

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

MICROUNITY SYSTEMS ENGINEERING,  
INC., a California corporation,

Plaintiff,

v.

ACER, INC., a Republic of China corporation, et  
al.,

Defendants.

Civil Action No. 2:10-CV-185-TJW-CE

**JURY TRIAL DEMANDED**

**ANSWER AND COUNTERCLAIMS OF DEFENDANT PALM, INC. TO  
PLAINTIFF MICROUNITY SYSTEMS ENGINEERING, INC.'S  
COMPLAINT FOR PATENT INFRINGEMENT**

Palm, Inc. (“Palm”), by and through its counsel, hereby answers the Complaint for Patent Infringement (“Complaint”) of MicroUnity Systems Engineering, Inc. (“MicroUnity”) and asserts counterclaims as follows:

**THE PARTIES**

1. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 1 of the Complaint, and, on that basis, denies them.
2. The allegations in paragraph 2 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 2 of the Complaint, and, on that basis, denies them.
3. The allegations in paragraph 3 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 3 of the Complaint, and, on that basis, denies them.

4. The allegations in paragraph 4 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 4 of the Complaint, and, on that basis, denies them.

5. The allegations in paragraph 5 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 5 of the Complaint, and, on that basis, denies them.

6. The allegations in paragraph 6 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 6 of the Complaint, and, on that basis, denies them.

7. Palm admits that it is a Delaware corporation and that 950 W. Maude Ave, Sunnyvale, California, 94085 is the location of its corporate headquarters. Palm further admits that it imports, sells and markets a mobile handset known as the Pre in the United States. Palm denies the remaining allegations of paragraph 7 of the Complaint.

8. The allegations in paragraph 8 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 8 of the Complaint, and, on that basis, denies them.

9. The allegations in paragraph 9 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 9 of the Complaint, and, on that basis, denies them.

10. The allegations in paragraph 10 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 10 of the Complaint, and, on that basis, denies them.

11. The allegations in paragraph 11 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 11 of the Complaint, and, on that basis, denies them.

12. The allegations in paragraph 12 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 12 of the Complaint, and, on that basis, denies them.

13. The allegations in paragraph 13 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 13 of the Complaint, and, on that basis, denies them.

14. The allegations in paragraph 14 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 14 of the Complaint, and, on that basis, denies them.

15. The allegations in paragraph 15 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 15 of the Complaint, and, on that basis, denies them.

16. The allegations in paragraph 16 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 16 of the Complaint, and, on that basis, denies them.

### **JURISDICTION AND VENUE**

17. Palm admits that this Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. § 1338(a). Palm further admits that the counts set forth in the Complaint are governed by the laws of United States, Title 35 of the United States Code. Palm denies the remaining allegations of paragraph 17 of the Complaint.

18. Palm admits that the Complaint asserts some of the same patents as asserted in the actions identified in paragraph 18 of the Complaint. Palm denies the remaining allegations of paragraph 18 of the Complaint.

**COUNT 1 (U.S. Patent No. 5,742,840 C1):**

19. Palm admits that what purports to be a copy of United States Patent No. 5,742,840 (“the ’840 patent”) is attached to the Complaint and that the face of Exhibit C to the Complaint states that the ’840 patent is entitled “General Purpose, Multiple Precision Parallel Operation, Programmable Media Processor” and issued on April 21, 1998. Palm lacks sufficient knowledge or information to admit or deny the remaining allegations of paragraph 19 of the Complaint, and, on that basis, denies them.

20. Palm admits that what purports to be a copy of the Reexamination Certificate for the ’840 patent is attached to the Complaint as Exhibit C1. The allegations regarding the Reexamination Certificate for the ’840 patent are conclusions of law which require no answer. Palm lacks sufficient knowledge or information to admit or deny the remaining allegations of paragraph 20 of the Complaint, and, on that basis, denies them.

21. The allegations in paragraph 21 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 21 of the Complaint, and, on that basis, denies them.

22. Palm denies the allegations in paragraph 22 of the Complaint insofar as the allegations relate to Palm. Palm lacks sufficient knowledge or information to admit or deny the remaining allegations of paragraph 22 of the Complaint, and, on that basis, denies them.

23. The allegations in paragraph 23 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 23 of the Complaint, and, on that basis, denies them.

24. Palm denies the allegations in paragraph 24 of the Complaint insofar as the allegations relate to Palm. Palm lacks sufficient knowledge or information to admit or deny the remaining allegations of paragraph 24 of the Complaint, and, on that basis, denies them.

25. Palm denies the allegations in paragraph 25 of the Complaint insofar as the allegations relate to Palm. Palm lacks sufficient knowledge or information to admit or deny the remaining allegations of paragraph 25 of the Complaint, and, on that basis, denies them.

**COUNT 2 (U.S. Patent No. 7,730,287 B2):**

26. Palm admits that what purports to be a copy of United States Patent No. 7,730,287 (“the ’287 patent”) is attached to the Complaint and that the face of Exhibit U to the Complaint states that the ’287 patent is entitled “Method and Software for Group Floating-Point Arithmetic Operations” and issued on June 1, 2010. Palm lacks sufficient knowledge or information to admit or deny the remaining allegations of paragraph 26 of the Complaint, and, on that basis, denies them.

27. The allegations in paragraph 27 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 27 of the Complaint, and, on that basis, denies them.

28. The allegations in paragraph 28 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 28 of the Complaint, and, on that basis, denies them.

29. The allegations in paragraph 29 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 29 of the Complaint, and, on that basis, denies them.

30. The allegations in paragraph 30 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 30 of the Complaint, and, on that basis, denies them.

31. The allegations in paragraph 31 are not directed to Palm and therefore no response is required. Palm lacks sufficient knowledge or information to admit or deny the allegations of paragraph 31 of the Complaint, and, on that basis, denies them.

#### **PRAYER FOR RELIEF**

32. Palm denies that MicroUnity is entitled to any of the relief it requested.

#### **GENERAL DENIAL**

33. To the extent that any allegations of the Complaint are not specifically admitted, Palm hereby denies them.

#### **AFFIRMATIVE DEFENSES**

##### **First Affirmative Defense (Failure to State a Claim)**

34. The Complaint fails to state a claim upon which relief can be granted because Palm has not performed any act, and is not proposing to perform any act, in violation of any rights validly belonging to MicroUnity.

**Second Affirmative Defense  
(Non-Infringement)**

35. As and for a separate affirmative defense, Palm alleges that it has not and does not directly, indirectly, contributorily and/or by inducement, infringe any claim of the '840 patent, either literally or under the doctrine of equivalents.

**Third Affirmative Defense  
(Invalidity/Unenforceability)**

36. As and for a separate affirmative defense, Palm alleges that one or more claims of the '840 patent are invalid and/or unenforceable for failing to comply with the provisions of the patent laws, 35 U.S.C. § 1 et seq., including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112.

**Fourth Affirmative Defense  
(Patent Marking)**

37. As and for a separate affirmative defense, Palm alleges that any claim for damages for patent infringement by MicroUnity is limited, at a minimum, by 35 U.S.C. § 287 to those damages occurring only after the notice of infringement.

**Fifth Affirmative Defense  
(Limitation on Damages)**

38. As and for a separate affirmative defense, Palm alleges that MicroUnity's damages, if any, are limited pursuant to 35 U.S.C. §§ 286 and 288.

**Sixth Affirmative Defense  
(Prosecution History Estoppel)**

39. As and for a separate affirmative defense, by reason of proceedings in the USPTO during the prosecution of the applications resulting in the '840 patent, as shown by their file histories, and by reason of the amendment, cancellation and/or abandonment of claims, and the admissions and other amendments made therein by or on behalf of the patentee, MicroUnity is

estopped to claim a construction of the '840 patent that would cause any valid claim thereof to cover or include any product manufactured, used, sold or offered for sale by Palm.

**Seventh Affirmative Defense  
(Adequate Remedy Other Than Injunctive Relief)**

40. As and for a separate affirmative defense, MicroUnity is not entitled to injunctive relief because any alleged injury to MicroUnity is not immediate or irreparable, and MicroUnity has an adequate remedy at law.

**Eighth Affirmative Defense  
(Laches)**

41. As and for a separate affirmative defense, Palm alleges on information and belief that any claim of patent infringement against Palm concerning the '840 patent is barred by the doctrine of laches.

**Ninth Affirmative Defense  
(Intervening Rights)**

42. As and for a separate affirmative defense, Plaintiff's claims for damages and relief are barred, in part, by the doctrine of intervening rights including that set forth in 35 U.S.C. §§ 307 and 252 (as referenced in 35 U.S.C. § 307).

**Tenth Affirmative Defense  
(Inequitable Conduct)**

43. As and for a separate affirmative defense, Palm alleges on information and belief that the '840 patent is unenforceable due to inequitable conduct. Palm is informed and believes that the named inventors, John Moussouris and Craig Hansen, and/or the MicroUnity attorneys who prosecuted these patents, Kenneth Cage in particular, failed to comply with their obligations under 37 C.F.R. § 1.56 and failed to discharge their duty of candor to the Patent Office during the prosecution of the applications leading to the issuance of this patent. Moussouris, Hansen,

and/or Cage with intent to deceive the Patent Office examiner, knowingly and intentionally (1) withheld material information from the USPTO during prosecution. Because Moussouris, Hansen, and/or Cage failed to comply with the duty of candor, the '840 patent is unenforceable.

#### Withholding Material Information from the USPTO

44. On information and belief, Moussouris and Hansen were aware of prior art references and the sale of prior art processors or systems that they knew to be material to the prosecution of patent applications leading to the '840 patent, yet knowingly and intentionally withheld that information from the USPTO.

#### Hewlett-Packard References

45. On information and belief, prior to the issue date of the '840 patent, MicroUnity was involved in a technology collaboration with Hewlett-Packard Company ("HP") and several of their engineers, including Ruby Lee, Jerry Huck, and Michael Mahon.

46. Upon information and belief, no later than January 1994, Hewlett Packard offered for sale the PA 7100LC microprocessor, part of the HP PA-RISC family of microprocessors. The PA 7100LC included multimedia extensions to the microprocessor instruction set that implemented dynamic partitioning for parallel processing of packed data elements.

47. On information and belief, Lee was involved in the design of the PA 7100LC multimedia instruction set extensions, and was also involved in the technology collaboration between MicroUnity and HP.

48. Lee published articles detailing multimedia instruction set extensions and the hardware necessary to implement these multimedia extensions. Several of Lee's articles were published prior to August 16, 1995, ("the Lee Articles") which was the filing date of the patent application that later matured into the '840 patent. *See, e.g., Ruby B. Lee, Accelerating*

*Multimedia with Enhanced Microprocessors*, IEEE Micro, April 1995. Lee also filed at least two patent applications relating to dynamic partitioning for parallel processing that claim a priority date of November, 1993, and are therefore prior art to the '840 patent. These two patent applications matured into U.S. Patent Nos. 5,636,351 and 5,390,135.

49. On information and belief, Lee, Huck, and Mahon were all actively involved in the design and implementation of the second-generation multimedia instruction set extensions for the HP PA 8000 microprocessor in 1995 and 1996, prior to the issue date of the '840 patent. These multimedia instruction set extensions also implemented dynamic partitioning for parallel processing of packed data elements. On information and belief, Lee, Huck, and Mahon were all also involved in the technology collaboration with MicroUnity.

50. On information and belief, Moussouris, as CEO of MicroUnity, and Hansen, as chief architect of the MicroUnity media processor, were in contact with the HP team (and Lee, Huck, and Mahon, in particular) during the technology collaboration, and were aware or became aware of the multimedia instruction set extensions to the HP processors prior to the issue date of the '840 patent.

51. Despite knowledge of the multimedia extensions and their operation, Moussouris and Hansen intentionally did not disclose the prior art HP microprocessors or the Lee Articles during the prosecution of the '840 patent, and therefore intentionally failed to disclose to the USPTO all information known to Moussouris and Hansen to be material to patentability.

52. The HP 7100LC microprocessor and the Lee Articles, including *Accelerating Multimedia with Enhanced Microprocessors*, were material to the USPTO's examination of the '840 patent. During the prosecution of the '840 patent, on May 28, 1997, Moussouris and Hansen distinguished their alleged invention from the prior art by arguing that the cited prior art

references did not include dynamic partitioning of media data that is narrower than the data path for parallel processing.

53. On information and belief, Moussouris and Hansen did not cite any references during the prosecution of the '840 patent that disclosed or performed dynamic partitioning for parallel processing.

54. Moussouris and Hansen did not cite any references during the prosecution of the '840 patent that disclosed or performed dynamic partitioning for parallel processing, despite the fact they were aware of the materiality of these references.

55. The HP 7100LC microprocessor performed dynamic partitioning of media data that is narrower than the data path for parallel processing. The Lee Articles, including the article entitled *Accelerating Multimedia with Enhanced Microprocessors*, disclosed dynamic partitioning of media data that is narrower than the data path for parallel processing.

56. On information and belief, despite their knowledge of the HP prior art processors and publications, Moussouris and Hansen intentionally withheld this information during the prosecution of the '840 patent from the USPTO in violation of their duty of candor.

#### Intel and Philips References

57. On information and belief, on August 15, 1995 an email was circulated to the MicroUnity Zeus media processor design team discussing competitive microprocessor products ("MicroUnity Zeus email"). On information and belief, Moussouris was copied on the MicroUnity Zeus email. On information and belief, on August 16, 1995, the MicroUnity Zeus email was forwarded to Craig Hansen. August 16, 1995, was also the filing date of the patent application that would mature into the '840 patent.

58. The MicroUnity Zeus email included an update from the MicroUnity marketing group. According to the MicroUnity Zeus email, one of the MicroUnity employees was performing a competitive analysis of other microprocessor companies. The MicroUnity Zeus email noted that the publicized business plans of the competitive microprocessor companies was “remarkably similar” to MicroUnity’s plans, in which multimedia capabilities were added to the microprocessor. In particular, the MicroUnity Zeus email noted Intel’s plans to add DSP functions to its processors (“Intel’s plans”) and Philips’s plans to include specialized operations for video compression and communications into its new VLIW processor core (“Philips’s plans”). Even though the approach taken in these processors was noted in this email to be “remarkably similar,” no information regarding Intel’s plans or Phillips’s plans or any Intel references or any Philips references were cited during the prosecution of the patent application for the ’840 patent.

59. On information and belief, the MicroUnity Zeus email was referring to Intel’s intent to add DSP-like functionality to its processors by including the MMX instruction set, which allowed dynamic partitioning of the execution unit for parallel processing.

60. On information and belief, both Moussouris and Hansen read the MicroUnity Zeus email. On information and belief, both Moussouris and Hansen were aware of these competing processor architectures, including Intel’s plans and Philips’s plans, discussed in the MicroUnity Zeus email. Neither Moussouris nor Hansen cited any information regarding Intel’s plans, Philips’s plans, Philips references or Intel references during the prosecution of the patent applications leading to the ’840 patent despite the fact that the plans for Philips and Intel to add DSP and multimedia functions were “remarkably similar.”

61. On information and belief, Moussouris and Hansen knew of Intel's MMX instruction set extensions prior to the issue date of the '840 patent.

62. On information and belief, Moussouris and Hansen intentionally failed to cite any references discussing the Intel MMX instruction set extensions in the '840 patent and therefore intentionally failed to disclose to the USPTO all information known to Moussouris and Hansen to be material to patentability.

63. On information and belief, Intel's plans and the Intel MMX instruction set were material to the prosecution of the '840 patent. On information and belief, Intel's plans disclosed dynamic partitioning of media data that is narrower than the data path for parallel processing. The Intel MMX instruction set defines instructions for dynamic partitioning of media data that is narrower than the data path for parallel processing. Moussouris and Hansen intentionally withheld this information from the USPTO in violation of their duty of candor.

#### Sun UltraSPARC and HP PA-RISC References

64. On information and belief, Hansen knew of the Sun UltraSPARC multimedia instruction set extensions and the HP PA-RISC multimedia instruction set extensions on or before November 7, 1995.

65. On information and belief, on November 7, 1995, Hansen responded to questions on Usenet, an internet bulletin board service, regarding a presentation given by Moussouris and Hansen on the operation of the MicroUnity media processor.

66. On information and belief, a questioner on the Usenet board made the following statement and question: "The title of the slide and the accompanying diagram indicate that these instructions operate simultaneously on many packed data items within their operands. (Sometimes called 'multigauged.' Much like the PA-RISC and UltraSPARC multimedia

extensions.) The slide indicates that the size of the sub-register data items can be from 1 to 64 bits. How is the size specified?” Upon information and belief, Hansen responded via Usenet, stating “The size of the data is specified as part of the operation code of the instruction.”

67. On information and belief, Hansen read and understood the references to the PA-RISC and UltraSPARC multimedia extensions, and understood the statement “these instructions operate simultaneously on many packed data items within their operands” – to mean that the multimedia extensions included instructions for dynamic partitioning for parallel processing.

68. The multimedia extensions to the PA-RISC and UltraSPARC processors were material to the prosecution of the '840 patent.

69. On information and belief, the multimedia extensions to the UltraSPARC processors included instructions for dynamic partitioning of media data that is narrower than the data path for parallel processing.

70. Moussouris and Hansen intentionally withheld information on the PA-RISC and UltraSPARC processors from the USPTO in violation of their duty of candor.

#### Unenforceability Due to Failure to Disclose References

71. The materiality of the references described in paragraphs 43 to 70, together with Moussouris's and Hansen's knowledge of (1) the reference's existence, and (2) the claimed features of the '840 patent, shows that Moussouris and Hansen intentionally withheld these references from the USPTO during prosecution of the '840 patent with an intent to deceive the USPTO.

72. Moussouris and Hansen understood that the USPTO required them to disclose prior art that was material to patentability, including the references described in paragraphs 43 to

70. Moussouris and Hansen signed a Combined Declaration/Power of Attorney document. This document included a declaration that “We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).” Despite signing this declaration, Moussouris and Hansen intentionally withheld information that was material and non-cumulative to the examination of the ’840 patent. This intentional withholding of material and non-cumulative information constitutes inequitable conduct and renders the ’840 patent unenforceable.

**Eleventh Affirmative Defense  
(Reservation of Additional Affirmative Defenses)**

73. Palm presently has insufficient knowledge or information upon which to form a belief as to whether it may have additional, yet unstated, affirmative defenses. As such, Palm reserves the right to assert additional defenses in the event investigation or discovery indicates that additional affirmative defenses are appropriate, including, but not limited to, affirmative defenses of unclean hands, patent misuse, implied license and patent exhaustion.

**COUNTERCLAIMS**

Defendant/Counterclaimant Palm brings the following counterclaims against Plaintiff/Counterdefendant MicroUnity:

**THE PARTIES**

1. Defendant/Counterclaimant Palm is a Delaware corporation with its principal place of business in Sunnyvale, California.

2. On information and belief, MicroUnity, which filed suit against Palm in this district, is a California corporation with its principal place of business in Santa Clara, California.

## **JURISDICTION AND VENUE**

3. This is an action for declaratory relief. This Court has jurisdiction over these counterclaims based on 28 U.S.C. §§ 1331, 1338(a), 2201 and 2202. An actual, substantial and continuing justiciable controversy exists between Palm and MicroUnity, with respect to which Palm requires a declaration of its rights by this Court. Specifically, the controversy relates to the invalidity, unenforceability and non-infringement of the '840 patent and to the right of MicroUnity to maintain a suit for alleged infringement of those patents against Palm.

4. Venue is proper under 28 U.S.C. §§ 1391 and 1400(b). Palm alleges that MicroUnity submitted to the venue of this Court by filing its Complaint here. Moreover, venue is also proper because Palm's counterclaims relate to MicroUnity's claims which are before this Court.

## **FACTS**

5. According to the allegations of the Complaint, MicroUnity claims to be the sole holder of the entire right, title, and interest in the '840 patent.

6. MicroUnity has accused Palm of directly and/or indirectly making, using, selling, and/or offering for sale in and/or importing into the United States products covered by one or more claims of the '840 patent. Palm denies that any of its products infringe the patents asserted against it by MicroUnity and further believes that these patents are invalid and/or unenforceable.

7. An actual case or controversy exists between the parties concerning the invalidity, unenforceability and non-infringement of the '840 patent, and that controversy is ripe for adjudication by this Court.

8. Palm alleges on information and belief that the '840 patent is unenforceable due to inequitable conduct. Palm is informed and believes that the named inventors, John

Moussouris and Craig Hansen, and/or the MicroUnity attorneys who prosecuted these patents, Kenneth Cage in particular, failed to comply with their obligations under 37 C.F.R. § 1.56 and failed to discharge their duty of candor to the Patent Office during the prosecution of the applications leading to the issuance of this patent. Moussouris, Hansen, and/or Cage with intent to deceive the Patent Office examiner, knowingly and intentionally (1) withheld material information from the USPTO during prosecution. Because Moussouris, Hansen, and/or Cage failed to comply with the duty of candor, the '840 patent is unenforceable.

#### Withholding Material Information from the USPTO

9. On information and belief, Moussouris and Hansen were aware of prior art references and the sale of prior art processors or systems that they knew to be material to the prosecution of patent applications leading to the '840 patent, yet knowingly and intentionally withheld that information from the USPTO.

#### Hewlett-Packard References

10. On information and belief, prior to the issue date of the '840 patent, MicroUnity was involved in a technology collaboration with Hewlett-Packard Company ("HP") and several of their engineers, including Ruby Lee, Jerry Huck, and Michael Mahon.

11. Upon information and belief, no later than January 1994, Hewlett Packard offered for sale the PA 7100LC microprocessor, part of the HP PA-RISC family of microprocessors. The PA 7100LC included multimedia extensions to the microprocessor instruction set that implemented dynamic partitioning for parallel processing of packed data elements.

12. On information and belief, Lee was involved in the design of the PA 7100LC multimedia instruction set extensions, and was also involved in the technology collaboration between MicroUnity and HP.

13. Lee published articles detailing multimedia instruction set extensions and the hardware necessary to implement these multimedia extensions. Several of Lee's articles were published prior to August 16, 1995, ("the Lee Articles") which was the filing date of the patent application that later matured into the '840 patent. *See, e.g.,* Ruby B. Lee, *Accelerating Multimedia with Enhanced Microprocessors*, IEEE Micro, April 1995. Lee also filed at least two patent applications relating to dynamic partitioning for parallel processing that claim a priority date of November, 1993, and are therefore prior art to the '840 patent. These two patent applications matured into U.S. Patent Nos. 5,636,351 and 5,390,135.

14. On information and belief, Lee, Huck, and Mahon were all actively involved in the design and implementation of the second-generation multimedia instruction set extensions for the HP PA 8000 microprocessor in 1995 and 1996, prior to the issue date of the '840 patent. These multimedia instruction set extensions also implemented dynamic partitioning for parallel processing of packed data elements. On information and belief, Lee, Huck, and Mahon were all also involved in the technology collaboration with MicroUnity.

15. On information and belief, Moussouris, as CEO of MicroUnity, and Hansen, as chief architect of the MicroUnity media processor, were in contact with the HP team (and Lee, Huck, and Mahon, in particular) during the technology collaboration, and were aware or became aware of the multimedia instruction set extensions to the HP processors prior to the issue date of the '840 patent.

16. Despite knowledge of the multimedia extensions and their operation, Moussouris and Hansen intentionally did not disclose the prior art HP microprocessors or the Lee Articles during the prosecution of the '840 patent, and therefore intentionally failed to disclose to the USPTO all information known to Moussouris and Hansen to be material to patentability.

17. The HP 7100LC microprocessor and the Lee Articles, including *Accelerating Multimedia with Enhanced Microprocessors*, were material to the USPTO's examination of the '840 patent. During the prosecution of the '840 patent, on May 28, 1997, Moussouris and Hansen distinguished their alleged invention from the prior art by arguing that the cited prior art references did not include dynamic partitioning of media data that is narrower than the data path for parallel processing.

18. On information and belief, Moussouris and Hansen did not cite any references during the prosecution of the '840 patent that disclosed or performed dynamic partitioning for parallel processing.

19. Moussouris and Hansen did not cite any references during the prosecution of the '840 patent that disclosed or performed dynamic partitioning for parallel processing, despite the fact they were aware of the materiality of these references.

20. The HP 7100LC microprocessor performed dynamic partitioning of media data that is narrower than the data path for parallel processing. The Lee Articles, including the article entitled *Accelerating Multimedia with Enhanced Microprocessors*, disclosed dynamic partitioning of media data that is narrower than the data path for parallel processing.

21. On information and belief, despite their knowledge of the HP prior art processors and publications, Moussouris and Hansen intentionally withheld this information during the prosecution of the '840 patent from the USPTO in violation of their duty of candor.

#### Intel and Philips References

22. On information and belief, on August 15, 1995 an email was circulated to the MicroUnity Zeus media processor design team discussing competitive microprocessor products ("MicroUnity Zeus email"). On information and belief, Moussouris was copied on the

MicroUnity Zeus email. On information and belief, on August 16, 1995, the MicroUnity Zeus email was forwarded to Craig Hansen. August 16, 1995, was also the filing date of the patent application that would mature into the '840 patent.

23. The MicroUnity Zeus email included an update from the MicroUnity marketing group. According to the MicroUnity Zeus email, one of the MicroUnity employees was performing a competitive analysis of other microprocessor companies. The MicroUnity Zeus email noted that the publicized business plans of the competitive microprocessor companies was “remarkably similar” to MicroUnity’s plans, in which multimedia capabilities were added to the microprocessor. In particular, the MicroUnity Zeus email noted Intel’s plans to add DSP functions to its processors (“Intel’s plans”) and Philips’s plans to include specialized operations for video compression and communications into its new VLIW processor core (“Philips’s plans”). Even though the approach taken in these processors was noted in this email to be “remarkably similar,” no information regarding Intel’s plans or Phillips’s plans or any Intel references or any Philips references were cited during the prosecution of the patent application for the '840 patent.

24. On information and belief, the MicroUnity Zeus email was referring to Intel’s intent to add DSP-like functionality to its processors by including the MMX instruction set, which allowed dynamic partitioning of the execution unit for parallel processing.

25. On information and belief, both Moussouris and Hansen read the MicroUnity Zeus email. On information and belief, both Moussouris and Hansen were aware of these competing processor architectures, including Intel’s plans and Philips’s plans, discussed in the MicroUnity Zeus email. Neither Moussouris nor Hansen cited any information regarding Intel’s plans, Philips’s plans, Philips references or Intel references during the prosecution of the patent

applications leading to the '840 patent despite the fact that the plans for Philips and Intel to add DSP and multimedia functions were “remarkably similar.”

26. On information and belief, Moussouris and Hansen knew of Intel's MMX instruction set extensions prior to the issue date of the '840 patent.

27. On information and belief, Moussouris and Hansen intentionally failed to cite any references discussing the Intel MMX instruction set extensions in the '840 patent and therefore intentionally failed to disclose to the USPTO all information known to Moussouris and Hansen to be material to patentability.

28. On information and belief, Intel's plans and the Intel MMX instruction set were material to the prosecution of the '840 patent. On information and belief, Intel's plans disclosed dynamic partitioning of media data that is narrower than the data path for parallel processing. The Intel MMX instruction set defines instructions for dynamic partitioning of media data that is narrower than the data path for parallel processing. Moussouris and Hansen intentionally withheld this information from the USPTO in violation of their duty of candor.

#### Sun UltraSPARC and HP PA-RISC References

29. On information and belief, Hansen knew of the Sun UltraSPARC multimedia instruction set extensions and the HP PA-RISC multimedia instruction set extensions on or before November 7, 1995.

30. On information and belief, on November 7, 1995, Hansen responded to questions on Usenet, an internet bulletin board service, regarding a presentation given by Moussouris and Hansen on the operation of the MicroUnity media processor.

31. On information and belief, a questioner on the Usenet board made the following statement and question: “The title of the slide and the accompanying diagram indicate that these

instructions operate simultaneously on many packed data items within their operands. (Sometimes called ‘multigauge.’ Much like the PA-RISC and UltraSPARC multimedia extensions.) The slide indicates that the size of the sub-register data items can be from 1 to 64 bits. How is the size specified?” Upon information and belief, Hansen responded via Usenet, stating “The size of the data is specified as part of the operation code of the instruction.”

32. On information and belief, Hansen read and understood the references to the PA-RISC and UltraSPARC multimedia extensions, and understood the statement “these instructions operate simultaneously on many packed data items within their operands” – to mean that the multimedia extensions included instructions for dynamic partitioning for parallel processing.

33. The multimedia extensions to the PA-RISC and UltraSPARC processors were material to the prosecution of the ’840 patent.

34. On information and belief, the multimedia extensions to the UltraSPARC processors included instructions for dynamic partitioning of media data that is narrower than the data path for parallel processing.

35. Moussouris and Hansen intentionally withheld information on the PA-RISC and UltraSPARC processors from the USPTO in violation of their duty of candor.

#### Unenforceability Due to Failure to Disclose References

36. The materiality of the references described in paragraphs 8 to 35, together with Moussouris’s and Hansen’s knowledge of (1) the reference’s existence, and (2) the claimed features of the ’840 patent, shows that Moussouris and Hansen intentionally withheld these references from the USPTO during prosecution of the ’840 patent with an intent to deceive the USPTO.

37. Moussouris and Hansen understood that the USPTO required them to disclose prior art that was material to patentability, including the references described in paragraphs 8 to 36. Moussouris and Hansen signed a Combined Declaration/Power of Attorney document. This document included a declaration that “We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).” Despite signing this declaration, Moussouris and Hansen intentionally withheld information that was material and non-cumulative to the examination of the ’840 patent. This intentional withholding of material and non-cumulative information constitutes inequitable conduct and renders the ’840 patent unenforceable.

**First Counterclaim  
(Declaration of Non-Infringement of the ’840 Patent)**

38. Palm hereby incorporates and realleges paragraphs 1 through 37 of these Counterclaims.

39. MicroUnity alleges that it owns the ’840 patent and has brought suit against Palm for infringement of the ’840 patent.

40. Palm has not made, used, sold, offered for sale in the United States or imported into the United States any device that infringes any claim of the ’840 patent.

41. An actual case or controversy exists between MicroUnity and Palm, based on MicroUnity having filed its Complaint against Palm alleging infringement of the ’840 patent.

42. Palm has been injured and damaged by MicroUnity filing a complaint asserting the ’840 patent which is not infringed by Palm.

43. Declaratory relief is both appropriate and necessary to establish that Palm has not made, used, sold, offered for sale in the United States or imported into the United States any

device that infringes any claim of the '840 patent, and thus the '840 patent cannot be asserted against Palm.

**Second Counterclaim  
(Declaration of Invalidity of the '840 Patent)**

44. Palm hereby incorporates and realleges paragraphs 1 through 43 of these Counterclaims.

45. Palm is informed and believes that the '840 patent is invalid for one or more of the reasons alleged in the Affirmative Defenses of the Answer by Palm, which paragraphs are incorporated into this counterclaim by reference with the same force and effect as if repeated herein in full.

46. An actual case or controversy exists between MicroUnity and Palm, based on MicroUnity having filed its Complaint against Palm alleging infringement of the '840 patent.

47. Palm has been injured and damaged by MicroUnity filing a complaint asserting the '840 patent which is invalid.

48. Declaratory relief is both appropriate and necessary to establish that the '840 patent is invalid, and thus cannot be asserted against Palm.

**Third Counterclaim  
(Declaration of Unenforceability of the '840 Patent)**

49. Palm hereby incorporates and realleges paragraphs 1 through 48 of these Counterclaims.

50. Palm is informed and believes that the '840 patent is unenforceable for one or more of the reasons alleged in the Affirmative Defenses of the Answer by Palm and paragraphs 8-37 of these Counterclaims, which paragraphs are incorporated into this counterclaim by reference with the same force and effect as if repeated herein in full.

51. An actual case or controversy exists between MicroUnity and Palm, based on MicroUnity having filed its Complaint against Palm alleging infringement of the '840 patent.

52. Palm has been injured and damaged by MicroUnity filing a complaint asserting the '840 patent which is unenforceable.

53. Declaratory relief is both appropriate and necessary to establish that the '840 patent is unenforceable, and thus cannot be asserted against Palm.

### **PRAYER FOR RELIEF**

WHEREFORE, Palm prays for relief as follows:

- A. MicroUnity's Complaint be dismissed with prejudice and MicroUnity recover nothing thereon;
- B. For an entry of judgment in favor of Palm and against MicroUnity;
- C. For an entry of judgment declaring that Palm has not infringed the '840 patent;
- D. For an entry of judgment declaring that the '840 patent is invalid;
- E. For an entry of judgment declaring that the '840 patent is unenforceable;
- F. For costs and attorneys' fees in connection with the Complaint and the Counterclaims pursuant to 35 U.S.C. § 285;
- G. For interest thereon at the legal rate; and
- H. For such other and further relief as the Court deems just and proper.

**DEMAND FOR JURY TRIAL**

Palm demands a trial by jury of all claims and issues so triable.

August 11, 2010

Respectfully submitted,

/s/ Elizabeth Day

M. Elizabeth Day (CA Bar No. 177125)

(*pro hac vice*)

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**ATTORNEYS FOR  
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PALM, INC.**

**CERTIFICATE OF SERVICE**

The undersigned certifies that on this 11th day of August 2010, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document through the Court's CM/ECF system under Local Rule CV-5(a)(3). Any other counsel of record will be served by a facsimile transmission and/or first class mail.

*/s/ Elizabeth Day*  
M. Elizabeth Day