVision with respect to the filing of this action against Qualcomm in this district, Sterne Kessler committed a tortious act within the state of Florida, and because by serving as ParkerVision's patent counsel generally for more than a decade, Sterne Kessler continuously conducted a substantial amount of business in Florida with ParkerVision.

ParkerVision's Pattern of Inequitable Conduct

8. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the PTO. 37 C.F.R. § 1.56. A breach of this duty may constitute inequitable conduct, rendering the patent unenforceable.

9. In clear violation of their duty of candor and good faith, individuals substantively involved in the prosecution of the '551 Patent, including in particular David F. Sorrells, a named inventor, and Michael Q. Lee, a prosecuting attorney from Sterne Kessler, (collectively, the "Applicants") concealed a reference known to be highly material and made repeated false statements to the Examiner concerning the scope and

teaching of other relevant prior art submitted in connection with a March 2, 1999 Petition to Make Special Under 37 C.F.R. § 1.102(d) and Incorporated Information Disclosure Statement (the "Petition to Make Special").

10. In particular, and as detailed below, the Applicants concealed a highly material reference and mischaracterized four or more references in the Petition to Make Special that clearly rendered the pending claims unpatentable by stating that each prior art reference failed to disclose the claimed combination of elements. The concealment was calculated and the mischaracterizations were demonstrably false; each was made with specific intent to mislead the PTO into granting the Petition to Make Special and to mislead the Examiner to secure allowance of unpatentable claims.

11. As part of their effort to mislead the Examiner, the Applicants "buried" him with hundreds of references so as to distract his attention from highly relevant references. For example, during the prosecution of the '551 Patent, in a single, September 21, 1999 Information Disclosure Statement ("IDS"), the Applicants submitted over 400 references to the Examiner. Detailed examination of these 400 references disclosed in the September 21, 1999 IDS has revealed that at least 60% of the 149 disclosed non-patent references are entirely irrelevant to the claimed inventions and at least 20% of the 263 disclosed patent references appear to be irrelevant to the claimed invention. In that same IDS, however, buried beneath the more than 150 irrelevant references, were a handful of highly relevant references—such as U.S. Patent No. 4,320,536 (the "536 Patent")—that, if they had been called to the Examiner's full attention, would have precluded issuance of the pending claims.

12. The '536 Patent discloses a subharmonic mixer that, in part, suppresses responses to undesired harmonics of a local oscillator frequency. *See* col. 1:5-11. A person of ordinary skill in the art would have understood the '536 Patent to be highly material to Pending Claim 8, which issued in amended form as Claim 1 of the '551 Patent. Indeed, each and every element required by Claim 1 of the '551 Patent is disclosed by the '536 Patent. In particular, the '536 Patent describes a system for:

- “down-converting a carrier signal to a lower frequency signal,” at col. 3:40-57;
- “receiving a carrier signal,” at col. 3:40-57;
- “transferring non-negligible amounts of energy from the modulated carrier signal,” at col. 1:14-16 and col. 3:40-57;
- “at an aliasing rate that is substantially equal to a frequency of the carrier signal plus or minus frequency of the lower frequency signal, divided by n , where n represents a harmonic or sub-harmonic of the carrier signal” at col. 1:14-16 and col. 3:40-57; and
- “generating a lower frequency signal from the transferred energy” at col. 3:40-57.

13. Had the '536 Patent been called to the Examiner's attention, at least Claim 1 of the '551 Patent would not have issued.

14. Thereafter, the Applicants continued to overwhelm the PTO with voluminous disclosures of largely irrelevant documents, for no apparent purpose other than to distract the Examiner from more material references, such as the '536 Patent. The Applicants submitted 45 additional Information Disclosure Statements during the prosecution of all the Patents-in-Suit, which included 818 additional references (for a total of 1251 references submitted across all of the Patents-in-Suit), many of which, like

the bulk of the over 400 included in the September 21, 1999 IDS, were irrelevant to ParkerVision's claimed inventions.

15. The vast number of irrelevant references cited to the PTO during prosecution of the '551 Patent alone include, among other things, ParkerVision press releases concerning changes in management (*e.g.*, "Press Release, 'ParkerVision, Inc. Announces The Retirement of William H. Fletcher, Chief Financial Officer,' 1 Page, May 11, 1994."), ParkerVision quarterly financial results (*e.g.*, "Press Release, 'Parkervision Announces First Quarter Financial Results,' 3 Pages May 4, 1998"), and scientific articles from clearly unrelated fields, such as the following:

- Vilar, E. *et al.*, "Comparison of Rainfall Rate Duration Distributions for ILE-IFE and Barcelona," *Electronics Letters*, vol. 28, No. 20, Sep. 24, 1992, pp. 1922-1924 (providing "[a] comparative statistical study of durations . . . of rainfall rates . . . for the temperate region of Barcelona and the tropical region of Ile-Ife (Nigeria)"); and
- Vilar, E. *et al.*, "Scattering and Extinction: Dependence Upon Raindrop Size Distribution in Temperate (Barcelona) and Tropical (Belem) Regions," 10th International Conf. On Antennas and Propagation, April 14-17, 1997, pp. 2.230-2.233 (reporting the results of a study conducted in Belem and Barcelona, showing "no significant differences in raindrop size distribution between the two sites").

As the abstracts of the Vilar articles make abundantly clear, these papers provide statistical analyses of rainfall variations in tropical and temperate regions, and have no relevance to the claimed subject matter, *i.e.*, radio-frequency receivers or the down-conversion of electromagnetic signals.

16. In further violation of their duty of candor and good faith, named inventor David Sorrells and prosecuting attorney Michael Lee deliberately concealed a

highly material reference from the Examiner that was brought to ParkerVision's attention by Qualcomm, despite their ongoing duty to supplement the then-pending Petition to Make Special.

17. On March 17, 1999, representatives from Qualcomm and ParkerVision met in Del Mar, California (the "March 17 Meeting"), to discuss certain aspects of the direct conversion technology that ParkerVision claimed to have invented. The ParkerVision representatives included David Sorrells, whom ParkerVision had identified as its lead technical person and the person responsible for all technical discussions of the technology that ParkerVision claimed to own.

18. Following the March 17 Meeting, Qualcomm sent to ParkerVision a copy of a 1997 article by A. Parssinen and others, entitled "A 2-GHz Subharmonic Sampler for Signal Downconversion," that had appeared in the December 1997 edition of the IEEE Transactions on Microwave Theory and Techniques (Parssinen 1997). At the same time, Qualcomm provided ParkerVision with a confidential memorandum (the "Qualcomm Memorandum") explaining how and why Parssinen 1997 was highly relevant to the direct conversion technology that ParkerVision claimed to have invented.

19. David Sorrells received Parssinen 1997 and the Qualcomm Memorandum on or around March 26, 1999.

20. Parssinen 1997 describes generally the subject matter of the claims of the Patents-in-Suit and anticipates or renders obvious many of their claims. For example, Parssinen 1997 discloses each element of issued Claim 1 of the '551 Patent. In particular, Parssinen 1997 describes a system and method for:

- “down-converting a carrier signal to a lower frequency signal,” at Figure 2 and in the Abstract;
- “receiving a carrier signal,” at Figure 5;
- “transferring non-negligible amounts of energy from the modulated carrier signal,” at pages 2344, column 1, 2345-46, and Figure 3;
- sampling “at an aliasing rate that is substantially equal to a frequency of the carrier signal plus or minus frequency of the lower frequency signal, divided by n , where n represents a harmonic or sub-harmonic of the carrier signal” at page 2344, columns 1-2 and Figure 1; and
- “generating a lower frequency signal from the transferred energy” at page 2345, column 1.

21. Parssinen 1997 also describes each element of an independent claim (“Pending Claim 8”) that was pending in March 1999 (when ParkerVision received Parssinen 1997 from Qualcomm and had just filed its Petition to Make Special) and that issued in amended form as Claim 1 of the ‘551 Patent. Specifically, Parssinen 1997 discloses a system and method for:

- “directly down-converting a modulated carrier to a demodulated baseband signal,” at Figure 2 and in the Abstract;
- “receiving the modulated carrier signal,” at pages 2344, column 2 and 2346, column 1;
- “transferring non-negligible amounts of energy from the modulated carrier signal,” at pages 2344, column 1, 2345-46, and Figure 3; and
- sampling “at a rate that is substantially equal to a sub-harmonic of the modulated carrier signal, whereby the transferred non-negligible amounts of energy forms the demodulated baseband signal,” at pages 2344-45.

22. Parssinen 1997 was not cumulative of the references presented in the Petition to Make Special because it contains a more clearly explicit teaching—and quantification—of the claim element “transferring non-negligible amounts of energy from the modulated carrier signal,” as compared with the teachings in the other references included in the Petition to Make Special.

23. The Petition to Make Special was pending in the PTO from March 31, 1999 until June 24, 1999, when it was granted. Throughout this period, ParkerVision, and specifically David Sorrells, was aware of the existence and high degree of materiality of Parssinen 1997 to the pending application for the '551 Patent. During that period, on or around April 23, 1999, David Sorrells met with prosecuting attorney Michael Lee, to discuss the pending application.

24. Despite having the opportunity to update the Petition to Make Special, David Sorrells and Michael Lee elected not to disclose Parssinen 1997 to the PTO until well after the petition was granted. ParkerVision, David Sorrells and Michael Lee must have disclosed Parssinen 1997 to the PTO at some point subsequent to the granting of the Petition to Make Special because Parssinen 1997 is listed on the face of the '551 Patent. Although Parssinen 1997 was not identified in any IDS found in the publicly available file history, it appears that the Applicants submitted three such disclosures—on September 21, 1999, September 28, 1999 and December 17, 1999—that are not available, in their entirety, in the PTO's public file for the '551 Patent. It appears that Parssinen 1997 was disclosed in one of these missing Information Disclosure Statements.

25. PTO practice and procedure require an applicant to supplement or update a petition to make special if the applicant becomes aware of a reference that is

“more closely related to the subject matter of a least one claim” than the references provided in the previously-filed petition to make special. Consequently, the disclosure of a prior art reference in an IDS filed after the granting of a petition to make special constitutes a representation by an applicant to the PTO that the newly submitted reference is less material than the prior art cited in the original petition to make special. Accordingly, the applicants for the ‘551 Patent, including in particular David Sorrells and Michael Lee, affirmatively misrepresented to the PTO that Parssinen 1997 was “less material” than the references contained in the Petition to Make Special. This was a material misrepresentation, made with specific intent to mislead and deceive the PTO, to secure allowance of the Patent.

26. ParkerVision’s egregious misconduct was exacerbated when these same individuals further concealed the high materiality of the Parssinen reference by submitting it in a routine IDS, along with hundreds of irrelevant prior art references, rather than supplementing the pending Petition to Make Special, as required by their duty of candor.

27. The Applicants also attempted during the prosecution of patents related to the ‘551 Patent to hide from the Examiner the materiality of Parssinen 1997. For example, on April 16, 1999, within weeks of receiving Parssinen 1997 and the Qualcomm Memorandum, ParkerVision filed a continuation in part to the ‘551 Patent which eventually issued as U.S. Patent No. 6,687,493 (“the ‘493 Patent”). However, the Applicants did not disclose Parssinen 1997 in the prosecution of the ‘493 Patent until August 16, 2001, when it was included in an IDS containing over 700 largely irrelevant references. In response to that overwhelming disclosure, the Examiner of the ‘493 Patent

admonished the Applicants for “fail[ing] to state that any submitted reference/document is materially relevant to the claims” and refused to inspect more than “four or five of the references” after determining that “nothing at all materially relevant to the claims of the instant application” was contained in the inspected references and therefore “the entire set of references need not be individually inspected for relevancy.”

28. The Applicants’ behavior, including their mischaracterizations of the prior art and their efforts to conceal the highly relevant Parssinen 1997 by burying the Examiner with irrelevant references, constitutes a pattern of intentional misconduct designed to mislead the PTO to secure the allowance of the ‘551 Patent. This inequitable conduct renders the ‘551 Patent unenforceable.

ParkerVision’s Mischaracterization of the Prior Art in the Petition to Make Special

29. On March 2, 1999, the Applicants submitted the Petition to Make Special that included, *inter alia*, a description of the Applicants’ pre-examination search for prior art, a copy of each document identified by the pre-examination search and deemed “most closely related to the subject matter encompassed by the claims,” and a discussion of those documents distinguishing the claimed subject matter from the identified prior art.

30. A petition to make special is a request for accelerated examination of a patent application based on one or more justifications for doing so as specified in 37 C.F.R. § 1.102(d) and the Manual of Patent Examination Procedure (“MPEP”) § 708.02. One of the main requirements for submission of such a petition is that the applicant perform a pre-examination search, submit a copy of each of the references deemed most

closely related to the subject matter, and include “a detailed discussion of the references, which points out, with . . . particularity . . . how the claimed subject matter is patentable over the references.” MPEP § 708.02[VIII] (7th Ed., July 1998); *see also* MPEP § 708.02[VIII] (8th Ed., July 2010).

31. Information Disclosure Statements are lists of prior art references applicants provide to examiners for the purpose of bringing those references to the examiners’ attention.

32. When the Applicants submitted the Petition to Make Special, the Application included, in relevant part, the following independent claim (“Pending Claim 8”):

8. A method for directly down-converting a modulated carrier to a demodulated baseband signal, comprising the steps of:

- (1) receiving the modulated carrier signal; and
- (2) transferring non-negligible amounts of energy from the modulated carrier signal, at a rate that is substantially equal to a sub-harmonic of the modulated carrier signal, whereby the transferred non-negligible amounts of energy forms the demodulated baseband signal.

33. In the Petition to Make Special, the Applicants listed 21 prior art references deemed “most closely related to the subject matter encompassed by the claims.” The cited references included:

- U.S. Patent 4,253,066, titled “Synchronous Detection with Sampling,” issued February 24, 1981 to Fisher *et al.* (“Fisher 1981”);
- U.S. Patent 5,557,642, titled “Direct Conversion Receiver for Multiple Protocols,” issued September 17, 1996 to Williams (“Williams 1996”);

- U.S. Patent 5,339,459, titled “High Speed Sample and Hold Circuit and Radio Constructed Therewith,” issued August. 16, 1994 to Schiltz *et al.* (“Schiltz 1994”); and
- Faulkner and Vilar, “Subharmonic Sampling for the Measurement of Short-Term Stability of Microwave Oscillators,” IEEE Transactions on Instrumentation and Measurement, Vol. 1M-32, No. 1, March 1983, pp. 208-213 (“Faulkner 1983”);

(collectively, the “Subharmonic Sampling Exemplars”).

34. The Applicants, including co-inventor David Sorrells and prosecuting attorney Michael Lee, distinguished each of these references as failing to disclose the combination of the elements of Pending Claim 8, namely “receiving a modulated carrier signal” and “transferring non-negligible amounts of energy from the modulated carrier signal, at a rate that is substantially equal to a sub-harmonic of the modulated carrier signal, whereby the transferred non-negligible amounts of energy forms a demodulated signal.” But each of the four references listed above plainly discloses these elements.

35. For example, in distinguishing Fisher 1981, the Applicants stated:

Reference 1 [Fisher 1981] appears to be related to a synchronous detector that samples an amplitude modulated wave for short periods. *Reference 1 does not teach or suggest directly down-converting a modulated carrier signal to a demodulated baseband signal, as recited in the claims. Considering claim 8, for example, Reference 1 does not teach or suggest the combination of receiving a modulated carrier signal and transferring non-negligible amounts of energy from the modulated carrier signal, at a rate that is substantially equal to a sub-harmonic of the modulated carrier signal, whereby the transferred non-negligible amounts of energy forms the demodulated baseband signal.* (Emphasis added).

36. Review of Fisher 1981 shows that the Applicants’ characterization of Reference 1 was false. The Fisher 1981 Abstract discloses:

[A] *receiving apparatus for a double-sideband amplitude-modulated wave*, a synchronous detector which *samples the modulated wave* for short periods centered on instants of peaks of the carrier at regularly-occurring intervals, *with a sampling frequency* greater than the Nyquist frequency for the modulating wave, *equal to the carrier frequency divided by an integer*, and *reconstructs the modulating wave from the sequence of samples in a reconstruction filter*. (Emphasis added).

37. On its face, Fisher 1981 teaches all of the elements that the Applicants described as missing from Fisher 1981:

- The system in Fisher 1981 includes a “receiving apparatus for a[n] . . . amplitude-modulated wave,” which one of ordinary skill in the art would have understood as teaching “receiving the modulated carrier signal.” See Abstract, Fig. 1.
- The system in Fisher 1981 “samples the modulated wave for short periods centered on instants of peaks of the carrier at regularly-occurring intervals,” in particular a “[s]ampling gate 2 is normally closed and is opened for short periods . . . at regularly occurring intervals,” which one of ordinary skill in the art would have understood as teaching “transferring non-negligible amounts of energy from the modulated carrier signal.” See Abstract, col. 2:15-18, Fig. 1.
- The system in Fisher 1981 transfers energy “with a sampling frequency . . . equal to the carrier frequency divided by an integer,” which one of ordinary skill in the art would have understood as teaching “at a rate that is substantially equal to a sub-harmonic of the modulated carrier signal.” See Abstract.
- The system in Fisher 1981 “reconstructs the modulating wave from the sequence of samples,” in particular, “[s]amples of a double-sideband amplitude-modulated wave may be reconstructed as an accurate replica of the modulating function,” which one of ordinary skill in the art would have understood as teaching “form[ing] the demodulated baseband signal.” See Abstract, col. 1:67-2:2.

38. David Sorrells and Michael Lee knew of Fisher 1981 and understood that it disclosed each of the above elements.

39. The Applicants' false description of Fisher 1981 was a material misrepresentation, outside the bounds of permissible attorney argument, made with specific intent to mislead and deceive the PTO.

40. An analysis of Williams 1996 shows that the Applicants' characterization of Williams 1996 was also false.

41. When distinguishing Pending Claim 8 from Williams 1996, the Applicants stated:

Reference 10 [Williams 1996] appears to be related to a direct conversion receiver for multiple protocols including a sample and hold circuit, a sigma-delta loop and a decimator. Reference 10 does not teach or suggest directly down-converting a modulated carrier signal to a demodulated baseband signal, as recited in the claims. Considering claim 8, for example, *reference 10 does not teach or suggest the combination of receiving a modulated carrier signal and transferring non-negligible amounts of energy from the modulated carrier signal, at a rate that is substantially equal to a sub-harmonic of the modulated carrier signal, whereby the transferred non-negligible amounts of energy forms the demodulated baseband signal.* (Emphasis added).

42. However, a review of the patent shows that Williams 1996 teaches all of the elements that the Applicants described as missing from Williams 1996:

- Williams 1996 notes that "RF energy [is] received at antenna 301," which one of ordinary skill in the art would have understood as teaching "receiving a modulated carrier." See col. 4:12-19; Fig. 3.
- Williams 1996 discloses a system in which the signal is "sub-sampled by sample and hold circuit 331 clocked by clock CLK1 having frequency ω_1 ," which one of ordinary skill in the art would have understood as teaching "transferring non-negligible amounts of energy from the modulated carrier signal." See col. 4:27-29; Fig. 3.

- The system in Williams 1996 transfers energy “[b]y ‘sub-sampling’ [with] sample and hold circuit [to provide] aliased copies of the original signal [such that the] resulting signal B . . . contains the original signal having a carrier frequency ω_c and aliased copies of that original signal centered at integral multiples of ω_1 , the sampling frequency of sampling hold circuit 331,” which one of ordinary skill in the art would have understood as teaching “at a rate that is substantially equal to a subharmonic of the modulated carrier signal.” See col. 4:36-41; Fig. 6.
- Williams 1996 discloses that “[s]ignal B is converted by oversampling” and then “decimation” to achieve direct conversion, *i.e.*, conversion directly to baseband, which one of ordinary skill in the art would have understood as teaching “form[ing] the demodulated baseband signal.” See col. 4:58-60; col. 5:25-55; Fig. 3.

43. David Sorrells and Michael Lee knew of Williams 1996 and understood that it disclosed each of the above elements.

44. The Applicants’ false description of Williams 1996 was a material misrepresentation, outside the bounds of permissible attorney argument, made with specific intent to mislead and deceive the PTO.

45. Review of Schiltz 1994 shows that the Applicants’ description of this reference was also false.

46. When distinguishing Pending Claim 8 from Schiltz 1994, the Applicants stated that the reference did not disclose the claimed combination of elements:

Reference 9 [Schiltz 1994] appears to be related to a sample and hold circuit, and to radios that use such circuit. Reference 9 does not teach or suggest directly down-converting a modulated carrier signal to a demodulated baseband signal, as recited in the claims. Considering claim 8, for example, *reference 9 does not teach or suggest the combination of receiving a modulated carrier signal and transferring non-negligible amounts of energy from the modulated carrier signal, at a rate that is substantially equal to a -sub-harmonic of the modulated carrier signal, whereby the*

transferred- non-negligible amounts of energy forms the demodulated baseband signal.

47. However, the Schiltz 1994 Abstract states:

The sample and hold circuit may be used as a wide bandwidth mixer. In a radio application, a pulse generator provides a stream of pulses in which the sampling rate times an integer number equals the RF frequency minus the IF frequency.

48. On its face, Schiltz 1994 teaches all of the elements that the Applicants described as missing from the reference:

- One of ordinary skill in the art would have understood antenna 12 from Figure 1 of Schiltz 1994 as inherently teaching “receiving the modulated carrier.”
- Schiltz 1994 discloses that a “sample and hold circuit may be used as a wide bandwidth mixer” and that “[t]he IF frequency is determined by characteristics of a pulse stream supplied by a pulse generator 30 to a control input of sample and hold circuit 26,” which one of ordinary skill in the art would have understood as teaching “transferring non-negligible amounts of energy from the modulated carrier signal.” See Abstract, col. 3:66-68; Fig. 1.
- Schiltz 1994 describes a system that transfers energy by specifying that “the sampling rate times an integer number equals the RF frequency minus the IF frequency,” which one of ordinary skill in the art would have understood as teaching “at a rate that is substantially equal to a subharmonic of the modulated carrier signal.” See Abstract.
- One of ordinary skill in the art would have understood Figure 1 from Schiltz 1994 as inherently teaching “form[ing] the demodulated baseband signal.”

49. David Sorrells and Michael Lee knew of Schiltz 1994 and understood that it disclosed each of the above elements.

50. The Applicants' false description of Schiltz 1994 was a material misrepresentation, outside the bounds of permissible attorney argument, made with specific intent to mislead and deceive the PTO.

51. Review of Faulkner 1983 shows that the Applicants' characterization of Reference 16 was also false.

52. When distinguishing Pending Claim 8 from Faulkner 1983, the Applicants stated:

Reference 16 [Faulkner 1983] appears to be related to a down-conversion system based on a sub-harmonic sampling technique. Reference 16 does not teach or suggest directly down-converting a modulated carrier signal to a demodulated baseband signal, as recited in the claims. Considering claim 8, for example, *reference 16 does not teach or suggest the combination of receiving a modulated carrier signal and transferring non-negligible amounts of energy from the modulated carrier signal, at a rate that is substantially equal to a sub-harmonic of the modulated carrier signal, whereby the transferred non-negligible amounts of energy forms the demodulated baseband signal.* (Emphasis added)

53. However, the abstract of Faulkner 1983 states, in pertinent part, "This paper is concerned with the theoretical principles, description, operation, and performance of a *down-conversion system based on the sub-harmonic sampling technique.*" (Emphasis added.)

54. Further, the last full paragraph on page 208 of Faulkner 1983 states:

The operation of the measurement system outlined in Fig. 1 is based on a process known as *subharmonic sampling, whereby the oscillator microwave signal of interest is sampled at a rate lower than the nominal carrier frequency. This results in replicas of the signal spectrum symmetrically positioned around the various harmonics of the sampling function. The net result is a form of down-conversion and the recovery of the original*

microwave signal spectrum can be carried out by bandpass filtering one of the replicas[.]

55. On its face, Faulkner 1983 teaches all of the elements that the Applicants described as missing from the reference:

- Faulkner 1983 describes a “nominal carrier frequency,” which one of ordinary skill in the art would have understood as teaching “receiving the modulated carrier.” See p. 208.
- Faulkner 1983 describes “subharmonic sampling, whereby the oscillator microwave signal of interest is sampled at a rate lower than the nominal carrier frequency,” which one of ordinary skill in the art would have understood as teaching “transferring non-negligible amounts of energy from the modulated carrier signal.” See p. 208.
- Faulkner 1983 describes a system that transfers energy using “subharmonic sampling” which one of ordinary skill in the art would have understood as teaching the “at a rate that is substantially equal to a subharmonic of the modulated carrier signal.” See p. 208.
- Faulkner 1983 describes a system wherein “[t]he net result is a form of down-conversion and the recovery of the original microwave signal spectrum can be carried out,” which one of ordinary skill in the art would have understood as teaching “form[ing] the demodulated baseband signal.” See p. 208.

56. David Sorrells and Michael Lee knew of Faulkner 1983 and understood that it disclosed each of the above elements.

57. The Applicants’ false description of Faulkner 1983 was a material misrepresentation, outside the bounds of permissible attorney argument, made with specific intent to mislead and deceive the PTO.

58. Pending Claim 8 later issued in amended form as Claim 1 of the ‘551 patent:

1. A method for down-converting a carrier signal to a lower frequency signal, comprising the steps of:

(1) receiving a carrier signal;

(2) transferring non-negligible amounts of energy from the carrier signal, at an aliasing rate that is substantially equal to a frequency of the carrier signal plus or minus frequency of the lower frequency signal, divided by n , where n represents a harmonic or sub-harmonic of the carrier signal; and

(3) generating a lower frequency signal from the transferred energy.

59. The Applicants' mischaracterizations concerning the teachings of Fisher 1981, Williams 1996, Schiltz 1984, and Faulkner 1983 were also material misrepresentations with respect to Claim 1, as each reference teaches the required elements of Claim 1.

60. On its face, Fisher 1981 teaches all of the elements of Claim 1:

- The system in Fisher 1981 includes a "receiving apparatus for a[n] . . . amplitude-modulated wave," which one of ordinary skill in the art would have understood as teaching "receiving carrier signal." *See* Abstract, Fig. 1.
- The system in Fisher 1981 "samples the modulated wave for short periods centered on instants of peaks of the carrier at regularly-occurring intervals," in particular a "[s]ampling gate 2 is normally closed and is opened for short periods . . . at regularly occurring intervals," which one of ordinary skill in the art would have understood as teaching "transferring non-negligible amounts of energy from the carrier signal." *See* Abstract, col. 2:15-18, Fig. 1.
- The system in Fisher 1981 transfers energy "with a sampling frequency . . . equal to the carrier frequency divided by an integer," which one of ordinary skill in the art would have understood as equivalent to "at an aliasing rate that is substantially equal to a frequency of the carrier signal plus or minus frequency of the lower frequency signal, divided by n ,

where n represents a harmonic or sub-harmonic of the carrier signal." *See* Abstract.

- The system in Fisher 1981 "reconstructs the modulating wave from the sequence of samples," in particular, "[s]amples of a double-sideband amplitude-modulated wave may be reconstructed as an accurate replica of the modulating function," which one of ordinary skill in the art would have understood as teaching "generating a lower frequency signal from the transferred energy." *See* Abstract, col. 1:67-2:2.

61. On its face, Williams 1996 teaches all of the elements of Claim 1:

- Williams 1996 notes that "RF energy [is] received at antenna 301," which one of ordinary skill in the art would have understood as teaching "receiving a carrier signal." *See* col. 4:12-19; Fig. 3.
- Williams 1996 discloses a system in which the signal is "sub-sampled by sample and hold circuit 331 clocked by clock CLK1 having frequency ω_1 ," which one of ordinary skill in the art would have understood as teaching "transferring non-negligible amounts of energy from the carrier signal." *See* col. 4:27-29; Fig. 3.
- The system in Williams 1996 transfers energy "[b]y 'sub-sampling' [with] sample and hold circuit [to provide] aliased copies of the original signal [such that the] resulting signal B . . . contains the original signal having a carrier frequency ω_c and aliased copies of that original signal centered at integral multiples of ω_1 , the sampling frequency of sampling hold circuit 331," which one of ordinary skill in the art would have understood as equivalent to "at an aliasing rate that is substantially equal to a frequency of the carrier signal plus or minus frequency of the lower frequency signal, divided by n , where n represents a harmonic or sub-harmonic of the carrier signal." *See* col. 4:36-41; Fig. 6.
- Williams 1996 discloses that "[s]ignal B is converted by oversampling" and then "decimation" to achieve direct conversion, *i.e.*, conversion directly to baseband, which one of ordinary skill in the art would have understood as teaching "generating a lower frequency signal from the transferred energy." *See* col. 4:58-60; col. 5:25-55; Fig. 3.

62. On its face, Schiltz 1994 teaches all of the elements of Claim 1:

- One of ordinary skill in the art would have understood antenna 12 from Figure 1 of Schiltz 1994 as inherently teaching “receiving a carrier signal.”
- Schiltz 1994 discloses that a “sample and hold circuit may be used as a wide bandwidth mixer” and that “[t]he IF frequency is determined by characteristics of a pulse stream supplied by a pulse generator 30 to a control input of sample and hold circuit 26,” which one of ordinary skill in the art would have understood as teaching “transferring non-negligible amounts of energy from the carrier signal.” *See* Abstract, col. 3:66-68; Fig. 1.
- Schiltz 1994 describes a system that transfers energy by specifying that “the sampling rate times an integer number equals the RF frequency minus the IF frequency,” which one of ordinary skill in the art would have understood as equivalent to “at an aliasing rate that is substantially equal to a frequency of the carrier signal plus or minus frequency of the lower frequency signal, divided by n , where n represents a harmonic or sub-harmonic of the carrier signal.” *See* Abstract.
- One of ordinary skill in the art would have understood Figure 1 from Schiltz 1994 as inherently teaching “generating a lower frequency signal from the transferred energy.”

63. On its face, Faulkner 1983 teaches all of the elements of Claim 1:

- Faulkner 1983 describes a “nominal carrier frequency,” which one of ordinary skill in the art would have understood as teaching “receiving a carrier signal.” *See* p. 208.
- Faulkner 1983 describes “subharmonic sampling, whereby the oscillator microwave signal of interest is sampled at a rate lower than the nominal carrier frequency,” which one of ordinary skill in the art would have understood as teaching “transferring non-negligible amounts of energy from the carrier signal.” *See* p. 208.
- Faulkner 1983 describes a system that transfers energy using “subharmonic sampling” which one of ordinary skill in the art would have understood as equivalent to “at an aliasing rate that is substantially equal to a frequency of the carrier signal plus or minus frequency of the lower frequency signal, divided by n , where n represents a harmonic or sub-harmonic of the carrier signal.” *See* p. 208.

- Faulkner 1983 describes a system wherein “[t]he net result is a form of down-conversion and the recovery of the original microwave signal spectrum can be carried out,” which one of ordinary skill in the art would have understood as teaching “form[ing] the demodulated baseband signal.” See p. 208.

64. Applicants’ false statements and material misrepresentations concerning the teachings of Fisher 1981, Williams 1996, Schiltz 1984, and Faulkner 1983 were material misrepresentations, outside the bounds of permissible attorney argument, made with specific intent to mislead and deceive the PTO. Indeed, ParkerVision’s activities throughout the prosecution of the ‘551 Patent, including the effort to bury the Examiner with hundreds of irrelevant references and to conceal the highly relevant Parssinen 1997 reference, evidence a deliberate pattern of misconduct meant to mislead the PTO. Accordingly, the material misrepresentations made during the prosecution of the ‘551 Patent violate 37 C.F.R. § 1.56 and render the ‘551 Patent unenforceable.

65. On August 3, 1999, after the Petition to Make Special was granted, the Examiner issued an Office Action acknowledging receipt of the IDS that included the 21 references discussed in the Petition to Make Special including, *inter alia*, the Subharmonic Sampling Exemplars. In that Office Action, the Examiner rejected Pending Claim 8 over the combination of U.S. Patent Nos. 4,888,557 (“Puckette”), cited as Reference 4 in the Petition to Make Special, and 5,903,827 (“Kennan”). None of the pending claims was rejected over the Subharmonic Sampling Exemplars discussed above.

66. On November 18, 1999, the Applicants participated in an interview with the Examiner. The Examiner Interview Summary Record is missing from the file history of the ‘551 Patent.

67. After that interview, the Applicants filed a Response to the August 3, 1999 Office Action, amending Pending Claim 8 in an attempt to traverse the Examiner's rejection. In support of allowing the amended claim, the Applicants stated that, during the November 18, 1999 Examiner Interview, the Examiner agreed that Pending Claim 8, as amended, would be allowable.

68. On November 24, 1999, the Applicants filed a Response to the August 3, 1999 Office Action, and amended Pending Claim 8 to traverse the rejection.

69. After that amendment, which would not have been sufficient to overcome a rejection of Pending Claim 8 over the Subharmonic Sampling Exemplars, Pending Claim 8 issued as Claim 1 of the '551 Patent.

First Count

(Declaration of Unenforceability of the '551 Patent Due to Inequitable Conduct)

70. Qualcomm incorporates by reference and realleges paragraphs 1 - 69 above as though fully stated herein.

71. ParkerVision contends that the '551 Patent is enforceable and has created a substantial, immediate and real controversy between the parties as to the enforceability of the '551 Patent.

72. During the prosecution of the '551 Patent, the Applicants, including co-inventor David Sorrells and prosecuting attorney Michael Lee, concealed a highly material prior art reference (Parssinen 1997) and made several false statements concerning the scope and content of the Subharmonic Sampling Exemplars with the specific intent to mislead and deceive the PTO. But for the Applicants' concealment and

materially false characterizations of the Subharmonic Sampling Exemplars, Claim 1 of the '551 Patent would not have issued.

73. The Applicants' specific intent to mislead and deceive the PTO may be inferred not only from their pattern of concealment of Parssinen 1997 and the affirmative mischaracterizations of the Subharmonic Sampling Exemplars, but also from their efforts to bury highly relevant prior art in submissions to the PTO among hundreds of irrelevant references. Such intent is the single most reasonable inference to be drawn from these circumstances.

74. The Applicants' inequitable conduct renders the '551 Patent unenforceable.

Second Count

(Declaration of Unenforceability of the '518 Patent Due to Inequitable Conduct)

75. Qualcomm incorporates by reference and realleges paragraphs 1 - 69 and 71 - 74 above as though fully stated herein.

76. ParkerVision contends that the '518 Patent is enforceable and has created a substantial, immediate and real controversy between the parties as to the enforceability of the '518 Patent.

77. The '518 Patent is a continuation of the '551 Patent and, as such, a direct descendant of the '551 Patent.

78. The '551 and '518 Patents have the same inventors.

79. The '551 and '518 Patents have identical specifications and claim similar or substantially similar subject matter related to down-conversion of an electromagnetic

signal, the subject of the material misrepresentations made to the PTO in connection with the prosecution of the '551 Patent.

80. During the prosecution of the '518 Patent, ParkerVision filed a terminal disclaimer to obviate a double-patenting rejection over the '551 Patent, thereby confirming the substantial relation between the subject matter claimed in both patents.

81. The applications for the '518 Patent and the '551 Patent contained identical claims at the time of filing. For example, claim 8 in the application for the '518 Patent ("Original Claim 8") is the same as Pending Claim 8 in the application for the '551 Patent. Original Claim 8 was rejected by the Examiner in the prosecution of the '518 Patent for the same reasons that Pending Claim 8 was rejected in the prosecution of the '551 Patent.

82. Original Claim 8 issued in amended form as Claim 1 of the '518 patent.

83. In the Notice of Allowance of the '518 Patent, one of the reasons for allowance given by the examiner was that the limitation "of sampling the carrier signal over aperture periods to *transfer energy* from the carrier signal and integrating the energy over the aperture periods" was not taught by the prior art. But for the Applicants' misrepresentations of Fisher 1981, Williams 1996, Schiltz 1984, and Faulkner 1983, Applicants would not have been successful in making this argument to overcome prior art.

84. The Applicants carried forward the fraud and egregious conduct perpetrated in the '551 patent into the prosecution and allowance of the '518 patent. As detailed in paragraphs 16 - 28, the Applicants concealed Parssinen 1997 from the Examiner and from the PTO officials handling the Petition to Make Special despite their

ongoing duty to supplement the petition upon discovering more relevant prior art, and, further, kept the Examiner ignorant of Parssinen 1997's materiality by submitting it along with hundreds of references in an Information Disclosure Statement filed after the grant of the Petition to Make Special. The Applicants continued to take advantage of the Examiner's ignorance of the materiality of Parssinen 1997 during the prosecution of the '518 Patent by, once again, submitting it along with hundreds of immaterial references in an IDS dated August 11, 2000, more than a year after the Applicants learned of the reference from Qualcomm. As a result of the Applicants' deceptive scheme, Parssinen 1997 was never mentioned or applied in a substantive Office Action during the prosecution of the '518 Patent. Had the Applicants properly advised the Examiner of the materiality of Parssinen 1997, as their duty of candor required them to do, the claims of the '518 Patent would not have issued.

85. The Applicants' intent to deceive can, at the very least, be inferred from their overall pattern of conduct of deliberate concealment and misrepresentation of prior art.

86. The '518 Patent is unenforceable as a result of ParkerVision's material misrepresentations made during the prosecution of the '551 Patent, and the continued concealment of Parssinen 1997.

Third Count

(Declaration of Unenforceability of the '371 Patent Due to Inequitable Conduct)

87. Qualcomm incorporates by reference and realleges paragraphs 1 - 69 and 71 - 74 above as though fully stated herein.

88. ParkerVision contends that the '371 Patent is enforceable and has created a substantial, immediate and real controversy between the parties as to the enforceability of the '371 Patent.

89. The '371 Patent incorporates by reference the '551 Patent.

90. The '551 and '371 Patents have the same inventors.

91. The '551 and '371 Patents claim similar or substantially similar subject matter related to down-conversion of an electromagnetic signal, the subject of the material misrepresentations made to the PTO in connection with the prosecution of the '551 Patent.

92. In the Notice of Allowance of the '371 Patent, one of the reasons for allowance given by the examiner was that the prior art did not disclose either a switch coupled to a pulse generator "*wherein energy is transferred from the carrier signal and integrated*" or "a switch opening and/or closing at an aliasing/sampling rate that is determined according to (a frequency of a carrier signal +/- a frequency of a lower frequency signal/N, where N is interpreted from the applicant's specification as representing a harmonic or sub-harmonic frequencies." (emphasis added). But for the Applicants' misrepresentations of Fisher 1981, Williams 1996, Schiltz 1984, and Faulkner 1983, Applicants would not have been successful in making this argument to overcome prior art.

93. Applicants carried forward the fraud and egregious conduct perpetrated in the '551 patent into the prosecution and allowance of the '371 patent. As detailed in paragraphs 16 - 28, the Applicants concealed Parssinen 1997 from the Examiner and from the PTO officials handling the Petition to Make Special despite their ongoing duty

to supplement the petition upon discovering more relevant prior art, and, further, kept the Examiner ignorant of Parssinen 1997's materiality by submitting it along with hundreds of references in an Information Disclosure Statement filed after the grant of the Petition to Make Special. The Applicants continued to take advantage of the Examiner's ignorance of the materiality of Parssinen 1997 during the prosecution of the '371 Patent by, once again, submitting it along with hundreds of immaterial references in an IDS dated July 21, 2000, more than a year after the Applicants learned of the reference from Qualcomm. As a result of the Applicants' deceptive scheme, Parssinen 1997 was never mentioned or applied in a substantive Office Action during the prosecution of the '371 Patent. Had the Applicants properly advised the Examiner of the materiality of Parssinen 1997, as their duty of candor required them to do, the claims of the '371 patent would not have issued.

94. During prosecution of the '371 Patent, ParkerVision filed a terminal disclaimer to obviate a double-patenting rejection over the '551 Patent, thereby confirming the substantial relation between the subject matter claimed in both patents.

95. The Applicants' intent to deceive can, at the very least, be inferred from their overall pattern of conduct of deliberate concealment and misrepresentation of prior art.

96. The '371 Patent is unenforceable as a result of ParkerVision's material misrepresentations made during the prosecution of the '551 Patent, and the continued concealment of Parssinen 1997

Fourth Count

(Declaration of Unenforceability of the '342 Patent Due to Inequitable Conduct)

97. Qualcomm incorporates by reference and realleges paragraphs 1 - 69 and 71 - 74 above as though fully stated herein.

98. ParkerVision contends that the '342 Patent is enforceable and has created a substantial, immediate and real controversy between the parties as to the enforceability of the '342 Patent.

99. The '342 Patent is a direct descendant of the '551 Patent.

100. All the inventors of the '551 Patent are also inventors of the '342 Patent.

101. The '551 and '342 Patents claim similar or substantially similar subject matter related to down-conversion of an electromagnetic signal, the subject of the material misrepresentations made to the PTO in connection with the prosecution of the '551 Patent.

102. Applicants carried forward the fraud and egregious conduct perpetrated in the '551 patent into the prosecution and allowance of the '342 patent. As detailed in paragraphs 16 - 28, the Applicants concealed Parssinen 1997 from the Examiner and from the PTO officials handling the Petition to Make Special despite their ongoing duty to supplement the petition upon discovering more relevant prior art, and, further, kept the Examiner ignorant of Parssinen 1997's materiality by submitting it along with hundreds of references in an IDS filed after the grant of the Petition to Make Special. The Applicants continued to take advantage of the Examiner's ignorance of the materiality of Parssinen 1997 during the prosecution of the '342 Patent by, once again, submitting it along with hundreds of immaterial references in an IDS dated April 5,

2005, more than six years after the Applicants learned of the reference from Qualcomm. As a result of the Applicants' deceptive scheme, Parssinen 1997 was never mentioned or applied in a substantive Office Action during the prosecution of the '342 Patent. Had the Applicants properly advised the Examiner of the materiality of Parssinen 1997, as their duty of candor required them to do, the claims of the '342 patent would not have issued.

103. The Applicants' intent to deceive can, at the very least, be inferred from their overall pattern of conduct of deliberate concealment and misrepresentation of prior art.

104. The '342 Patent is unenforceable as a result of ParkerVision's material misrepresentations made during the prosecution of the '551 Patent, and the continued concealment of Parssinen 1997.

Fifth Count

(Declaration of Unenforceability of the '896 Patent Due to Inequitable Conduct)

105. Qualcomm incorporates by reference and realleges paragraphs 1 - 69 and 71 - 74 above as though fully stated herein.

106. ParkerVision contends that the '896 Patent is enforceable and has created a substantial, immediate and real controversy between the parties as to the enforceability of the '896 Patent.

107. The '896 Patent is a direct descendant of the '551 Patent.

108. The '551 Patent is incorporated by reference into the '896 Patent.

109. The '551 and '896 Patents have the same inventors.

110. The '551 and '896 Patents claim similar or substantially similar subject matter related to down-conversion of an electromagnetic signal, the subject of the material misrepresentations made to the PTO in connection with the prosecution of the '551 Patent.

111. The Applicants carried forward the fraud and egregious conduct perpetrated in the '551 patent into the prosecution and allowance of the '896 patent. As detailed in paragraphs 16 - 28, the Applicants concealed Parssinen 1997 from the Examiner and from the PTO officials handling the Petition to Make Special despite their ongoing duty to supplement the petition upon discovering more relevant prior art, and, further, kept the Examiner ignorant of Parssinen 1997's materiality by submitting it along with hundreds of references in an IDS filed after the grant of the Petition to Make Special. The Applicants continued to take advantage of the Examiner's ignorance of the materiality of Parssinen 1997 during the prosecution of the '896 Patent by, once again, submitting it along with hundreds of immaterial references in an Information Disclosure Statement dated September 14, 2001, more than two years after the Applicants learned of the reference from Qualcomm. As a result of the Applicants' deceptive scheme, Parssinen 1997 was never mentioned or applied in a substantive Office Action during the prosecution of the '896 Patent. Had the Applicants properly advised the Examiner of the materiality of Parssinen 1997, as their duty of candor required them to do, the claims of the '896 patent would not have issued.

112. The Applicants' intent to deceive can, at the very least, be inferred from their overall pattern of conduct of deliberate concealment and misrepresentation of prior art.

113. The '896 Patent is unenforceable as a result of ParkerVision's material misrepresentations made during the prosecution of the '551 Patent, and continued concealment of Parssinen 1997.

Sixth Count

(Declaration of Unenforceability of the '845 Patent Due to Inequitable Conduct)

114. Qualcomm incorporates by reference and realleges paragraphs 1 - 69 and 71 - 74 above as though fully stated herein.

115. ParkerVision contends that the '845 Patent is enforceable and has created a substantial, immediate and real controversy between the parties as to the enforceability of the '896 Patent.

116. The '845 Patent incorporates by reference Provisional Application 60/171,349, which incorporates by reference the '551 Patent.

117. All of the inventors of the '551 Patent are also inventors of the '845 Patent.

118. The '551 and '845 Patents claim similar or substantially similar subject matter related to down-conversion of an electromagnetic signal, the subject of the material misrepresentations made to the PTO in connection with the prosecution of the '551 Patent.

119. The Applicants carried forward the fraud and egregious conduct perpetrated in the '551 patent into the prosecution and allowance of the '845 patent. As detailed in paragraphs 16 - 28, the Applicants concealed Parssinen 1997 from the Examiner and from the PTO officials handling the Petition to Make Special despite their ongoing duty to supplement the petition upon discovering more relevant prior art, and, further, kept the Examiner ignorant of Parssinen 1997's materiality by submitting it

along with hundreds of references in an IDS filed after the grant of the Petition to Make Special. The Applicants continued to take advantage of the Examiner's ignorance of the materiality of Parssinen 1997 during the prosecution of the '845 Patent by, once again, submitting it along with hundreds of immaterial references in an IDS dated April 5, 2005, more than six years after the Applicants learned of the reference from Qualcomm. As a result of the Applicants' deceptive scheme, Parssinen 1997 was never mentioned or applied in a substantive Office Action during the prosecution of the '845 Patent. Had the Applicants properly advised the Examiner of the materiality of Parssinen 1997, as their duty of candor required them to do, the claims of the '845 patent would not have issued.

120. The Applicants' intent to deceive can, at the very least, be inferred from their overall pattern of conduct of deliberate concealment and misrepresentation of prior art.

121. The '845 Patent is unenforceable as a result of ParkerVision's material misrepresentations made during the prosecution of the '551 Patent, and the continued concealment of Parssinen 1997.

Seventh Count

(Declaration of Unenforceability of the '401 Patent Due to Inequitable Conduct)

122. Qualcomm incorporates by reference and realleges paragraphs 1 - 69 and 71 - 74 above as though fully stated herein.

123. ParkerVision contends that the '401 Patent is enforceable and has created a substantial, immediate and real controversy between the parties as to the enforceability of the '401 Patent.

124. The '401 Patent is a direct descendant of the '551 Patent.

125. The '551 Patent is incorporated by reference into the '401 Patent.

126. All of the inventors of the '551 Patent are also inventors of the '401 Patent.

127. The '551 and '401 Patents claim similar or substantially similar subject matter related to down-conversion of an electromagnetic signal, the subject of the material misrepresentations made to the PTO in connection with the prosecution of the '551 Patent.

128. The Applicants carried forward the fraud and egregious conduct perpetrated in the '551 patent into the prosecution and allowance of the '401 patent. As detailed in paragraphs 16 - 28, the Applicants concealed Parssinen 1997 from the Examiner and from the PTO officials handling the Petition to Make Special despite their ongoing duty to supplement the petition upon discovering more relevant prior art, and, further, kept the Examiner ignorant of Parssinen 1997's materiality by submitting it along with hundreds of references in an IDS filed after the grant of the Petition to Make Special. The Applicants continued to take advantage of the Examiner's ignorance of the materiality of Parssinen 1997 during the prosecution of the '401 Patent by, once again, submitting it along with hundreds of immaterial references in an IDS dated October 12, 2004, more than five years after the Applicants learned of the reference from Qualcomm. As a result of the Applicants' deceptive scheme, Parssinen 1997 was never mentioned or applied in a substantive Office Action during the prosecution of the '401 Patent. Had the Applicants properly advised the Examiner of the materiality of Parssinen 1997, as their duty of candor required them to do, the claims of the '401 patent would not have issued.

129. The Applicants' intent to deceive can, at the very least, be inferred from their overall pattern of conduct of deliberate concealment and misrepresentation of prior art.

130. The '401 Patent is unenforceable as a result of ParkerVision's material misrepresentations made during the prosecution of the '551 Patent, and the continued concealment of Parssinen 1997.

Eighth Count

(Declaration of Non-Infringement of the Patents-in-Suit)

131. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 above as though fully stated herein.

132. ParkerVision claims to be owner of all right, title and interest in the Patents-in-Suit.

133. ParkerVision has accused Qualcomm of infringement of the Patents-in-Suit and has created a substantial, immediate and real controversy between the parties as to the infringement of the Patents-in-Suit.

134. Qualcomm has not infringed, and currently does not infringe, any valid claim of any of the Patents-in-Suit, directly, indirectly, contributorily, by inducement, or in any other manner, and ParkerVision is entitled to no relief for any claim of alleged infringement.

Ninth Count

(Declaration of Invalidity of the Patents-in-Suit)

135. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 above as though fully stated herein.

136. ParkerVision contends that the Patents-in-Suit are valid and has created a substantial, immediate and real controversy between the parties as to the invalidity of the Patents-in-Suit.

137. Each claim of the Patents-in-Suit is invalid for failure to comply with one or more provisions of 35 U.S.C. §§ 101, 102, 103, and 112, and ParkerVision is entitled to no relief for any claim relating to their alleged validity.

138. Most, if not all, of the claims of the Patents-in-Suit are invalid as anticipated or rendered obvious by the prior art, including Fisher 1981, Williams 1996, Schiltz 1994, Faulkner 1983 and Parssinen 1997.

139. Many of the claims of the Patents-in-Suit are invalid under 35 U.S.C. § 112 because terms contained therein are indefinite or because they lack adequate descriptive support in the specification, including the following:

- Claim 5 of the '551 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because the term "the frequency of the energy transfer signal" lacks an antecedent basis in claims 1 and 2;
- Claim 156 of the '551 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "the energy control signal" lacks an antecedent basis in any of claims 23, 149, 150 and 155;
- Claim 30 of the '518 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "N" lacks an antecedent basis in claim 29;
- Claim 31 of the '518 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "the frequency of the second signal" lacks an antecedent basis in claim 29;
- Claims 35-41 of the '518 Patent are invalid as indefinite under 35 U.S.C. § 112, second paragraph, because "N" lacks an antecedent basis in claim 29;

- Claims 6, 8, 12, 14, 17-19, 40-44, 46, 52-54 and 56-66 of the '371 Patent are invalid as indefinite under 35 U.S.C. § 112, second paragraph, because the meaning of "represents" is unclear;
- Claims 6, 8, 12, 14, 17-19, 40-44, 46, 52-54 and 56-66 of the '371 Patent are also invalid because the specification does not contain written description of the claimed inventions, and the manner and process of making and using them, in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same;
- Claim 6 of the '342 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because an input impedance is a value, not an impedance device; and
- Claim 4 of the '845 Patent is invalid as indefinite under 35 U.S.C. § 112, second paragraph, because the function is undefined.

Tenth Count

(Sterne Kessler's Breach of Fiduciary Duty)

140. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 above as though fully stated herein.

141. Qualcomm owns more than 10,000 patents worldwide and has tens of thousands of patent applications pending. Qualcomm regularly retains outside law firms to assist in the filing and prosecution of the many patent applications it files every year. Through this "prosecution work," performed in conjunction with Qualcomm's in-house patent counsel, the outside attorneys retained by Qualcomm acquire very detailed knowledge of the properties of Qualcomm's products. That knowledge is highly confidential.

142. Qualcomm also frequently retains outside law firms to assist in the assessment of whether third parties suing and/or seeking licenses from Qualcomm to their patented technology have viable claims for infringement. Through this "opinion

work,” as through prosecution work, outside attorneys acquire very detailed knowledge of the properties of Qualcomm’s products. That knowledge is highly confidential.

143. Qualcomm retains a law firm to handle this “opinion work” with the expectation that the law firm will provide analysis and an opinion with respect to the asserted patents and then make itself available to deliver the opinion to Qualcomm and, if necessary or desirable, defend the opinion in possible litigation. Because of the complexity and variety of the technology embodied in Qualcomm’s products, lawyers who have handled prior projects for Qualcomm and climbed the associated “learning curve” can generally perform additional work for Qualcomm far more efficiently than attorneys who have not. Therefore, it is often efficient to use the same opinion counsel for various matters, rather than training a new set of lawyers about Qualcomm’s technology each time a matter requiring opinion work arises.

144. One such firm that Qualcomm has regularly retained for patent prosecution and opinion work is Sterne Kessler.

145. Qualcomm first retained Sterne Kessler prior to 1998.

146. Over the years, Qualcomm has paid Sterne Kessler in excess of \$1.5 million for its work.

147. Between 1998 and the present, Qualcomm has retained Sterne Kessler for over 100 matters, primarily for patent prosecution work, but also for opinion work. Over the course of that relationship, Sterne Kessler procured for Qualcomm the issuance of more than 50 U.S. patents, including patents in the field of radio frequency technology. One patent issued to Qualcomm through the prosecution efforts of Sterne Kessler, U.S. Patent No. 6,985,711 (the “711 Patent”), relates to Qualcomm’s direct

conversion receiver technology. During the prosecution of these patents, Sterne Kessler gained access to highly confidential information about the Qualcomm technology at issue in this litigation.

148. Sterne Kessler has also served ParkerVision as its patent counsel for many years, including as prosecution counsel for the Patents-in-Suit.

149. One of Sterne Kessler's founding partners, Robert Sterne, served as a member of ParkerVision's board from 2000 to 2003, and then again from 2006 to the present.

150. ParkerVision's most recent Form 10-K reports payments of \$794,000, \$909,000, and \$1,160,000 in 2010, 2009, and 2008, respectively, by ParkerVision to Sterne Kessler.

151. During the course of Sterne Kessler's early representation of Qualcomm, there arose a time in early 1999 (just prior to the issuance of the first of the Patents-in-Suit) that Sterne Kessler sought the consent of Qualcomm and ParkerVision for Robert Sterne to represent ParkerVision in (ultimately unproductive) negotiations between ParkerVision and Qualcomm concerning technology of which ParkerVision claimed ownership.

152. In connection with that representation, ParkerVision and Qualcomm each agreed to waive, with important limitations, the conflict of interest that resulted from Sterne's representation of ParkerVision in negotiations opposite Sterne Kessler's client, Qualcomm.

153. In soliciting that consent from Qualcomm Sterne Kessler stated in a January 12, 1999 letter agreement (the "January 12 Letter Agreement") signed by Sterne

on behalf of Sterne Kessler, and by authorized representatives of ParkerVision and Qualcomm, that “if this negotiation were unsuccessful and hypothetically resulted in some dispute between the parties, [Sterne Kessler] would not represent either party in connection with such a dispute.”

154. In the January 12 Letter Agreement, Sterne Kessler also committed, “as a condition for this waiver of any potential conflict, that no one at [Sterne Kessler] would in any future matter take an adversarial position (*e.g.*, participate in litigation against either QUALCOMM or ParkerVision on any matters), at least as long as we continue to represent such company, even in unrelated matters.”

155. The negotiations between Qualcomm and ParkerVision concerned direct conversion technology that ParkerVision claimed to own. No agreement resulted from those negotiations. Because the negotiations between the parties concerned direct conversion receiver technology to which ParkerVision claimed ownership, and which is the subject of one or more of the asserted patents that issued soon after the conclusion of the negotiations, this lawsuit results, at least in part, from those failed negotiations.

156. Beginning in 2010, Qualcomm retained Sterne Kessler for six matters, involving primarily the preparation of opinions and associated litigation support.

157. For each of those matters, Qualcomm executed an engagement letter prepared by Sterne Kessler. Those letters, while requesting waivers of certain types of conflicts of interest, did not call upon Qualcomm to waive the conflict of interest that would arise if Sterne Kessler represented another client in litigation against Qualcomm while Qualcomm was a current client of Sterne Kessler. To the contrary, in every such letter, Sterne Kessler stated, “We understand that this consent does not extend to

concurrent representation of clients adverse to Qualcomm in a litigation concurrent with the firm's representation of Qualcomm."

158. In addition, in every one of its 2010 engagement letters with Qualcomm, Sterne Kessler confirmed that even after Qualcomm ceased to be a Sterne Kessler client, Sterne Kessler would not represent a different client in litigation against Qualcomm if Sterne Kessler was "in possession of confidential information of Qualcomm that would preclude the representation adverse to Qualcomm in violation of an applicable rule of professional conduct."

159. Of the six matters for which Qualcomm recently retained Sterne Kessler, two were still ongoing when ParkerVision filed this lawsuit, and were expected to require additional work over an extended period of time.

160. On July 20, 2011, ParkerVision filed this lawsuit against Qualcomm alleging infringement of the Patents-in-Suit, all of which were prosecuted by members of Sterne Kessler. Each of the Patents-in-Suit identifies Sterne Kessler as the sole prosecuting counsel.

161. During a July 21, 2011 conference call with investment analysts, the day after the filing of the Complaint, Jeffrey Parker, ParkerVision's founder and CEO was asked the following question and gave the following answer:

Q: . . . [H]elp us here, understand the discovery process that you found these infringements were occurring. Evidently they've been going on for a good while, how did they come to the forefront?

A: Well, I can't really go into the detail of how we discovered this. That's going to come out in the lawsuit. But I'm comfortable saying to you that when we discovered it, we took the information to our legal

counselors immediately. They helped walk us through the process of verification and we are absolutely certain of this infringement. . . .

162. Although Parker did not identify the “legal counselors” who helped ParkerVision “walk through the process of verification,” ParkerVision’s website identified Sterne Kessler as the company’s “Patent Counsel.” The website did not identify any other law firm serving that function.

163. During the July 21 conference call, another analyst asked Parker about Robert Sterne’s role specifically in the decision to file this action: “Could you talk about Bob Sterne’s involvement in making this decision?” To which Parker responded: “Right. Well, the Sterne firm started from day one analyzing the core invention. . . . So, they’ve been very involved in the creation and prosecution of the patent and they will continue to be.”

164. On August 1, 2011, in house legal counsel for Qualcomm was contacted by the partner at Sterne Kessler handling the ongoing Qualcomm matters. During a subsequent telephone call, that Sterne Kessler lawyer advised Qualcomm’s legal counsel that Sterne Kessler needed to “wrap up” its work on the legal matters it was handling for Qualcomm, in light of the recently filed lawsuit between ParkerVision and Qualcomm. Legal counsel for Qualcomm responded that Sterne Kessler’s work on those matters was not complete and that Qualcomm would not consent to premature termination of Sterne Kessler’s representation of Qualcomm. The Sterne Kessler lawyer noted that the firm was in a “tough spot,” as Sterne had been an advisor to ParkerVision for some time. Legal counsel for Qualcomm responded that Sterne Kessler could not terminate its relationship with Qualcomm to be involved in litigation adverse to

Qualcomm. After the Sterne Kessler lawyer pointed out that Robert Sterne has a close relationship with ParkerVision, the Qualcomm attorney responded that Mr. Sterne should have recused himself from any action adverse to Qualcomm.

165. On August 16, 2011, Qualcomm sent a letter to Sterne Kessler, seeking information about the extent of Sterne Kessler's involvement in the present litigation and reiterating Qualcomm's refusal to allow Sterne Kessler prematurely to withdraw from its ongoing representation of Qualcomm.

166. On August 25, 2011, Sterne Kessler responded, acknowledging that Qualcomm was a current client of Sterne Kessler and stating that "Sterne Kessler will not enter its appearance or otherwise act as counsel for ParkerVision in the pending Florida matter or any related litigation" and "will not advise ParkerVision or its litigation counsel regarding the Florida matter or any other litigation with Qualcomm . . . so long as Qualcomm remains a firm client."

167. Sterne Kessler's August 25 response was silent, however, on several questions Qualcomm had posed in its August 16 letter, including whether Sterne Kessler had helped ParkerVision prepare this action against its then current client, Qualcomm, and whether Robert Sterne, a director of ParkerVision, had recused himself from any ParkerVision board discussions concerning the initiation of this action.

168. As the reason for declining to answer these and other questions, Sterne Kessler cited "our obligations of confidentiality under District of Columbia Rule of Professional Conduct 1.6," which prohibits a lawyer from revealing client "confidences" and "secrets."

169. If Sterne Kessler had not in fact assisted ParkerVision in the preparation of this action, Sterne Kessler would have been able to disclose that lack of assistance without compromising any “secret” of ParkerVision, as that term is defined in codes of ethical conduct governing lawyers. And in no event would the fact of such assistance (as distinct from its substance) be privileged or a “confidence” of ParkerVision.

170. Similarly, Qualcomm’s query whether Sterne had recused himself from board discussions and votes on the initiation of a lawsuit against Qualcomm sought information not gained through Sterne Kessler’s professional relationship with ParkerVision but rather through Sterne’s personal service on ParkerVision’s board. Under no set of facts could the information Qualcomm sought qualify as a confidence under legal ethics rules.

171. On September 2, 2011, Qualcomm sent a letter to Sterne Kessler, explaining that Sterne Kessler’s refusal to address whether Sterne Kessler had provided assistance to ParkerVision compelled the inference that Sterne Kessler had provided such assistance and inviting Sterne Kessler to dispel that inference by providing the assurances that Qualcomm had previously requested.

172. On September 9, 2011, Sterne Kessler, through its outside counsel, pledged to provide a prompt response to the issues that Qualcomm had raised in its September 2 letter. Sterne Kessler did not address Qualcomm’s several previous requests for assurances that Sterne Kessler had not helped ParkerVision to sue Qualcomm.

173. On September 16, 2011, after failing to receive any commitment as to the date by which Qualcomm would receive a response to its September 2 letter, Qualcomm

filed its answer to ParkerVision's complaint and joined Sterne Kessler as a counterclaim defendant for breach of fiduciary duty and breach of contract.

174. On October 14, 2011, Sterne Kessler informed Qualcomm that in light of Qualcomm's counterclaim against Sterne Kessler, the firm "ha[d] an ethical obligation to withdraw immediately from its representation of Qualcomm" and that Sterne Kessler would be "unable to complete" its pending work. Sterne Kessler did not specify the ethical obligation that required its immediate withdrawal. Sterne Kessler also maintained its silence regarding Qualcomm's requests for assurances that Sterne Kessler had not aided ParkerVision to sue Qualcomm.

175. On October 18, 2011, Qualcomm responded to Sterne Kessler's October 14 letter. Qualcomm asked Sterne Kessler, "does Sterne Kessler intend to assist ParkerVision in any way in its litigation against Qualcomm?" and stated explicitly that Qualcomm would seek to enjoin ParkerVision from providing such assistance if Sterne Kessler did not provide an unequivocal disavowal of any such intent.

176. On October 25, 2011, Sterne Kessler responded to Qualcomm's October 18 letter, stating that Sterne Kessler "is not representing ParkerVision . . . with respect to the patent infringement claims against Qualcomm, nor regarding ParkerVision's defense of the counter-claim [sic] Qualcomm filed against ParkerVision." Sterne Kessler's response did not reveal whether Sterne Kessler intended to assist ParkerVision in this action.

177. On October 27, 2011, Qualcomm sent a letter to Sterne Kessler, stating that, unless Sterne Kessler provided clear and unequivocal answers to the questions posed in Qualcomm's prior letters, Qualcomm would have no choice but to assume that

Sterne Kessler had, in fact, breached its obligations to Qualcomm and would move to enjoin the firm from providing further assistance to ParkerVision in connection with this lawsuit. On November 9, 2011, Qualcomm filed a motion for entry of a preliminary injunction enjoining Sterne Kessler from representing ParkerVision in connection with this litigation.

178. Based on Sterne Kessler's refusal to respond to Qualcomm's successive inquiries about the nature of the assistance Sterne Kessler and Robert Sterne provided to ParkerVision in connection with the filing of this action, coupled with Parker's comments at the July 21 conference call and the inherent technical complexity of the seven Patents-in-Suit, it is reasonable to infer that such assistance from ParkerVision's longstanding patent counsel and sole prosecution counsel for the Patents-in-Suit was substantial.

179. Qualcomm has paid Sterne Kessler substantial fees for legal work that Sterne Kessler performed while Sterne Kessler was helping ParkerVision sue Qualcomm.

180. While Sterne Kessler served as Qualcomm's counsel, Sterne Kessler owed Qualcomm fiduciary duties that include the duty of loyalty.

181. Among the most fundamental components of a lawyer's fiduciary duty of loyalty to a client is the duty not to assist others in bringing suit against that client. That duty is recognized in the ethical rules governing the conduct of lawyers, such as the American Bar Association Model Rule 1.7 and its D.C. and Florida counterparts.

182. Sterne Kessler breached the fiduciary duty of loyalty it owed to Qualcomm by providing legal counsel to ParkerVision in preparing to file this action.

183. Sterne Kessler also breached its fiduciary duty of loyalty to Qualcomm when one of its partners, Robert Sterne, participated in and failed to recuse himself from ParkerVision board discussions concerning the initiation of the present litigation against Qualcomm.

184. Qualcomm has been injured as a proximate result of Sterne Kessler's breaches of its fiduciary duty of loyalty by incurring legal fees to defend against a lawsuit brought with the assistance of Qualcomm's own lawyers, in violation of their duty of loyalty to Qualcomm, and alleging the infringement of patents procured through affirmative misrepresentations to the PTO by ParkerVision and Sterne Kessler.

185. Qualcomm has been further injured as a proximate result of Sterne Kessler's breaches of its fiduciary duty of loyalty by losing the value of the opinion work that Sterne Kessler has performed on the two matters that were still ongoing at the time the Complaint was filed. As a result of Sterne Kessler's conduct, Qualcomm will need to retain replacement counsel to complete, or possibly restart, the opinion work left unfinished by Sterne Kessler.

186. Qualcomm has been further injured through the payment of fees to Sterne Kessler during the period when Sterne Kessler was assisting ParkerVision in its action against Qualcomm. Qualcomm seeks the disgorgement of the fees paid to Sterne Kessler during this period of disloyalty.

Eleventh Count

(ParkerVision's Aiding and Abetting Breach of Fiduciary Duty)

187. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 above as though fully stated herein.

188. Sterne Kessler, as Qualcomm's longstanding patent prosecution and opinion counsel, owes Qualcomm fiduciary duties.

189. ParkerVision has known since at least 1999 that Sterne Kessler has served Qualcomm as a client and, accordingly, that Sterne Kessler owes a fiduciary duty to Qualcomm.

190. Sterne Kessler has breached the fiduciary duty of loyalty it owes to Qualcomm by providing legal counsel to ParkerVision in preparing to file this action.

191. ParkerVision knowingly participated in and encouraged that breach by retaining Sterne Kessler in connection with preparing to file this action against Qualcomm.

192. Qualcomm has been injured as a proximate result of ParkerVision's aiding and abetting of Sterne Kessler's breach of its fiduciary duty, by, among other things, being required to defend against a lawsuit alleging the infringement of patents procured through affirmative misrepresentations to the PTO by ParkerVision and Sterne Kessler.

193. Qualcomm has been injured as a proximate result of ParkerVision's aiding and abetting of Sterne Kessler's breaches of its fiduciary duty of loyalty by incurring legal fees to defend against a lawsuit brought with the assistance of Qualcomm's own lawyers, in violation of their duty of loyalty to Qualcomm, and alleging the infringement of patents procured through affirmative misrepresentations to the PTO by ParkerVision and Sterne Kessler.

194. Qualcomm has been injured as a proximate result of ParkerVision's aiding and abetting of Sterne Kessler's breaches of its fiduciary duty of loyalty by losing

the value of the opinion work that Sterne Kessler has performed on the two matters that were still ongoing at the time the Complaint was filed. As a result of Sterne Kessler's breach of its fiduciary duty, Qualcomm will need to retain replacement counsel to complete, or possibly restart, the opinion work left unfinished by Sterne Kessler.

195. Qualcomm has been further injured by ParkerVision's aiding and abetting Sterne Kessler's breach of its fiduciary duty because it paid fees to Sterne Kessler during the period when Sterne Kessler was assisting ParkerVision in its action against Qualcomm.

Twelfth Count

(Sterne Kessler's Breach of Contract)

196. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 and 141 - 186 above as though fully stated herein.

197. The January 12 Letter Agreement constitutes a valid contract between Sterne Kessler and Qualcomm.

198. Sterne Kessler materially breached the January 12 Letter Agreement by representing ParkerVision and participating on behalf of ParkerVision in litigation against Qualcomm.

199. Sterne Kessler's continued representation of ParkerVision and participation on behalf of ParkerVision in connection with this litigation is also a material breach of the January 12 Letter Agreement.

200. Qualcomm has suffered injury as a proximate result of Sterne Kessler's breach of contract, by, among other things, being required to defend against a lawsuit brought with the assistance of Sterne Kessler and alleging the infringement of patents

procured through affirmative misrepresentations to the PTO by ParkerVision and Sterne Kessler.

201. Qualcomm has suffered further injury as a proximate result of Sterne Kessler's breach of contract by losing the value of the opinion work that Sterne Kessler has performed on the two matters that were still ongoing at the time the Complaint was filed. As a result of Sterne Kessler's conduct, Qualcomm will need to retain replacement counsel to complete, or possibly restart, the opinion work left unfinished by Sterne Kessler.

202. Qualcomm has been further injured as a proximate result of Sterne Kessler's breach of contract by having paid fees to Sterne Kessler during the period when Sterne Kessler was assisting ParkerVision in its action against Qualcomm.

Thirteenth Count

(ParkerVision's Tortious Interference with a Contractual Relationship)

203. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 above as though fully stated herein.

204. During the course of Sterne Kessler's early representation of Qualcomm, there arose a time in early 1999 (just prior to the issuance of the first of the Patents-in-Suit) that Sterne Kessler sought the consent of Qualcomm and ParkerVision for Robert Sterne to represent ParkerVision in (ultimately unproductive) negotiations between ParkerVision and Qualcomm concerning technology of which ParkerVision claimed ownership.

205. In connection with that representation, ParkerVision and Qualcomm each agreed to waive, with important limitations, the conflict of interest that resulted from

Sterne's representation of ParkerVision in negotiations opposite Sterne Kessler's client, Qualcomm.

206. In soliciting that consent from Qualcomm Sterne Kessler stated in a January 12, 1999 letter agreement (the "January 12 Letter Agreement") signed by Sterne on behalf of Sterne Kessler, and by authorized representatives of ParkerVision and Qualcomm, that "if this negotiation were unsuccessful and hypothetically resulted in some dispute between the parties, [Sterne Kessler] would not represent either party in connection with such a dispute."

207. In the January 12 Letter Agreement, Sterne Kessler also committed, "as a condition for this waiver of any potential conflict, that no one at [Sterne Kessler] would in any future matter take an adversarial position (*e.g.*, participate in litigation against either QUALCOMM or ParkerVision on any matters), at least as long as we continue to represent such company, even in unrelated matters."

208. The January 12 Letter Agreement constitutes a valid contract between Sterne Kessler and Qualcomm, under which Sterne Kessler made certain promises to Qualcomm (such as the promises not to represent ParkerVision in a dispute "resulting" from unsuccessful licensing negotiations, not to represent a party adverse Qualcomm in unrelated litigation for as long Qualcomm was a client, and not to disclose Qualcomm confidential information) in consideration of Qualcomm's undertaking to waive the conflict of interest that existed by virtue of Sterne Kessler's simultaneous representation of ParkerVision and Qualcomm.

209. The January 12 Letter Agreement also embodied a contract between Sterne Kessler and ParkerVision, under which Sterne Kessler made certain promises to

ParkerVision in consideration of ParkerVision's undertaking to waive Sterne Kessler's conflict. This contractual agreement is embodied in the same January 12 Letter Agreement between Sterne Kessler and Qualcomm.

210. Although embodied for convenience in a single document, Sterne Kessler's obligations to Qualcomm under the January 12 Letter Agreement are independent of its separate obligations to ParkerVision. Both sets of Sterne Kessler obligations are supported by distinct, non-overlapping consideration from Qualcomm and ParkerVision, respectively.

211. As a signatory to the January 12 Letter Agreement, ParkerVision had knowledge of Sterne Kessler's promise that "no one at [Sterne Kessler] would in any future matter take an adversarial position (e.g., participate in litigation against either QUALCOMM or ParkerVision on any matters), at least as long as we continue to represent such company, even in unrelated matters."

212. By retaining Sterne Kessler in connection with the present litigation, ParkerVision intentionally and without justification interfered with the contractual relationship between Qualcomm and Sterne Kessler, resulting in Sterne Kessler's material breach of contract.

213. Qualcomm has suffered injury as a proximate result of ParkerVision's inducement of Sterne Kessler's breach of contract, by, among other things, being required to defend against a lawsuit alleging the infringement of patents procured through affirmative misrepresentations to the PTO by ParkerVision and Sterne Kessler.

214. Qualcomm has suffered further injury as a proximate result of ParkerVision's inducement of Sterne Kessler's breach of contract by losing the value of

the opinion work that Sterne Kessler has performed on the two matters that were still ongoing at the time the Complaint was filed. As a result of Sterne Kessler's breach of contract, Qualcomm will need to retain replacement counsel to complete, or possibly restart, the opinion work left unfinished by Sterne Kessler.

215. Qualcomm has been further injured as a proximate result of ParkerVision's inducement of Sterne Kessler's breach of contract by having paid fees to Sterne Kessler during the period when Sterne Kessler was assisting ParkerVision in its action against Qualcomm.

Fourteenth Count

(ParkerVision's Breach of Contract)

216. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 above as though fully stated herein.

217. On March 15, 1999, Qualcomm and ParkerVision entered into a Mutual Non-Disclosure Agreement in connection with the ongoing negotiations concerning direct conversion technology that ParkerVision claimed to own (the "March 1999 NDA"). Qualcomm and ParkerVision had been involved in such negotiations since at least June 1998. The March 1999 NDA requires that any party receiving confidential information pursuant to the agreement hold that information in strict confidence and use it only for certain authorized purposes, such as the evaluation of ParkerVision's technology.

218. On March 17, 1999, ParkerVision and Qualcomm met in Del Mar, California to discuss certain aspects of the ParkerVision technology. Pursuant to the March 1999 NDA, Qualcomm subsequently provided ParkerVision with a confidential

memorandum dated March 23, 1999 (the “Qualcomm Memorandum”), which contained Qualcomm’s proprietary information. The Qualcomm Memorandum, which was written by Qualcomm employee Saed Younis, provided detailed criticism of the technology ParkerVision disclosed to Qualcomm at the March 17 meeting, as well as suggestions for overcoming the perceived deficiencies.

219. In particular, the Qualcomm Memorandum identified several problems associated with the use of direct down conversion RF receivers in CDMA systems, as well as certain performance limitations apparent in ParkerVision’s technology. Qualcomm also proposed certain solutions to the problems that it had identified. For example, Qualcomm both identified the problem that direct down conversion receivers are often sensitive to even-order distortion, and proposed a solution, *i.e.* “increasing the headroom Vdd.” Prior to Qualcomm’s disclosure, ParkerVision was not aware of the even-order distortion problem or the solution proposed by Qualcomm.

220. The Qualcomm Memorandum also identified for ParkerVision a problem associated with direct down conversion RF receivers’ sensitivity to I/Q gain and phase mismatch, noting that “[a]t UHF frequencies, phase mismatch is more of a problem to control since similar propagation errors between the I&Q chains leads to a larger phase error at UHF than at IF.” Further, the Qualcomm Memorandum suggested a solution to this problem known as “proper device matching.” Prior to Qualcomm’s disclosure ParkerVision was not aware of the solution proposed by Qualcomm.

221. On April 16, 1999, within weeks of receiving the proprietary information in the Qualcomm Memorandum, ParkerVision filed a continuation-in-part application to the ‘551 Patent that eventually issued as the ‘493 Patent. Included in the ‘493 Patent – for

the very first time—are several “Biased Configurations” that illustrate “increasing the headroom Vdd” in order to improve performance, as suggested in the Qualcomm Memorandum. *See* ‘493 Patent col. 106:9-37 and Figs. 114-115. This solution was derived from Qualcomm’s confidential information.

222. ParkerVision benefited from the receipt of Qualcomm’s confidential information, as reflected by the inclusion of Qualcomm’s confidential disclosure to ParkerVision concerning the suggested increase in “headroom Vdd” in several claims of the issued ‘493 Patent, including claims 4, 7, 22 and 24.

223. During the period of confidential negotiations, ParkerVision continued to incorporate Qualcomm’s confidential information about CDMA technology into its patents and patent applications related to direct down conversion technology, including Provisional Application No. 60/124,376 (filed March 15, 1999) and Provisional Application No. 60/171,502 (filed December 12, 1999), which contains numerous claims, *e.g.*, claims 1-18, to complicated CDMA concepts that were previously unknown to ParkerVision. Additionally, ParkerVision’s U.S. Patent No. 7,110,435 titled “Spread Spectrum Applications of Universal Frequency Translation” claims a “method for downconverting and de-spreading a received spread spectrum signal” that is derived, at least in part, from the confidential information disclosed during negotiations between Qualcomm and ParkerVision.

224. The March 1999 NDA constitutes a valid contract.

225. ParkerVision materially breached that contract by incorporating Qualcomm’s confidential information into the ‘493 Patent, which is a parent to three of the ParkerVision patents asserted in this litigation: the ‘896, ‘342, and ‘401 Patents.

226. Qualcomm has suffered injury as a proximate result of ParkerVision's breach of contract, by, among other things, losing the value of its proprietary and confidential information which, due to ParkerVision's conduct, was made public at least as early as the date of issuance of the '493 Patent.

227. ParkerVision has been unjustly enriched by its breach of contract by obtaining the benefit, through the issuance of the '493 Patent, of Qualcomm confidential information to which it was not entitled.

Fifteenth Count

(Order of Correction of Named Inventors of the '493 Patent)

228. Qualcomm incorporates by reference and realleges paragraphs 1 - 7 above as though fully stated herein.

229. On March 17, 1999, ParkerVision and Qualcomm met in Del Mar, California to discuss certain aspects of the ParkerVision technology. Pursuant to the March 1999 NDA, Qualcomm subsequently provided ParkerVision with a confidential memorandum dated March 23, 1999 (the "Qualcomm Memorandum"), which contained Qualcomm's proprietary information. The Qualcomm Memorandum, which was written by Qualcomm employee Saed Younis, provided detailed criticism of the technology ParkerVision disclosed to Qualcomm at the March 17 meeting, as well as suggestions for overcoming the perceived deficiencies.

230. In particular, the Qualcomm Memorandum identified several problems associated with the use of direct down conversion RF receivers in CDMA systems, as well as certain performance limitations apparent in ParkerVision's technology. Qualcomm also proposed certain solutions to the problems that it had identified. For

example, Qualcomm both identified the problem that direct down conversion receivers are often sensitive to even-order distortion, and proposed a solution, *i.e.*, “increasing the headroom Vdd.” Prior to Qualcomm’s disclosure, ParkerVision was not aware of the even-order distortion problem or the solution proposed by Qualcomm.

231. On April 16, 1999, within weeks of receiving the proprietary information in the Qualcomm Memorandum, ParkerVision filed a continuation-in-part application to the ‘551 Patent that eventually issued as the ‘493 Patent. Included in the ‘493 Patent—for the very first time—are several “Biased Configurations” that illustrate “increasing the headroom Vdd” in order to improve performance, as suggested in the Qualcomm Memorandum. *See* ‘493 Patent col. 106:9-37 and Figs. 114-115.

232. ParkerVision incorporated this solution, which was derived from the information disclosed in Saed Younis’s confidential Qualcomm Memorandum, into the several claims of the ‘493 Patent, including claims 4, 7, 22 and 24.

233. Because Saed Younis contributed to the conception of at least claims 4, 7, 22 and 24, he is properly considered a co-inventor of the inventions claimed in the ‘493 Patent. The failure to name Saed Younis as a co-inventor on the ‘493 patent occurred without any deceptive intent on the part of Qualcomm.

234. Qualcomm has standing to assert this count because it is the assignee of any and all Qualcomm employees’, agents’ or representatives’ rights in the patent, including but not limited to Saed Younis’s rights in the patent (after correction) by virtue of an express contract, implied contract, employment relationship or otherwise.

235. During the prosecution of the '493 Patent and thereafter, the Applicants failed to disclose to the PTO all of the actual inventors of the subject matter of one or more claims of the '493 Patent.

236. By reason of the foregoing, Qualcomm seeks and is entitled to an Order from the Court, pursuant to 35 U.S.C. § 256, ordering correction of the Patent.

Prayer for Relief

WHEREFORE, Qualcomm respectfully requests that this Court enter a Judgment and Order:

A. Declaring that all asserted claims of the Patents-in-Suit are invalid, not infringed, and/or unenforceable;

B. Finding that this case is an exceptional case pursuant to 35 U.S.C. § 285 or otherwise, and awarding Qualcomm its costs, together with reasonable attorneys' fees and all of its expenses for defending this suit;

C. Awarding Qualcomm compensatory damages for Sterne Kessler's breach of its fiduciary duty, and for ParkerVision's aiding and abetting of such breach;

D. Ordering Sterne Kessler to disgorge fees paid to it during the period of its breach of fiduciary duty;

E. Enjoining Sterne Kessler and those acting in concert from providing legal advice, legal or technical analysis, or services of any kind to ParkerVision in connection with this action or in any other manner adverse to Qualcomm's interests;

F. Awarding Qualcomm compensatory damages for Sterne Kessler's breach of contract, and for ParkerVision's inducement of such breach;

G. Awarding Qualcomm compensatory damages and restitution for ParkerVision's breach of contract,

H. Awarding Qualcomm any such other costs and further relief as the Court may deem just and proper; and

I. Ordering the Director of the Patent and Trademark Office to issue a certificate correcting the '493 Patent by listing Saed Younis, as an employee of Qualcomm, as a co-inventor.

Jury Demand

Pursuant to Federal Rule of Civil Procedure 38(b), Qualcomm demands trial by jury on all issues so triable as to the Counterclaim and Affirmative Defenses.

December 2, 2011

BEDELL, DITTMAR, DEVAULT, PILLANS & COXE
Professional Association

By: s/ John A. DeVault, III
John A. DeVault, III
Florida Bar No. 103979
jad@bedellfirm.com
Courtney K. Grimm
cgrimm@bedellfirm.com
Florida Bar No. 953740
The Bedell Building
101 East Adams Street
Jacksonville, Florida 32202
Telephone: (904) 353-0211
Facsimile: (904) 353-9307

-and-

CRAVATH, SWAINE & MOORE LLP

Keith R. Hummel (admitted pro hac vice)

(Trial Counsel)

khummel@cravath.com

David Greenwald (admitted pro hac vice)

dgreenwald@cravath.com

Worldwide Plaza

825 Eighth Avenue

New York, New York 10019

Telephone: (212) 474-1000

Facsimile: (212) 474-3700

-and-

CADWALADER, WICKERSHAM & TAFT LLP

Christopher A. Hughes (admitted pro hac vice)

Christopher.Hughes@cwt.com

1 World Financial Center

New York, New York 10281

Telephone: (212) 504-6000

Facsimile: (212) 504-6666

Counsel for Defendant, Counterclaim Plaintiff Qualcomm Incorporated

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 2nd day of December, 2011, I electronically filed the foregoing with the Clerk of the Court by using the CM/ECF system which will send a notice of electronic filing to all counsel of record.

s/John A. DeVault, III
John A. DeVault, III
Florida Bar No. 103979
Bedell, Dittmar, DeVault, Pillans & Coxe, P.A.
The Bedell Building
101 East Adams Street
Jacksonville, Florida 32202
Telephone: (904) 353-0211
Facsimile: (904) 353-9307
E-Mail: jad@bedellfirm.com