I/P Engine, Inc. v. AOL, Inc. et al
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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
NORFOLK DIVISION

I/P ENGINE, INC. Plaintiff, v. AOL, INC., GOOGLE INC., IAC SEARCH & MEDIA, INC., GANNETT COMPANY, INC., and TARGET CORPORATION, Defendants.	Civil Action No. 2:11-cv-512-RAJ

DECLARATION OF DEFENDANTS' EXPERT
KEITH R. UGONE, PH.D.
CONCERNING POST-JUDGMENT ROYALTIES

CONFIDENTIAL -- OUTSIDE COUNSEL ONLY

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I, Keith R. Ugone, Ph.D., declare as follows.[1]

I. Background

1. My name is Keith R. Ugone, Ph.D. I have been retained by Defendants AOL, Inc., Google Inc., IAC Search & Media, Inc., Target Corp., and Gannett Co., Inc. (collectively "Defendants") to give my expert opinion concerning post-judgment royalties.

2. I submitted an expert report and testified at trial in this matter on behalf of Defendants. I described my qualifications during my trial testimony[2] and in my expert report ("Ugone Report"). To avoid repetition, I incorporate that Report by reference and attach it as **Exhibit 1**. That Report also can be found at D.N. 468-4.

3. I have been asked to provide my opinion and certain calculations with respect to a post-judgment (or "on-going") royalty. I also have been asked to review the Declaration of Stephen L. Becker, Ph.D. Regarding Ongoing Royalties dated December 18, 2012 ("Becker Declaration") and the Report of Stephen L. Becker, Ph.D. Regarding Ongoing Royalties dated September 25, 2013 ("Becker Ongoing Royalties Report").[3] In this Declaration, I provide my analysis of the relevant economic evidence in this matter and my professional opinions on the issue of a post-judgment royalty in this case.

4. I understand that the jury found claims 10, 14, 15, 25, 27, and 28 of United States Patent No. 6,314,420 and claims 1, 5, 6, 21, 22, 26, 28, and 38 of United States Patent No. 6,775,664 infringed and not invalid.[4] I further understand that the jury found that the

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[1] Except for the introductory and concluding sentences of this declaration and a sentence in paragraph 2 of this declaration stating where my report can be located, this document is identical to the Report of Keith R. Ugone Concerning Post-Judgment Royalties dated October 15, 2013.

[2] Trial Tr., pp. 54-58.

[3] D.N. 824. (*See* **Exhibit 2** is a listing of the additional facts, data, and information received.)

[4] D.N. 789.

hypothetical negotiation in 2004 at issue for purposes of past damages would have resulted in a 3.5% running royalty.[5] The jury awarded total damages of $30,496,155, attributed as follows: Google - $15,800,000; AOL - $7,943,000; IAC - $6,650,000; Target - $98,833; and Gannett - $4,322.[6]

5. On August 13, 2013, the Court issued a Memorandum Opinion and Order.[7] The Court found that I/P Engine is "entitled to an ongoing royalty to compensate it for Defendant's continued infringement."[8] The Court also ordered that it would "apply the 20.9% royalty base introduced at trial to determine the proper ongoing royalty."[9] I understand that the Court has ruled on that issue and, for purposes of this declaration, I assume that the hypothetical negotiation for an ongoing royalty would include a running royalty with an apportionment percentage of 20.9%.[10]

II. Date and Parties of the Hypothetical Post-Judgment Royalty Negotiation

6. The opinions presented in my prior report in this case provide a thorough analysis of a hypothetical negotiation between Lycos and Google in or around March 2004. This declaration provides my opinion of the result of a hypothetical negotiation between I/P Engine and Google for a license to the patents-in-suit on November 20, 2012, the date of the entry of

[5] D.N. 789, p. 11. As explained more fully below, if a 20.9% royalty base apportionment is used, the damages amounts awarded by the jury reflect a much lower effective royalty rate.

[6] D.N. 789, p. 11.

[7] D.N. 963.

[8] D.N. 963, p. 6.

[9] D.N. 963, p. 6

[10] Pursuant to the Court's Order, I have assumed a 20.9% apportionment and a running royalty for purposes of this report. However, for the reasons stated in my prior declarations, the use of a 20.9% apportionment percentage leads to certain inconsistencies relating to the jury's verdict and damages award. (D.N. 806, pp. 4-5; D.N. pp. 1, 14, 16 & 21-23.) Further, comparable Google and I/P Engine license agreements do not contain unrestricted running royalty payment structures.

judgment.[11] Therefore, for the purpose of determining a post-judgment royalty in this matter, I have assumed a hypothetical negotiation in November 2012 between I/P Engine (i.e., the owner of the patents-in-suit at this time) and Google. Thus, more than eight years separates the pre-trial hypothetical negotiation in my prior report and the hypothetical negotiation at issue in the determination of a post-judgment on-going royalty.

III. Changed Circumstances Between 2004 and 2012

7. Although much of the discussion of the 2004 hypothetical negotiation in my previous report would not be affected, events associated with the change in the date of the hypothetical negotiation would affect some significant aspects of the analysis. A summary of the relatively more important changed circumstances is provided below.

7.1 The change in the hypothetical negotiation date alters the parties to that negotiation. The patents-in-suit were owned by I/P Engine, rather than Lycos, in 2012.

7.2 The change in the hypothetical negotiation date affects the relative weights assigned to the real-world license agreements in the record.

a. Dr. Becker based his 3.5% running royalty rate opinion at trial upon several license agreements for a group of patents owned by Overture[12] that were executed during 2005.[13]

b. The change in the hypothetical negotiation date renders other agreements <u>more</u> probative to the outcome of the negotiation. As described in my report, Google purchased several patents from Carl Meyer in 2008. As also described in my report, Lycos received offers to purchase the patents-in-suit in 2008-2009 and 2011, and eventually sold the patents to I/P Engine in 2011 for $3.2 million.[14]

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[11] D.N. 823, p. 7 n.3.

[12] Trial Tr., pp. 784-785.

[13] D.N. 824, p. 5.

[14] Trial Tr., pp. 1582-1583; **Exhibit 1** (Ugone Report), pp. 40-45; Declaration of Margaret P. Kammerud in Support of Defendants' Opposition to Plaintiff's Motion for Post-Judgment Royalties ("Kammerud Decl."), Ex. 1.

c. However, if the Overture licenses are deemed to be probative to the outcome of the November 2012 hypothetical negotiation, greater weight would be placed upon a license between Overture and Google than the licenses between Overture and other parties.

7.3 The change in the hypothetical negotiation date would mean that the parties to the 2012 negotiation would be aware of the jury's findings on past damages.

7.4 I have been informed, as described more fully below, that by the time of the jury verdict, [redacted]

a. Assuming that the changes Google implemented render Google's system to be non-infringing, Google's development of alternative designs to the patents-in-suit would be another changed circumstance at the November 2012 hypothetical negotiation that needs to be considered in the determination of an ongoing royalty.

b. Assuming that the changes Google implemented render Google's system to be non-infringing, Google's implementation of these changes could have been accelerated if Google were faced with a significantly high claimed royalty rate. Under such circumstances, Google could have implemented the necessary changes within two weeks to one and a half months of the November 2012 hypothetical negotiation date.

8. One aspect of the hypothetical negotiation that would not change is the assumption that the patents are valid and infringed. I understand that I/P Engine has argued that the jury's finding of validity and infringement would strengthen I/P Engine's negotiating position in 2012 relative to Lycos' in 2004. However, as stated in my previous report and Dr. Becker's report, and as testified to by Dr. Becker and myself, the parties to the 2004 hypothetical negotiation would have conclusively assumed that the patents are valid and infringed.[15] The jury's verdict simply would confirm these assumptions. Confirming what was already assumed does not alter the analysis or the weight placed upon that consideration.[16]

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[15] Trial Tr., pp. 785-86, 1570-71.

[16] I understand several courts have held that the jury's finding of validity and infringement is not a change in the circumstances at the post-judgment negotiation. *Univ. of Pittsburgh v. Varian*

IV. Outcome of a Hypothetical Negotiation Between Google and I/P Engine in 2012

9. The outcome of a November 2012 hypothetical negotiation between Google and I/P Engine can be evaluated in terms of the non-exclusive list of factors in *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970). I consider each of the relevant factors in the context of a November 2012 hypothetical negotiation below.

A. *Georgia Pacific* Factor 1: The royalties received by the patentee for the licensing of the patent in suit.

10. Prior to the sale to I/P Engine, Lycos had licensed the patents-in-suit. Lycos entered into settlement license agreements relating to the patent family that included the patents-in-suit (a) [redacted][17] (b) [redacted][18] and (c) [redacted][19] I also understand that

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Med. Sys., Inc., No. 08cv1307, 2012 WL 1436569, at *11-12 (W.D. Pa. Apr. 25, 2012) ("The jury was instructed to assume, for purposes of the damages portion of the trial, that the '554 patent was valid and was being infringed . . . . Thus, because the jury found, in the third portion of the trial, that the claims of the '554 patent at issue in the damages portion of the trial are, in fact, valid, there is no change in the circumstances from the jury's award of a reasonable royalty."); *Mondis Tech*. *Ltd. v. Chimei Innolux Corp*., 822 F. Supp. 2d 639, 648 (E.D. Tex. 2011) ("Furthermore, when the jury determined damages based on a hypothetical negotiation in 2005, it also assumed that validity and infringement for those claims it found to be valid and infringed. Therefore, InnoLux's status as an adjudicated infringer (aside from potentially willfulness) has not changed the parties' bargaining position with respect to the 2005 hypothetical negotiation as compared to the post-judgment negotiation."); *Presidio Components Inc. v. Am. Tech. Ceramics Corp*., No. 08-cv-335, 2010 WL 3070370, at *4 (S.D. Cal. Aug. 5, 2010), *vacated in part on other grounds*, 702 F.3d 1351; *Cummins–Allison Corp. v. SBM Co.*, 584 F. Supp. 2d 916, 918 (E.D. Tex. 2008) ("[A] jury finding of infringement and no invalidity does not change any logically consistent analysis; rather, it merely confirms the original assumption of those facts."); *Ariba, Inc. v. Emptoris, Inc.*, 567 F. Supp. 2d 914, 918 (E.D. Tex. 2008) ("[I]t is logically inconsistent to argue that a calculation based upon assumptions of infringement and validity would change when those assumptions are replaced by jury findings of the same facts.").

[17] Kammerud Decl., Ex. 2.

[18] Kammerud Decl., Ex. 3.

[19] Kammerud Decl., Ex. 4..

I/P Engine (a) granted a partial license to AOL for a lump-sum of $100,000 in 2012[20] and (b) a license to Microsoft in 2013 for $1 million, six of Microsoft's patents, and 5% of any amounts Google pays for use of the patents-in-suit. Microsoft's "total liability" under the agreement is subject to a cap that would be triggered if "the amounts received from Google substantially exceed the judgment previously awarded."[21] I/P Engine's license agreement with Microsoft indicates that I/P Engine is willing to accept a royalty payment structure with a cap.

11. Also, by way of background, Lycos (with the patents-in-suit) was at one time owned by Terra, a Spanish Internet company. Terra sold Lycos (including the patents-in-suit) to Daum Communications in 2004.[22] Daum acquired Lycos in a 100 percent stock transfer for $95 million.[23] Mr. Blais testified that Daum acquired all of Lycos' "properties and Websites, products and services," except for Lycos Europe which remained with Terra.[24] Lycos retained ownership of its patents and intellectual property.[25] Thus, Daum paid $95 million for what was essentially the entire Lycos company and its assets (including intellectual property). Making a relative value observation, the acquisition of an entire company and its goodwill and assets (including its intellectual property) is more valuable than a non-exclusive license to two of that same company's patents.

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[20] Kammerud Decl., Ex. 5.

[21] D.N. 954. According to Vringo's Form 8-K, "the parties also agreed to a limitation on Microsoft's total liability, which would not impact the Company unless the amounts received from Google substantially exceed the judgment previously awarded."

[22] Blais Deposition, p. 30.

[23] Blais Deposition, p. 117.

[24] Blais Deposition, pp. 117-18.

[25] Blais Deposition, pp. 117-18.

12. At the end of 2008, Lycos began receiving offers to purchase its entire patent portfolio.[26] By 2011, the offers were no longer for the entire portfolio, but rather for one specific patent family that included the patents-in-suit. These offers evolved into a bidding process, which led to Lycos' sale of this patent family to Smart Search Labs (i.e., the predecessor to I/P Engine) in 2011 for a lump-sum payment of $3.2 million.[27] During that bidding process Altitude Capital Partners offered $3 million for the patent family, including the patents-in-suit.[28] Altitude Capital Partners previously offered $4 million for Lycos' entire patent portfolio.[29] Mr. Stayko Staykov also negotiated for the purchase of the patent family, including the patents-in-suit. His final offer was $2.5 million.[30]

13. The $3.2 million lump-sum payment that resulted from the bidding process among Altitude Capital Partners, Mr. Staykov, and Hudson Bay Capital (on behalf of Smart Search Labs) provides a value indicator of the patent portfolio that included the patents-in-suit close to the time of the November 2012 hypothetical negotiation.[31] The $3.2 million figure was determined by sophisticated participants through a competitive bidding process. It therefore is a highly relevant indicator of value of the patents-in-suit. Further, the sale of the patents occurred well after it was publicly known that Google implemented the accused AdWords system.[32] Given that the $3.2 million lump-sum payment was for the sale of a patent family (which would

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[26] **Exhibit 1** (Ugone Report), pp. 40-41; Kammerud Decl., Ex. 23, pp. 30 & 122-40.

[27] Trial Tr., pp. 1582-1583; **Exhibit 1** (Ugone Report), pp. 42-45; DX-019.

[28] **Exhibit 1** (Ugone Report), p. 42; Kammerud Decl., Ex. 23, pp. 135 & 140.

[29] **Exhibit 1** (Ugone Report), p. 41; Kammerud Decl., Ex. 6.

[30] **Exhibit 1** (Ugone Report), p. 43; Kammerud Decl., Ex. 23, p. 135.

[31] **Exhibit 1** (Ugone Report), pp. 43-45; Kammerud Decl., Exs. 7, 8, 9.

[32] D.N. 800, pp. 8-9.

confer greater value in comparison to a license to the two patents at issue), this amount likely overstates the value of a license to the patents-in-suit.

14. Relative to a 2004 hypothetical negotiation, more emphasis would be placed upon I/P Engine's purchase of the patents-in-suit from Lycos – which occurred closer to the time of the 2012 hypothetical negotiation and would be aligned more closely with current underlying economic and technological conditions.

15. In addition, I/P Engine's license to Microsoft is an indicator of value relating to the patents-in-suit. Microsoft received a license to the patents-in-suit in exchange for six patents, $1 million, and a payment equal to 5% of any amounts Google pays for use of the patents-in-suit (subject to a cap).[33] This license agreement was (a) entered into after, but very close to, the November 2012 hypothetical negotiation date, (b) after a jury had found the patents not invalid, and (c) was with Google's largest competitor in the search advertising market.

16. Also, in 2012, a jury found that the 2004 hypothetical negotiation between the parties would have resulted in payments totaling $30,496,155, attributed as follows: Google - $15,800,000; AOL - $7,943,000; IAC - $6,650,000; Target - $98,833; and Gannett - $4,322.[34] As described below, the parties to the hypothetical negotiation could calculate that, using the court-ordered 20.9% apportionment rate, the jury utilized an effective royalty rate of 0.5%. I explain the derivation of the 0.5% effective royalty rate immediately below.

17. I understand that during closing arguments at trial, I/P Engine displayed a demonstrative exhibit (i.e., PDX-441) for the allowable damages period (i.e., a damages period beginning September 15, 2011) which showed a claimed damages amount of approximately

[33] D.N. 954.

[34] D.N. 789, p. 11.

$118 million.[35] The claimed damages amount of $118 million was based upon a 3.5% royalty rate and a 20.9% royalty base apportionment. I/P Engine asked the jury to use the demonstrative exhibit PDX-441 to determine "what's a reasonable royalty for Google to pay."[36] However, Dr. Becker previously had testified that the claimed damages figures in this demonstrative exhibit were based upon all revenues that Google and the non-Google Defendants received.[37] Hence, I/P Engine's instruction to the jury would yield double counting of claimed damages. Should the Court determine that there was a double counting of damages (i.e., the damages the jury awarded against Google included damages owed by the non-Google Defendants), and if such double counting were removed, the jury award of $15.8 million against Google translates to an effective royalty rate of 0.5%. The 0.5% effective royalty rate is derived as follows. (**Exhibit 3.**)

> 17.1 Using I/P Engine's claimed damages figure of $118 million and a claimed royalty rate of 3.5%, the apportioned royalty base used to derive the $118 million is [redacted]
>
> 17.2 Using a royalty base apportioned at 20.9% (i.e., [redacted]), the jury award of $15.8 million yields an effective royalty rate of 0.5% [redacted].

18. Should the Court determine that there is no double counting of damages, the jury award of $30.5 million against all Defendants combined translates to an effective royalty rate of 0.9%. [redacted] (which was derived based upon PDX-441 and an apportionment percentage of 20.9%).

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[35] Trial Tr. 2005:13-2008:24; D.N. 807 at ¶ 2 & Ex. B (PDX-441).

[36] Trial Tr. 2008:19-2008:24.

[37] Trial Tr. 848:14-849:6.

B. *Georgia-Pacific* Factor Two: Royalties paid by Google for the use of other comparable patents

19. On December 18, 2008, Google executed a patent purchase agreement with Carl Meyer in which Google acquired three U.S. patents and two U.S. patent applications for a lump-sum payment of $3.55 million.[38] Mr. Maccoun testified that the acquired technology relates to determining "which advertisements are most effective when used on the internet."[39] Dr. Unger testified that the technology in these patents was comparable to the technology covered by the patents-in-suit because the Carl Meyer patents described a system "for placing ads across multiple different locations and sites and . . . track[ing] the click-through rate . . . and it filters out and say's [sic] don't show ads that have low click-through rates."[40]

20. Google's $3.55 million lump-sum payment to Carl Meyer is an indicator of Google's willingness to pay for a license to the patents-in-suit close to the time of the November 2012 hypothetical negotiation. In addition, the Carl Meyer agreement is for a patent purchase, as opposed to a patent license. A patent purchase provides more rights than a non-exclusive license. Therefore, the Google / Carl Meyer agreement (and the payment contained within the agreement) is a conservative indicator of the outcome of the 2012 hypothetical negotiation.

21. Compared to a 2004 hypothetical negotiation, relatively more emphasis would be placed upon the Carl Meyer agreement – which occurred closer to the time of the 2012 hypothetical negotiation.

22. In addition, while I have opined here and elsewhere in my report that patent-related agreements with comparable technologies to the patents-in-suit executed closer to the

[38] Trial Tr., pp. 1567, 1595-1596; DX-090.

[39] **Exhibit 1** (Ugone Report), p. 77; D.N. 652 (Maccoun Dep.) at 63.

[40] Trial Tr., pp. 1274-1277.

date of the November 2012 hypothetical negotiation should carry more weight, if it is deemed that agreements closer to the date of 2004 hypothetical negotiation are still relevant, the agreement that Google executed with Disney, Infoseek, and Starwave in November 2004 would serve as an additional indicator of value for a license to the patents-in-suit. It is my understanding that Dr. Unger has opined that the technology contained within the patents purchased and licensed from Disney is comparable to the technology covered by the patents-in-suit. [redacted] Google made a lump-sum payment of $5 million for both the patent purchase and patent license.[41] Similar to the Google / Carl Meyer agreement, this agreement involves a patent purchase, which confers more rights (and value) than a non-exclusive patent license. Additionally, this agreement involves a larger number of licensed and purchased patents, whereas the November 2012 hypothetical negotiation would have involved a non-exclusive license to just two patents. To the extent the parties at the 2012 hypothetical negotiation would have looked to the agreements executed closer to the date of the 2004 hypothetical negotiation, more weight would be placed upon the Google / Disney agreement than the Overture agreements (which have significant differences from the hypothetical license to the patents-in-suit for the reasons discussed later in my report).

23. In addition to the Google / Carl Meyer agreement and the Google / Disney agreement, I understand Dr. Unger has opined that the technology contained within the patents in two agreements that Google executed with [redacted] is comparable to the technology

[41] **Exhibit 1** (Ugone Report), pp. 75-76.

covered by the patents-in-suit. These financial parameters of the two agreements are discussed below.

23.1 [redacted]

23.2 [redacted]

These two agreements provide additional guidance as to the outcome of the 2012 hypothetical negotiation.

C. *Georgia-Pacific* Factor Three: The nature and scope of the license

24. I/P Engine and Google would have negotiated a freedom-to-operate and non-exclusive U.S. license to the patents-in-suit. I am not aware of any technical information or knowhow that I/P Engine would provide with the license agreement. In addition, as with the original March 2004 hypothetical negotiation, significant ongoing contributions by Google would be required to maintain the Accused Products (including hardware infrastructure and software programming).[44] Also, a license to the patents-in-suit would not provide Google with the specific method of computing the predicted Click Through Rates ("pCTRs") that allegedly are used in the Accused Functionality.[45]

[42] **Exhibit 1** (Ugone Report), p. 77.

[43] **Exhibit 1** (Ugone Report), pp. 76-77.

[44] Trial Tr., pp. 1048-49 (discussing how Google makes "about two dozen or so very significant changes to AdWords" each quarter and constantly works to improve the system), 1050-51 (discussing work on serving systems, computers, and data centers necessary to return ads quickly), 1091-1101 (discussing generally the infrastructure involved with AdWords), 1117 (discussing changes to SmartAds models); **Exhibit 1** (Ugone Report), pp. 59-60, 64-65.

[45] Trial Tr., pp. 709-710.

25. The November 2012 license would give Google full use of the patents-in-suit, including making Google's technology available to its partners such as AOL, IAC, Gannett, and Target.[46]

26. Because the comparable agreements in the record (e.g., the sale of the patents by Lycos to I/P Engine and the Carl Meyer patent purchase agreement) involve the transfer of title, this suggests they are conservative indicators of the value of a non-exclusive license to the patents-in-suit.

D. *Georgia-Pacific* Factor Four: The licensor's established policy regarding licensing

27. I/P Engine's willingness to license its patents is evidenced by the fact that it recently has granted a license to Microsoft and a partial license to AOL.[47] I/P Engine does not have a policy of maintaining exclusive use of (or not licensing) the patents-in-suit. In addition, I/P Engine was formed for the purpose of licensing the patents-in-suit. Further, I/P Engine would benefit significantly from licensing its patents to Google given Google's strong brand name and commercial success. Consequently, I/P Engine would have a strong incentive to execute a license with Google and to encourage Google to use the patented technology.

E. *Georgia-Pacific* Factor Five: The commercial relationship between I/P Engine and Google

28. I/P Engine and Google did not have a commercial relationship. I/P Engine and Google also were not competitors because I/P Engine did not practice the patents-in-suit or commercialize a product embodying the teachings of the patents-in-suit, *inter alia*. Therefore, given that I/P Engine and Google were not competitors and that I/P Engine did not practice the

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[46] Trial Tr., pp. 850, 1621.

[47] Kammerud Decl., Ex. 5; D.N. 954.

patents-in-suit, the only economic benefit I/P Engine could gain from the patents-in-suit would be from licensing.

29. I/P Engine would recognize the advantages of licensing the patents-in-suit to a company like Google. I/P Engine would realize that it would be able to earn licensing revenues driven by Google's strong brand name and commercial success (but tempered by Google's contributions to the successful implementation of the accused functionalities).

F. *Georgia-Pacific* Factor Six: The extent of derivative or convoyed sales

30. I/P Engine agrees that there are no derivative or convoyed sales associated with the patents-in-suit.[48] Google, therefore, was not at risk of losing sales of non-patented products or services should it not obtain a license to the patents-in-suit. Also, I/P Engine would not be able to negotiate a higher royalty payment based upon this licensing consideration.

G. *Georgia-Pacific* Factor Seven: The duration of the patent and the term of the license

31. I understand that on May 11, 2013, Google completed changes to the accused systems [redacted][49] I further understand that Google had already begun implementing these changes before the jury reached a verdict and before entry of final judgment.[50]

31.1 If Google's new system is found not to infringe the patents-in-suit, at the November 2012 hypothetical negotiation, I/P Engine and Google would have

[48] Kammerud Decl., Ex. 24, PDX071; Tr. 795.

[49] Furrow Declaration; Furrow Deposition pp. 130-31.

[50] Trial Tr., p. 1069 ("We are working on changes to our system now whereby we will no longer need to limit the number of ads that we look at for these purposes."); Furrow Deposition, p. 122 ("So whole-page auction is a broad -- is a broader effort that's been going on, I think it's been discussed since 2011, possibly earlier, to -- with the goal of changing how we select which ads are shown on -- in AdWords."); Furrow Deposition, p. 128 [redacted].

negotiated a license with a duration of approximately six months (i.e., until May 11, 2013).

31.2 If Google's new system is found to infringe the patents-in-suit, the hypothetical negotiation in November 2012 would have been for a license that would last less than four years (i.e., until the expiration of the patents-in-suit on April 4, 2016[51] or until another design around option could be implemented).

32. In contrast, the patents-in-suit had approximately five years left when I/P Engine purchased them in 2011. I also understand that the Carl Meyer patents had more than ten years left before expiration when Google purchased them.[52] This suggests that these agreements are a conservative indicator of the outcome of the November 2012 hypothetical negotiation, because they included rights for patents with longer remaining periods until expiration.

H. *Georgia-Pacific* Factors Eight (The established profitability of the patented product and its commercial success); Nine (The utility and advantages of the patented product over other modes or devices); Ten (The nature of the patented invention and the benefits to those who have used it); Eleven (The extent and value of Google's use of the invention); and Thirteen (The portion of the realizable profit credited to the invention as distinguished from non-patented elements)

33. Factors eight through eleven and thirteen are directed to measuring the value of the patents-in-suit in relation to the prior art and the benefits the licensee would gain from a license. They can be appropriately considered together in this context.

34. As discussed extensively in my expert report in this case, the commercial success of the Accused Products is attributable significantly to Google's contributions rather than to the claimed teachings of the patents-in-suit. This observation continues to be true as of the November 2012 hypothetical negotiation.

35. Google had achieved significant commercial success prior to the first alleged infringement (and prior to the first hypothetical negotiation in March 2004).

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[51] D.N. 823, p. 1.

[52] DX-90.

35.1 Google had established a large user base and network of advertisers and partnership sites that would drive Google's accused advertising revenues independent of the patents-in-suit.

35.2 At the March 2004 hypothetical negotiation, Lycos and Google would have acknowledged that Google would continuously introduce new and improved products, services, features, and functionalities unrelated to the patents-in-suit to maintain and enhance its installed base of users and advertisers.

35.3 Google had built an extremely successful search engine prior to any alleged infringement.

35.4 Google's Accused Products offer features and benefits that drive demand and contribute to their success independent of the claimed teachings of the patents-in-suit. These features and benefits include keyword-based search advertising, account management features, additional services for large advertisers, an effective return on investment, and an extremely fast display of advertisements (which has been achieved through Google's extensive infrastructure investment).

35.5 As early as 2002, when most online businesses were advertising in traditional ways, Google implemented an auction-based system for selling advertisements. Google's auction system drives the accused advertising revenues independent of the claimed teachings of the Patents-in-Suit. Google's shift in 2002 from a pay-per-impression system to a pay-per-click system, combined with its use of an auction system that incorporated both bid amount and predicted click-through rate in the ranking of ads, was a significant improvement over prior search advertising systems.[53]

36. As with the original March 2004 hypothetical negotiation, at the time of the November 2012 hypothetical negotiation, I/P Engine's sole contribution to the commercialization of a product practicing the claims of the patents-in-suit would be a bare (or naked) patent licensing agreement. Significant contributions beyond a bare license were required by Google to implement the Accused Functionality. A post-November 2012 license would not provide Google with any of the practical requirements for implementing the Accused Functionality, including necessary hardware infrastructure or software programming. The

[53] Trial Tr., pp. 710-11 (discussing the auction system, as well as ranking and pricing of advertisements, all of which was not accused of infringement), 1091-1101 (discussing generally the infrastructure involved with AdWords), 1117 (discussing changes to SmartAds models); **Exhibit 1** (Ugone Report), pp. 59-65.

parties would have understood that the claimed teachings of the patents (in isolation) were not sufficient to obtain commercial success.

36.1 For example, I understand that one component of the Accused Functionality was the calculation of a predicted clickthrough rate (pCTR).[54]

36.2 It is my understanding that Smart Ads' *specific computation* of pCTRs (in isolation) was not accused of infringing the patents-in-suit.[55]

36.3 I/P Engine's technical expert, Dr. Frieder, testified at his deposition that "[t]he way Google makes its predicted clickthrough rate is it is developed by Google . . . . Google came up with how it does predicted click-through rate . . . ."[56]

36.4 It is my understanding that pCTRs played a broader role in the Accused Products beyond merely promoting and disabling advertisements.[57]

37. The limited contribution of the patents-in-suit to the success of the Accused Products is demonstrated by the different levels of success associated with the different products that I/P Engine has accused. For example, in addition to Google's search advertising systems, AOL's "Advertising.com Sponsored Listings" was accused of infringing the Patents-in-Suit. However, there is a significant variation in the levels of success of different search advertising systems alleged to employ the same patented technology (i.e., Google's systems vs. AOL's). Thus, the success of Google's search advertising systems is driven by Google-specific contributions. This consideration would be even more evident as of the November 2012 hypothetical negotiation relative to the March 2004 hypothetical negotiation, because by that time, Google would have implemented significantly more improvements and changes to its own system.

[54] Trial Tr., pp. 463-64.

[55] Trial Tr., pp. 709-710.

[56] Trial Tr., p. 710.

[57] Trial Tr., pp. 709-711, 1616.

38. Based upon discussions with Google engineer Bartholomew Furrow, a review of the transcript of his September 2013 deposition, and his previously filed declaration,[58] it is my understanding that by the time of the November 2012 hypothetical negotiation, Google had begun implementing changes to the Accused Products. I understand that one basis for I/P Engine's infringement theory at trial was the use of QBB disabling, which I/P Engine alleged practiced the "filter" and "filtering" related claim limitations.[59] Mr. Furrow testified [redacted].[61]

38.1 [redacted]

38.2 [redacted]

39. I further understand from Mr. Furrow that (a) these changes were technically feasible and relatively easy to implement in the normal course of business (including in the normal course of software updating and maintenance) and that Google has in fact implemented them and (b) these changes are acceptable to Defendants, their advertisers, and their users and

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[58] I understand that Mr. Furrow currently is the technical lead on the ads click quality team. (Furrow Deposition, pp. 7-8.)

[59] Trial Tr. pp. 556 & 1015-16.

[60] Furrow Deposition, p. 65.

[61] Furrow Deposition, p. 129.

[62] Furrow Declaration; Furrow Deposition 112 & 208

[63] Furrow Deposition, pp. 14-15 ("In the current system, that step no longer exists.").

[64] Furrow Declaration; Furrow Deposition, pp. 130-31; Frieder Report ¶ 7.

they have had a positive impact on advertisement quality. I have further been informed by Mr. Furrow that these changes have not had any discernible negative impact on revenues or the performance of the AdWords system.[65] Mr. Furrow testified at his deposition that Google has found the changes to the Accused Products "to be a net win,"[66] that they "were all changes that [Google] wanted to make in any case,"[67] and that [redacted]

40. In addition, according to Mr. Furrow, operational costs as a result of the roll-out that included the [redacted] are expected to increase by less than $10 million per year.[69] However, these cost increases are primarily attributable to other previously-planned improvements to the auction implemented around the same time as the [redacted]. Google does not expect there to be incremental operations costs that are specifically attributable to the [redacted][70] Mr. Furrow testified that his $10 million figure was an "outrageously high" estimate and that the actual cost will "be less than that number."[71]

41. I understand that I/P Engine alleges that Google's new, redesigned system that is presently in place infringes the patents-in-suit. (It also is my understanding that Google [redacted]

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[65] Furrow Declaration; Furrow Deposition, pp. 129-30 ("We expect to make very significant gains from the [redacted]."); Furrow Deposition, pp. 133-34 ("I believe that the removal did not have an impact on quality metrics.").

[66] Furrow Deposition, p. 65.

[67] Furrow Deposition, p. 109.

[68] Furrow Deposition, p. 122.

[69] Furrow Deposition, pp. 131-32; Furrow Declaration,

[70] Furrow Declaration; Furrow Deposition, pp. 131-33

[71] Furrow Deposition, p. 132

Engine contended practiced the "filtering" limitations of the patents-in-suit.[72]) Dr. Frieder testified at trial that the purpose of this disabling was to limit the number of advertisements that were eligible for the auction that determined which advertisements were displayed to the user.[73] I/P Engine argued to the jury that, without this pre-auction filtering, Google would have had too many potential advertisements to quickly and efficiently conduct the auction.[74] I/P Engine's counsel asked Google officers to confirm that its invention was important because "you have to take [the excess ads] away because the computers that Google has are not able to actually analyze all of those ads in the context of a particular query" and "because of latency and overall overhead constraints, you couldn't take all the eligible or candidate ads for an auction and bring them into the mixer points."[75] Dr. Frieder therefore states that his present analysis "focused on the functionality, [redacted] QBB disabling, Mixer disabling and Promotion steps the jury found to infringe the claimed 'filtering' limitation."[76]

41.1 In his new report, I understand that Dr. Frieder alleges that Google's new system performs the claimed "filtering" step [redacted].[77]

41.2 Dr. Frieder does not contend that the new system [redacted].[78]

41.3 Dr. Frieder opines that the new system performs this step "[redacted]."[79]

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[72] Frieder Report ¶7; Furrow Declaration; Furrow Deposition, pp. 112, 130-31 & 208.;

[73] Trial Tr., pp. 439, 494-95, 693, 697-98 & 728-29.

[74] Trial Tr., pp. 1994-96.

[75] Trial Tr., p. 1068

[76] Frieder Report ¶6.

[77] Frieder Report ¶ 13 ("[redacted].").

[78] Frieder Report ¶ 14 ("Except for the timing of the step relative to the auction, LTV is used in New AdWords in exactly the same way as in Old AdWords, namely, as a "standard" to protect against showing poor quality ads.").

41.4 Dr. Frieder does not contend that the purpose of this "filtering" in the new system is to limit the number of advertisements eligible for the auction.

42. *Georgia-Pacific* factors eight through eleven and thirteen provide the following implications for the November 2012 hypothetical negotiation.

42.1 Given the continuous improvements and updates Google implemented between 2004 and 2012, the relative contributory value of the patents-in-suit to Google's systems would diminish over time. Hence, *Georgia-Pacific* factors eight through eleven and thirteen would place downward pressure on the reasonable royalty payment.

42.2 If Google's new system is found to no longer infringe the patents-in-suit, the availability of a non-infringing design around at the time of the hypothetical negotiation would weigh in favor of a lower royalty payment. Implementation of Google's new system would result in the end of any running royalty obligation as of May 13, 2013, the date that Google completed its implementation.

I. *Georgia-Pacific* Factor Twelve: The portion of the profit of the invention that may be customary to allow for the use of the invention or analogous inventions

43. There is no customary royalty payment associated with the claimed teachings of the patents-in-suit.

44. I understand that I/P Engine contends that certain licenses executed between Overture and three non-parties tend to show a customary licensing rate. This assertion is flawed for several reasons (based upon my discussions with Dr. Ungar and the reasons set forth in my prior report[80]).

44.1 First, the Overture licenses were executed in 2005, seven years before the November 2012 hypothetical negotiation.[81]

44.2 Second, the Overture licenses did not include the patents-in-suit, unlike other more probative transactions involving the patents-in-suit (e.g., Lycos' sale of the patent family including the patents-in-suit to Smart Search Labs).

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79 Frieder Report ¶ 13.

80 **Exhibit 1** (Ugone Report), pp. 95-96.

81 D.N. 824, p. 5.

44.3 Third, I understand that the Overture patents are not technologically comparable to the patents-in-suit. I/P Engine's technical expert testified at trial that they were comparable only "in the general sense."[82] Both I/P Engine's and Defendants' technical expert testified about differences between the '361 patent and the patents-in-suit.[83]

44.4 Fourth, the Overture licenses provide rights to a portfolio of patents and applications in addition to the seminal '361 Patent.

44.5 Fifth, the Overture licensees were not similarly situated to Google.

44.6 Sixth, Overture was a leader in paid search when it executed the license agreements relied upon by Dr. Becker and was practicing its patents.

45. Therefore, the Overture licenses, which did not concern the patents-in-suit, did not involve either Google or I/P Engine, and occurred seven years prior to a November 2012 hypothetical negotiation, are not as probative to the outcome of the November 2012 hypothetical negotiation as (a) the actual sale price of the patents-in-suit and (b) the Carl Meyer agreement with Google.

46. To the extent that the Court determines that the Overture licenses are probative of the outcome of a November 2012 hypothetical negotiation between I/P Engine and Google, greater weight should be placed upon Overture's license with Google than Overture's licenses with other companies (e.g., Marchex, eXact, and Interchange). Overture's agreement with Google is discussed below.

46.1 On August 9, 2004, Yahoo! (which acquired Overture)[84] and Google entered into a settlement agreement, whereby Google issued 2.7 million shares of its common stock to Yahoo! to resolve two disputes between the parties: (a) a patent infringement lawsuit in which Overture asserted that Google's AdWords and AdSense infringed Overture's '361 Patent and (b) a warrant dispute concerning a warrant held by Yahoo! to purchase 3.72 million shares of Google's stock in connection with a June 2000 services agreement. Concurrently with the settlement agreement, Yahoo! and Google executed a license agreement in which

[82] Trial Tr., p. 630.

[83] Trial Tr., pp. 716-17, 1277-78.

[84] Yahoo! acquired Overture in October 2003. (**Exhibit 1** (Ugone Report), p. 92.)

Yahoo! granted Google a non-exclusive license to Overture's '361 Patent portfolio.[85]

46.2 The settlement agreement between Yahoo!/Overture and Google included an excerpt from Google's SEC filings which stated that (a) Google preliminarily estimated the non-cash charge associated with this settlement would be between $260 million and $290 million based upon Google's proposed initial public offering ("IPO") price range and (b) Google would "engage a third party valuation consultant to assist management in the allocation of the settlement amount" between the license and the warrant grant.[86]

46.3 According to Google's 2004 Form 10-K, Google valued the total consideration under the settlement agreement with Yahoo!/Overture at $229.5 million based upon Google's actual IPO price.[87] Also according to Google's 2004 Form 10-K, Google had "engaged a third party valuation consultant to assist management in the allocation of the value of the settlement consideration" and determined that the value of the total consideration attributable to the licensed Overture patents was $28.5 million.[88]

47. To the extent that the Court determines that the Overture licenses are probative of the outcome of a November 2012 hypothetical negotiation, Overture's license with Google provides guidance that the aggregate royalty payment that I/P Engine and Google would have agreed upon would be subject to a royalty cap of $28.5 million. A licensing structure with a royalty cap is consistent with the license that I/P Engine executed with Microsoft (i.e., Google's

[85] Confidential Settlement Agreement and Release between Yahoo! Inc./Overture Services, Inc. and Google Inc. dated August 9, 2004 (G-IPE-0220601 – 637 at 601 – 603 and 619 – 620) and Google 2004 10-K, p. 86.

[86] Google Inc., Amendment No. 5 to Form S-1 filed on August 9, 2004, pp. 60 – 61 and Confidential Settlement Agreement and Release between Yahoo! Inc./Overture Services, Inc. and Google Inc. dated August 9, 2004 (G-IPE-0220601 – 637 at 634).

[87] Google 2004 10-K, pp. 18 and 86. On August 18, 2004, Google conducted its IPO with a price per share of $85. The total settlement consideration (i.e., $229.5 million) was determined by multiplying the number of shares Google issued to Yahoo! (i.e., 2.7 million shares) by Google's IPO price (i.e., $85).

[88] Google 2004 10-K, p. 86. According to Schedule 1 of the agreement between Yahoo! and Google, Yahoo! allocated 1 million shares (out of 2.7 million shares) to the license agreement relating to the Overture patents. (G-IPE-0220601 – 637 at 630.) Subsequently, Google and its third-party valuation consultant placed a value of $28.5 million on the license agreement.

largest competitor in the search advertising market) close to the time of the November 2012 hypothetical negotiation.

J. Conclusion

48. The outcome of a November 2012 hypothetical negotiation would take into account the changes in the circumstances between a March 2004 hypothetical negotiation and a November 2012 hypothetical negotiation. These changes include the following.

> 48.1 Relatively more weight would be placed upon the comparable license agreements that occurred close to the time of the November 2012 hypothetical negotiation (e.g., Google's patent purchase agreement with Carl Meyer for $3.55 million in December 2008 and I/P Engine's purchase of the patent family including the patents-in-suit for $3.2 million in June 2011).
>
> 48.2 Relatively less weight (if any) would be placed upon the Overture license agreements which relate to seminal technologies that are significantly more valuable than the patents-in-suit and occurred over seven years prior to the November 2012 hypothetical negotiation. However, to the extent that the Court determines that the Overture licenses are probative of the outcome of a November 2012 hypothetical negotiation between I/P Engine and Google, greater weight should be placed upon Overture's license with Google than Overture's licenses with other companies. Under Overture's agreement with Google, a $28.5 million value was attributed to Overture's license of its patent portfolio to Google.
>
> 48.3 The damages the jury awarded against all Defendants totaled $30.5 million – only 26% of the damages claimed by I/P Engine at trial (i.e., approximately $118 million against all Defendants). Should the Court determine that there was a double counting of damages (i.e., the damages the jury awarded against Google includes damages owed by the non-Google Defendants), and if such double counting were removed, the jury award of $15.8 million against Google yields an effective royalty rate of 0.5% if a 20.9% royalty base apportionment percentage (as instructed by the Court)[89] is used.[90]

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[89] I have conducted my analyses using the Court's directive that an apportionment factor of 20.9% be used. However, if the Court were to revisit the issue of the apportionment factor, there are indications that an apportionment factor of 20.9% overstates the contribution of the Accused Functionality. These reasons are detailed in the Ugone Report and my declaration dated May 13, 2013 and include: (a) the apportionment factor was derived based upon a draft Google presentation dated June 2006 (i.e., over six years prior to the November 2012 hypothetical negotiation); (b) when Smart Ads was first implemented in 2004, it only resulted in a 7.8% increase in advertising revenue; (c) the initial experiment Google performed using Smart Ads

48.4 [redacted].

48.5 Operational costs as a result of the roll-out that [redacted] but these cost increases are primarily attributable to other previously-planned improvements to the auction implemented around the same time as [redacted].

1. Outcome If New AdWords Is Found Not To Infringe

49. Assuming that Google's alternative solution does not infringe the patents-in-suit, the availability of the alternative designs that Google had begun implementing at the time of the November 2012 hypothetical negotiation would place downward pressure on the aggregate to-be-negotiated on-going royalty payment. Also, the implementation of New AdWords would shorten the duration of the license that the parties would negotiate. Based upon input from Google, I have presented for the Court's consideration three scenarios: (a) assuming no acceleration of the implementation of New AdWords which Google already performed, (b) assuming that the [redacted] would have been accelerated, and (c) assuming that [redacted].

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resulted in a decrease in revenue from the prior system; and (d) the jury verdict against Google equates to a royalty base apportioned at 2.8% of revenue (based upon a 3.5% royalty rate).

[90] The parties to the 2012 hypothetical negotiation would place greater significance on the effective rate actually applied by the jury because that figure is derived from the actual award.

[91] Furrow Declaration; Furrow Deposition, pp. 111 & 208; Frieder Dec. ¶ 7.

[92] Furrow Declaration; Furrow Deposition 130-31.

a. Scenario 1a: No Acceleration Of Non-Infringing Alternative Implementation

50. Assuming no acceleration in the implementation of the existing New AdWords system, the outcome of the November 2012 hypothetical negotiation would be a running royalty rate of no more than 0.5%[93] to be applied to an apportioned royalty base of 20.9% (in accordance with Court's ruling) of accused advertising revenues from November 21, 2012 to May 11, 2013. This outcome takes into account the constraining influence of the alternative solution, the effective royalty rate applied by the jury (given an apportionment rate of 20.9%), and other considerations discussed above (including but not limited to I/P Engine's purchase of the patents-in-suit and Google's license with Carl Meyer which occurred close the time of the hypothetical negotiation).

b. Scenario 1b: Acceleration Of [redacted]

51. I have been informed that Google could have accelerated the implementation of the [redacted], launching the new system within one and a half months of the November 20, 2012 hypothetical negotiation. Generally, my understanding of this option is as follows.

51.1 Beginning in the fourth quarter of 2011 and to date, Google engineers have spent approximately [redacted] Beginning in the first quarter of 2012 and to date, Google engineers have spent approximately [redacted]

51.2 I have been informed that with a 25% increase in man hours devoted to the implementation of a [redacted] within one and a half months

[93] Should the Court determine that there was no double counting of damages in the jury damages award, the royalty rate would be no more than 0.9%.

[94] [redacted]

of November 20, 2012 (i.e., by January 4, 2013).[95] I have been informed that the per-hour cost for a Google engineer is [redacted]. Therefore, for a cost of approximately [redacted], Google could have accelerated the [redacted] and the transition to the [redacted] to January 4, 2013 (instead of May 11, 2013).

51.3 The launch of the [redacted] is associated with an increase in operational costs of no more than [redacted] per year. Under the conservative assumption that the entire incremental operational costs of $10 million per year is attributable to no longer using the Accused Functionality, these incremental costs amount to no more than <u>$3.5 million</u> over the January 4, 2013 to May 11, 2013 time period.

51.4 Therefore, assuming that Google could have accelerated the transition to the [redacted] by January 4, 2013, the November 2012 hypothetical negotiation would result in a payment totaling <u>no more than</u> the following: (a) a running royalty rate of no more than 0.5% to be applied to an apportioned royalty base of 20.9% of accused advertising revenues from November 21, 2012 to January 4, 2013 <u>and</u> (b) a one-time payment of $3.55 million. The one-time payment of $3.55 million is the sum of the costs of accelerating the implementation (i.e., $51,500) and the incremental operational costs (i.e., $3.5 million).[96]

c. Scenario 1c: Acceleration Of [redacted]

52. I have been informed that Google could have accelerated the [redacted], launching these changes within two weeks of the November 20, 2012 hypothetical negotiation (i.e., by December 4, 2012). Generally, my understanding of this options is as follows.

52.1 As previously mentioned, beginning in the first quarter of 2012 and to date, Google engineers have spent approximately [redacted].

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[95] I have been advised that Google could have [redacted] within two weeks of November 20, 2012 for no additional cost.

[96] This royalty payment figure is conservatively high in that the entire identified cost savings is allocated to the royalty payment rather than being divided (or shared) between I/P Engine and Google.

52.2 I have been informed that with a 25% increase in man hours devoted to the [redacted] Google could have removed these features within two weeks of November 20, 2012 (i.e., by December 4, 2013). Applying the per-hour cost of a Google engineer (i.e., [redacted]) to [redacted] results in an additional cost of [redacted] features by December 4, 2012.

52.3 Under the conservative assumption that the entire incremental operational costs of [redacted] per year is attributable to [redacted], these incremental costs amount to no more than [redacted] over the December 4, 2013 to May 11, 2013 time period.

52.4 Under this scenario, the November 2012 hypothetical negotiation would result in a payment totaling <u>no more than</u> the following: (a) a running royalty rate of no more than 0.5% to be applied to an apportioned royalty base of 20.9% of accused advertising revenues from November 21, 2012 to December 4, 2012 (i.e., the completion of the [redacted]) and (b) a one-time payment of [redacted] The one-time payment of [redacted]

d. Summary

53. Assuming that New AdWords does not infringe, there is a range of outcomes for the hypothetical negotiation. Specifically, I/P Engine and Google would have agreed to a running royalty rate of no more than 0.5% from November 21, 2012 to the completion of the [redacted], which is either May 11, 2013 or earlier (depending upon the acceleration scenario). Moreover, assuming that the implementation could have been accelerated, there would have been an additional one-time payment ranging from [redacted] (depending upon the acceleration scenario).

2. Outcome If New AdWords Is Found To Infringe

54. Assuming that Google's alternative solution continues to infringe the patents-in-suit, the value indicators of the patents-in-suit that occurred closer to the November 2012 hypothetical negotiation (including I/P Engine's purchase of the patents-in-suit, Google's license

[97] 25% x 400 hours = 100 hours.

with Carl Meyer, and the aggregate jury award in this matter) would be probative as to an ongoing royalty. For example, the parties would take into consideration the damages award of $15.8 million that the jury awarded I/P Engine for Google's infringement over the September 2011 – September 2012 time period (based upon a 2004 hypothetical negotiation). Using (a) a 20.9% royalty base apportionment percentage (as instructed by the Court) and (b) accused advertising revenues over the September 2011 – September 2012 time period, the damages award of $15.8 million translates to an effective royalty rate of 0.5%.[98]

55. As discussed throughout my declaration, changed circumstances between the March 2004 hypothetical negotiation and November 2012 hypothetical negotiation indicate downward pressure on the reasonable royalty rate relative to the royalty rate resulting from a 2004 hypothetical negotiation. These changed circumstances include: (1) the change in parties to the hypothetical negotiation; (2) the change in relative probative value of the licenses in the record; (3) I/P Engine's licensing of the patents-in-suit; (4) the jury's application of an effective 0.9% royalty rate; and (5) Google's decision to, independent of I/P Engine's patents, redesign the Accused Products. In addition, to the extent that the Overture licenses are probative of the outcome of the November 2012 hypothetical negotiation, under Google's agreement with Overture, the value that Google and its third-party valuation consultant attributed to the license to the Overture patents was $28.5 million.

56. With respect to Google's decision to redesign the Accused Products, as an additional consideration, the jury damages award was based upon three filtering steps: QBB disabling, mixer disabling, and promotion disabling. [redacted]

[98] The effective royalty rate of 0.5% assumes that the Court may find the damages awarded by the jury double counts certain accused base revenues. If the double counting is not omitted, the effective royalty rate would be 0.9%.

[redacted]. I understand Dr. Frieder does not opine that a QBB equivalent exists in Google's current advertising system. Given that there is no dispute at least one of the three filtering steps (which formed the basis for the jury's verdict) is no longer applicable to Google's current advertising system in the post-judgment period, this consideration would place downward pressure on the 0.5% effective royalty rate derived from the jury's damages award.

57. Given these considerations, should Google's system be found to still infringe the patents-in-suit, an ongoing reasonable royalty rate for a license to the Patents-in-Suit would be no more than 0.5% to be applied to an apportioned royalty base of 20.9% (in accordance with the Court's ruling that I must apply this apportionment rate) of the accused advertising revenues. Consistent with the licensing structure in I/P Engine's agreement with Microsoft, which used a cap as detailed above, the aggregate royalty payment to be paid by Google and non-Google Defendants would be subject to a cap in the amount of $28.5 million.[99] The royalty cap has as a basis the value attributable to a license to Overture patents in Google's agreement with Overture, and other value indicators relating to the patents-in-suit close to the time of the November 2012 hypothetical negotiation. In light of the many changed circumstances since the 2004 hypothetical negotiation that was the subject of the jury verdict, a 0.5% royalty rate, subject to a $28.5 million royalty cap, represents a conservative determination of the ongoing royalty rate that Google and I/P Engine would have agreed to in November 2012 (until the expiration of the patents-in-suit on April 4, 2016 or until another design around option could be implemented).

[99] Should the Court determine that there is no double counting in the jury damages award, the outcome of the November 2012 hypothetical negotiation would be a royalty rate of no more than 0.9% to be applied to an apportioned royalty base of 20.9% of the accused advertising revenues, subject to a royalty cap of $28.5 million.

V. Evaluation of Dr. Becker's Ongoing Royalty Opinion

58. Dr. Becker opined that during a November 2012 hypothetical negotiation Google and I/P Engine would have agreed to a 5% running royalty applied to a royalty base of 20.9% of Google's revenues from AdWords, AdSense for Search, and AdSense for Mobile Search.[100] Dr. Becker failed to acknowledge the following important changes in the circumstances between a 2004 hypothetical negotiation and a 2012 hypothetical negotiation (discussed in greater detail in the remainder of my declaration).

> 58.1 Dr. Becker failed to place any weight upon the bidding process in Spring 2011 (i.e., close to the time of the November 2012 hypothetical negotiation) that resulted in a market-determined value indicator for the Patents-in-Suit of $3.2 million.
>
> 58.2 Dr. Becker failed to alter (i.e., decrease) the relative weight that would be placed upon the Overture agreements, which occurred over seven years prior to the November 2012 hypothetical negotiation.
>
> 58.3 Dr. Becker failed to place any weight upon the incremental improvements Google made to its advertising systems between 2004 and 2012.
>
> 58.4 In the event that Google's alternative solution is found not to infringe the patents-in-suit, Dr. Becker failed to appropriately take into consideration the availability of Google's alternative design that it had already begun implementing by the time of the November 2012 hypothetical negotiation. Instead, Dr. Becker inappropriately concluded that the non-infringing alternatives would not affect the outcome of the November 2012 hypothetical negotiation.

A. Dr. Becker Failed To Appropriately Consider Changed Circumstances Between March 2004 And November 2012

59. Dr. Becker's claimed royalty rate of 5% is overstated and does not appropriately take into account the changed circumstances between a March 2004 hypothetical negotiation and a November 2012 hypothetical negotiation.

60. Certain value indicators that occurred after the March 2004 hypothetical negotiation would have occurred prior to the November 2012 hypothetical negotiation (i.e., *ex-*

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[100] Becker Ongoing Royalties Report, p. 8.

post indicators of value have become *ex-ante* indicators of value). These value indicators include: (a) the purchase of the patent family that includes the patents-in-suit by I/P Engine for $3.2 million in June 2011;[101] (b) the bidding process for the patent family that included the patents-in-suit in Spring 2011 whereby Mr. Staykov made a final offer of $2.5 million, Altitude Capital Partners made a final offer of $3.0 million, and Hudson Bay Capital (on behalf of Smart Search Labs) made a final offer of $3.2 million;[102] (c) Altitude's highest offer to purchase Lycos' entire patent portfolio, which included the patents-in-suit, for $4 million in February 2009;[103] and (d) Google's patent purchase agreement with Carl Meyer relating to comparable patents for $3.55 million in December 2008.[104]

61. Dr. Becker also does not account for I/P Engine's license agreement with Microsoft. That agreement was executed within months of the date of the 2012 hypothetical negotiation and is with Google's largest competitor in the search advertising industry. I/P Engine, as a party to that agreement, is in the best position to determine the value of the consideration Microsoft provided in exchange for a license to the patents-in-suit, including the value of the Microsoft patents transferred. Yet, Dr. Becker does not state that he has made any inquiry into this agreement or whether a royalty rate can be derived from the agreement.

62. Given the closer proximity in time between a November 2012 hypothetical negotiation and (a) probative agreements relating to the patents-in-suit (e.g., Lycos' sale of the patent family including the patents-in-suit to Smart Search Labs) or (b) probative agreements for comparable technology (e.g., the Google/Carl Meyer agreement), relatively more weight would

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[101] DX-019.

[102] Kammerud Decl., Ex. 23, pp. 122-37; Kammerud Decl., Exs. 7, 8.

[103] **Exhibit 1** (Ugone Report), p. 41; Kammerud Decl., Ex. 21.

[104] DX-090.

be placed upon these agreements by negotiators than the Overture license agreements presented by Dr. Becker (and which Dr. Becker used as a foundation for his March 2004 hypothetical negotiation opinions).

63. The Overture license agreements are not relevant to a November 2012 hypothetical negotiation for multiple reasons.

> 63.1 First, the agreements were executed over seven years prior to the 2012 hypothetical negotiation. Dr. Becker testified at trial that he did not believe the 2008 Carl Meyer license was probative of the 2004 hypothetical negotiation because the four-year difference rendered it "temporally removed from 2004." [105] Under Dr. Becker's own reasoning, the 2005 Overture licenses are even more temporally removed from the 2012 negotiation.
>
> 63.2 Second, the Overture licenses did not involve the patents-in-suit, unlike the other more probative transactions involving the patents-in-suit (e.g., Lycos' sale of the patent family including the patents-in-suit to Smart Search Labs). All things being equal, a real-world transaction involving the patents-in-suit (such as Lycos' sale of the patents-in-suit) is more probative of the value of the patents-in-suit than a transaction involving unrelated patents (such as the Overture licenses).
>
> 63.3 Third, I understand that the Overture patents are not technologically comparable to the patents-in-suit. I/P Engine's technical expert testified at trial that they were comparable only "in the general sense."[106] Both I/P Engine's and Defendants' technical expert testified about differences between Overture's '361 patent and the patents-in-suit.[107] As discussed above, it was undisputed at trial that the Overture license agreements relate to seminal technologies that are significantly more valuable than the technology covered by the patents-in-suit. Google would be aware of the seminal value of the Overture patents because Google executed a settlement license agreement with Overture relating to these patents.
>
> 63.4 Fourth, the Overture licenses provide rights to a portfolio of patents and applications in addition to the seminal '361 patent. All three licenses include rights to U.S. Patent 6,078,866, and the [redacted]

[105] Trial Tr. 837.

[106] Trial Tr., p. 630.

[107] Trial Tr., pp. 716-717, 1277-1278.

[redacted]

63.5 Fifth, the Overture licensees were not similarly situated to Google. In 2012, Google was a global technology leader. The Overture licensees either provided only [redacted] The contributions of the licensees in these three Overture agreements would not be representative of Google's contributions to the success of the accused functionalities that would be discussed during a negotiation with I/P Engine in 2012.

63.6 Sixth, Overture was a leader in paid search when it executed the license agreements relied upon by Dr. Becker and was practicing its patents.[110] I/P Engine, on the other hand, has not contended that it has ever practiced the patents-in-suit.

64. Therefore, the Overture licenses (which did not concern the patents-in-suit, did not involve either Google or I/P Engine, and occurred seven years prior to a November 2012 hypothetical negotiation) are not as probative to the outcome of the November 2012 hypothetical negotiation as (a) the actual sale price of the patents-in-suit and (b) the Carl Meyer agreement with Google.

65. Dr. Becker opined that an ongoing royalty payment for the patents-in-suit would be at the upper bound of the royalty rates contained in the Overture license agreements (i.e., 5%). However, the significant differences between Overture’s technologies and the technology covered by the patents-in-suit render such a high royalty rate assessment unreasonable. Given the seminal nature of the Overture patents, the larger number of patents included in the Overture agreements, and Overture’s proven success in commercializing the Overture patents, a significant downward adjustment would need to be made to the royalty rate range in the Overture license agreements in deriving a reasonable ongoing royalty rate for the patents-in-suit.

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[108] PDX080; PX184; PX185; PX424.

[109] PX184; PX185; PX424.

[110] Trial Tr., pp. 888-89.

66. Under Dr. Becker's methodology of using the Overture licenses as a benchmark for the claimed royalty rate, Dr. Becker failed to place weight upon the agreement between Overture and Google. As stated above, Google and its third-party valuation consultant placed the value of the license to Overture's '361 patent portfolio at $28.5 million. Following Dr. Becker's assumption that the Overture licenses are probative of the outcome of the hypothetical negotiation, Google's aggregate royalty payment would not exceed $28.5 million.

67. In addition, the bidding process relating to Lycos' sale of the patents-in-suit reflect the market value of the patents. Dr. Becker claims that in contrast to I/P Engine and its parent company, Vringo, which are "sophisticated licensors,"[111] Lycos' parent company in 2004 (i.e., Terra) "was unaware and uninterested in the value of Lycos' patent portfolio."[112] Dr. Becker failed to acknowledge that just prior to the November 2012 hypothetical negotiation, there was a bidding process for the patents among three parties (i.e., Mr. Staykov, Altitude, and Hudson Bay Capital). After Mr. Staykov contacted Lycos to express an interest in purchasing the patent family that included the patents-in-suit, Lycos proactively sought other bidders for this patent family. From an economic perspective, through the bidding process in Spring 2011, the value of the patent family increased to its market value. The purchase price that resulted from

[111] I understand that I/P Engine is owned by Vringo, Inc. On November 6, 2012, the date of the jury verdict, shares of Vringo's stock sold for $3.57 per share and that there were 81.89 million shares outstanding – giving the company a market capitalization of approximately $292 million. I therefore do agree that both Vringo and Google, as well as Lycos, were sophisticated business entities having sophisticated business personnel that could serve as prudent negotiators.

[112] Becker Ongoing Royalties Report, p. 4. Mr. Blais' deposition testimony, which Dr. Becker cited, does not support Dr. Becker's assertion that "Terra was unaware and uninterested in the value of Lycos' patent portfolio." Mr. Blais testified that he did not have knowledge of the negotiations relating to Terra's purchase of Lycos and Terra's subsequent sale of Lycos to Daum. Mr. Blais testified that he did not know whether the parties discussed the patents-in-suit during these negotiations. (Kammerud Decl., Ex. 23, p. 30 ("Q: Do you know anything at all about the negotiations related to Terra's purchase of Lycos? A: No. Q: Is it relatedly – do you have any knowledge as to whether the parties discussed the '420 patent in connection with the purchase? A: No. Q: Or the '664 patent? A: No. ").

this bidding process (i.e., $3.2 million lump-sum amount) reflected the market's assessment of the patent family that included the patents-in-suit. The result of this bidding process (i.e., a $3.2 million lump-sum purchase price) is of particular relevance to a November 2012 hypothetical negotiation given that it occurred close in time to the November 2012 hypothetical negotiation and is directly related to the patents-in-suit.

68. Abstracting away from the above discussion relating to patent licenses and patent sales that provide guidance to an ongoing royalty rate, Dr. Becker claims that the royalty rate of 3.5% awarded by the jury "is a reasonable starting point for the November 2012 negotiation."[113] However, Dr. Becker makes no attempt to reconcile the royalty rate of 3.5% with an apportionment percentage of 20.9%, given the damages amounts awarded by the jury. The aggregate damages award by the jury against all Defendants (i.e., $30.5 million) is only 26% of the claimed damages calculated by Dr. Becker using a 3.5% royalty rate and a 20.9% apportionment for the September 15, 2011 – September 30, 2012 time period (i.e., $118 million[114]). This demonstrates that the jury did <u>not</u> use both a 3.5% royalty rate and a 20.9% apportionment in arriving at the total damages award of $30.5 million. Dr. Becker does not acknowledge that if a 20.9% apportionment percentage has to be applied (as instructed by the Court), the royalty rate applicable to the jury award would be significantly less than 3.5%.

69. In light of the above discussion, the royalty damages demanded by I/P Engine for the post-judgment period fails a reasonableness test. For illustrative purposes, based upon Dr. Becker's claimed royalty rate of 5% and a royalty base apportionment percentage of 20.9%, I/P Engine's claimed royalty damages against all Defendants for a one-year period subsequent to the

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[113] Becker Ongoing Royalties Report, p. 4.

[114] PDX-441.

November 2012 hypothetical negotiation amount to over [redacted].[115] In comparison, (1) the jury awarded damages against Google, AOL, IAC, Target, and Gannett totaling $30.5 million for the claimed infringement period of September 15, 2011 through September 30, 2012 (also a one-year period) and (2) as of November 2012, the entire market capitalization of Vringo (owner of I/P Engine) was only $292 million. Thus, the royalty payments that would result from Dr. Becker's methodology are out of proportion with the jury's verdict and appear to be out of proportion to the real-world value of I/P Engine and its parent corporation.

70. Dr. Becker claims that because there was no existing business relationship between I/P Engine and Google (as existed in the case of Lycos and Google), there would be upward pressure on the reasonable royalty rate relative to the royalty rate resulting from a 2004 hypothetical negotiation.[116] This argument is flawed. Although I/P Engine did not (and does not) have an existing business relationship with Google, I/P Engine would view Google as an attractive licensee given Google's strong brand name, Google's commercial success, and I/P Engine's desire to monetize the patents-in-suit. Given that licensing is I/P Engine's entire business model, I/P Engine would have had strong incentives to grant a license to Google.

71. An additional consideration that Dr. Becker failed to take into account in his report is the relative contribution of Google to the commercial success of Google's advertising systems. As mentioned earlier in my declaration and as discussed in the Ugone Report, Google makes many ongoing contributions to its advertising systems. Therefore, the relative contribution of the patents-in-suit to the commercial success of Google's accused advertising systems would diminish over time given Google's continuous contributions and updating of

[115] The revenue figure used in this calculation (i.e., [redacted]) is obtained by [redacted] over the January 1, 2012 – November 20, 2012 time period (i.e., assuming no growth in revenue).

[116] Becker Ongoing Royalties Report, p. 7.

features (with the eventual removal of the accused filtering functionality in 2012 and 2013). This observation is independent of the Court's ruling that 20.9% of the accused revenues form the royalty base. This observation is dependent upon Google's brand name, research and development, marketing, and other considerations that have led to Google's increasing commercial success and increasing advertising revenues overtime.

B. Dr. Becker Failed To Appropriately Consider Google's Non-Infringing Alternative

72. In the Becker Ongoing Royalties Report, Dr. Becker opined that Google's implementation of a non-infringing alternative to the patents-in-suit "would not change the outcome of the hypothetical negotiation between I/P Engine and Google."[117] Dr. Becker's opinion that Google's non-infringing alternative has no impact on the determination of an ongoing royalty rate runs counter to the Court's determination that "the ease and availability of non-infringing alternatives has some relevance to the question of an ongoing royalty."[118]

73. As support for his opinion, Dr. Becker stated that if I/P Engine was aware that Google's systems would not infringe the patents-in-suit as of May 2013, it was "only economically reasonable" that I/P Engine would "raise the [ongoing] rate."[119] However, Dr. Becker's opinion is flawed. Generally, the existence of non-infringing alternatives places ***downward*** pressure on a to-be-agreed-upon royalty rate. It is my understanding that prior to the November 2012 hypothetical negotiation, Google was in the process of implementing its alternative solution and that some of the infringing features (i.e., QBB disabling) were removed from AdWords as of the November 2012 hypothetical negotiation. I also understand that

[117] Becker Ongoing Royalties Report, p. 7.

[118] D.N. 963, p. 8.

[119] Becker Ongoing Royalties Report, p. 8. (Bracketed text added for clarification.)

Google's motivation for implementing the alternative solution was for business reasons unrelated to this lawsuit.[120] Therefore, it is reasonable to assume that, if faced with the prospect of paying an unreasonably high ongoing royalty rate for the six-month period from November 20, 2012 to May 11, 2013, Google would have accelerated the implementation of its non-infringing alternative. As discussed above, I have been advised that Google could have accelerated the removal of the Accused Functionality at a low cost. Dr. Becker does not acknowledge this incentive to Google in his report. Under such conditions, a demand by I/P Engine for an even higher royalty payment would further accelerate Google's implementation of its non-infringing alternative.

74. In addition, as previously mentioned, I/P Engine and Google would be aware of the value indicators of the patents-in-suit (e.g., the $3.2 million purchase price of the patent family including the patents-in-suit) and the declining relative importance of the patents-in-suit to Google's products. These considerations would further increase Google's unwillingness to pay an unreasonably high ongoing royalty rate, thereby exerting downward pressure on the to-be-agreed-upon royalty rate. Dr. Becker's claimed ongoing royalty rate opinion for a November 2012 hypothetical negotiation does not take these changed circumstances into account.

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

Keith R. Ugone

Keith R. Ugone, Ph.D.
October 28, 2013

[120] Furrow Declaration; Furrow Deposition, pp. 65 & 122.

Exhibit 1

Exhibit 1 not included here

Exhibit 2

Supplemental Facts, Data, and Other Information Received

Description	Bates Prefix	Start	End
Legal Documents			
I/P Engine, Inc.'s Motion for Leave to File Corrected Reply In Support of Its Motion for An Award of Post Judgment Royalties			
I/P Engine, Inc.'s Reply in Support of Its Motion for an Award of Post-Judgment Royalties filed May 20, 2013			
I/P Engine, Inc.'s Reply in Support of its Motion for An Award of Post-Judgment Royalties filed May 23, 2013			
Memorandum in Support of Plaintiff I/P Engine, Inc.'s Motion for An Award of Post-Judgment Royalties			
Memorandum Opinion and Order			
Opposition to Plaintiff's Motion for Post-Judgment Royalties			
Plaintiff I/P Engine, Inc.'s Motion for An Award of Post-Judgment Royalties			
Deposition Transcripts and Associated Exhibits			
Deposition of Bartholomew Furrow taken September 20, 2013			
Declarations			
Declaration of Bartholomew Furrow dated May 11, 2013			
Declaration of Brian Kuethe in Support of Defendants' Opposition to Plaintiff's Motion for An Award of Post-Judgment Royalties			
Declaration of Keith R. Ugone, Ph.D. on Post-Judgment Royalties dated May 13, 2013			
Declaration of Stephen L. Becker, Ph.D. regarding Ongoing Royalties dated December 18, 2012 and Associated Documentation			
Expert Reports and Associated Documentation			
Expert Report of Ophir Frieder concerning New AdWords Being No More Than A Colorable Variation of Old AdWords			
Report of Stephen L. Becker, Ph.D. regarding Ongoing Royalties dated September 25, 2013			
Documents Produced by Google			
Whole Page… Auction? Presentation	G-IPE	0892256	0892293
Whole Page Google Presentation dated February 13, 2012	G-IPE	0892294	0892332
State of the Auction Google Presentation dated March 19, 2012	G-IPE	0892333	0892353
Whole Page Auction dated May 31, 2013 (https://sites.google.com)	G-IPE	0892354	0892354
Whole Page Auction Decision Tree Design	G-IPE	0892355	0892364
Whole Page Auction Design Doc	G-IPE	0892365	0892372
Ad Format Selection (Whole Page Auction Part I)	G-IPE	0892373	0892380
Auction Code Main Ideas and Example Trees	G-IPE	0892381	0892383

Supplemental Facts, Data, and Other Information Received

Description	Bates Prefix	Start	End
Pre-Auction Selection of New Ad Formats	G-IPE	0892384	0892386
QBB Min CPC Curves in Serving	G-IPE	0892387	0892399
QBB Off Launch Doc (Http://launchtool.corp.google.com)	G-IPE	0892400	0892405
QBB Min CPC Curves in Serving by David Arthur and Derek Cook	G-IPE	0892406	0892417
QBB Off Launch Doc (Http:launchtool.corp.google.com)	G-IPE	0892418	0892421
Per-Position Auction Rollout	G-IPE	0892422	0892425
Positioning Pctr and Impression Costs Within Per Position Auctions	G-IPE	0892426	0892428
83207 Remove QBBs Role in Filtering and Pricing dated November 5, 2012	G-IPE	0892429	0892435
About the Help Center (https://Support.google.com/adwowrds/answer/3094231)	G-IPE	0892436	0892437
House Ads Code Update + Top/Rhs Auction Refactor (https://ariane.googleplex.com)	G-IPE	0901992	0901992
105391 House Ads Code Update + Top/Rhs Auction Refactor dated May 11, 2013	G-IPE	0901993	0901994
Critique Code Reviews "Store QBB Status on the Keyword Server AGC Replies"	G-IPE	0901995	0901995
Critique Code Reviews "Add Back Flag That Allows Us to do Qbb Filtering in Admixer"	G-IPE	0901996	0901996
Critique Code Reviews "Decouple Creative Rotation from Threshold Checks"	G-IPE	0901997	0901997
Critique Code Reviews "Deprecated Qbb to Mixer Compatibility Mode"	G-IPE	0901998	0901998
Critique Code Reviews "Move Customer Sorting Before Disabling. Two Subtleties"	G-IPE	0901999	0901999
Critique Code Reviews "Do Not Apply XBT to Low Quality Ads"	G-IPE	0902000	0902000
Critique Code Reviews "Remove Disable Low Quality Ads Logic for Filtering if Drop Early Threshold Check is True"	G-IPE	0902001	0902001
Critique Code Reviews "Make New Customer Sorting Function Aware of Upcoming Bottom Auction"	G-IPE	0902002	0902002
Critique Code Reviews "Support Keywordless in Drop Early Threshold Check Mode. This Removes All Keywordless Diffs in Regtest"	G-IPE	0902003	0902003
Critique Code Reviews "Remove the Qbb Status from Ad Serving Binaries"	G-IPE	0902004	0902005
Critique Code Reviews "Support for Removing Pre-Auction Thresholding"	G-IPE	0902006	0902007
Critique Code Reviews "No Thresholding Pre-Auction: Finishing Touches"	G-IPE	0902008	0902008
Critique Code Reviews "Adds An Experiment Flag to Cap Bids for House Ads in the Top Slot Only"	G-IPE	0902009	0902010
Critique Code Reviews "Launches Promotion/Disabling Refactoring. Actually Takes it to 100%. Then I'll Flip the Flag, Then I'll Delete the Experiment"	G-IPE	0902011	0902011
Critique Code Reviews "Wrap Auction Candidate into AuctionDecisionData, So During the Auction, We Keep AuctionCandidate Constant. As A Result, We Can Run Auction as a Library"	G-IPE	0902012	0902015
Critique Code Reviews "Remove the Launched Per-Position Flags, and Refactor the Auctioneer a Bit in This Brave New World"	G-IPE	0902016	0902017

Supplemental Facts, Data, and Other Information Received

Description	Bates Prefix	Start	End
Critique Code Reviews "For Eliminating "Peninsular Ads" Pull the Correct Number of RHS PLA Ads That Takes Current Trumping Logic and Scenario Selection Into Consideration"	G-IPE	0902018	0902019
Critique Code Reviews "Launch Positioned Pctr on Google (Mobile, Desktop, and Tablet). Tune for Desktop and Tablet as Follows: Multiply Top Impression Weight and Top Good Impression Weight by 1.0045. Multiply RHS and BTM CTR and Good-CTR Weights by 0.85. No Tuning for Mobile"	G-IPE	0902020	0902021
Critique Code Reviews "Remove the Deprecated Drop Early Threshold Check, Since This Feature Has Launched Everywhere"	G-IPE	0902022	0902022
Critique Code Reviews "Add Serving Support for Exp Flag QBB to Mixer Compatibility Mode. This Allows Us to Score As Many Ads As If This Were True QBBless but Without Changing Behavior"	G-IPE	0902023	0902024
Critique Code Reviews "Move Min-Billable Unit Check Out of Initialization and Into Filtering Step Within Strategy-Mixer"	G-IPE	0902025	0902025
Critique Code Reviews "Do No Log QBB -> Mixer Ads That Survived to the Mixer Only Because of This Change. This Includes Both Normal Ads and BC Ads That Were Rejected In Creative Server"	G-IPE	0902026	0902027
Critique Code Reviews "Delete Three Multi-Rejection Tests"	G-IPE	0902028	0902028
Critique Code Reviews "Finalize QBB -> Mixer.	G-IPE	0902029	0902029
Critique Code Reviews "Changes to Limits on Templog Sizes"	G-IPE	0902030	0902031
Critique Code Reviews "Launch Curve 123 to Google.com + Modes"	G-IPE	0902032	0902032
Critique Code Reviews "YJ Ringo: Launch and Create a Holdback"	G-IPE	0902033	0902034
Critique Code Reviews "Remove Special Checks for QBB Disabling in the Admixer. Just Always Do It for All Ads"	G-IPE	0902035	0902036
Critique Code Reviews "Add Support for Alternate Whole Page Auction Mixer Control Flow"	G-IPE	0902037	0902037
Critique Code Reviews "Launch QBB minCPC Off for AFS and Mobile With The New QBB Model, Gundam"	G-IPE	0902038	0902038
Critique Code Reviews " Launch Curve 123 to PYV"	G-IPE	0902039	0902039
Critique Code Reviews "Remove QBB MinCPCs from Keyword Server"	G-IPE	0902040	0902040
Critique Code Reviews "Launch Whole Page Auction Mixer Flow"	G-IPE	0902041	0902041
Critique Code Reviews "Merge Filter and Score Creatives and Auction in Admixer-Control-Flow"	G-IPE	0902042	0902043
Critique Code Reviews "Remove QBB MinCPCs from Keyword Search"	G-IPE	0902044	0902047
Critique Code Reviews "Delete Unused Low-Ctr Filtering Logic"	G-IPE	0902048	0902048

Exhibit 3

Effective Royalty Rate Based Upon Jury Damages Award Amount And A 20.9% Apportionment Percentage

Estimated Claimed Damages From 9/15/2011 - 9/30/2012 (Based Upon a 3.5% Royalty Rate and 20.9% Apportionment)	[A]	$118,000,000
I/P Engine's Claimed Royalty Rate	[B]	3.5%
[redacted]	[redacted]	[redacted]
Jury Damages Award - Google	[D]	$15,800,000
Effective Royalty Rate Based Upon Jury Damages Award Amount And A 20.9% Apportionment Percentage	[E] = [D]/[C]	***0.5%***

Estimated Claimed Damages
September 15, 2011 - Q3 2012

	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Total
Estimated Claimed Damages From PDX 441	$24,500,000	$28,000,000	$27,900,000	$29,000,000	$29,200,000	$138,600,000
Portion of Period	0.17	1.00	1.00	1.00	1.00	
Estimated Claimed Damages Beginning September 15, 2011	**$4,260,870**	**$28,000,000**	**$27,900,000**	**$29,000,000**	**$29,200,000**	**$118,360,870**