IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

SKYHOOK WIRELESS, INC.,	)	
	)	
Plaintiff and	)	
Counterclaim-Defendant,	)	Case No. 1:10-cv-11571-RWZ
	)	
v.	)	
	)	
GOOGLE INC.,	)	
	)	
Defendant and	)	
Counterclaimant.	)	
	)	

JOINT CLAIM CONSTRUCTION AND PRE-HEARING STATEMENT

Pursuant to Patent LR 16.6, Skyhook Wireless, Inc. ("Skyhook") and Google Inc. ("Google") hereby submit this Joint Claim Construction and Pre-Hearing Statement.

I. Constructions On Which The Parties Agree

The parties have stipulated to the proper construction of nine claim terms. The parties' agreed constructions are set forth below.

Term	Claims	Agreed Construction	Court's Construction
"Wi-Fi access points"	'245/1,2 '694/1 '988/1,3 '897/1,3,4	Devices operating consistent with the IEEE 802.11 standard to provide network connectivity.	
"triggering the Wi-Fi device to transmit a request to all Wi-Fi access points within range of the Wi-Fi device"	'245/1	Causing the Wi-Fi device to actively search for Wi-Fi access points. The Wi-Fi device transmits a request to all Wi-Fi access points within range of the Wi-Fi device to identify themselves.	

Term	Claims	Agreed Construction	Court's Construction
"a radius on the order of tens of miles"	'694/1 '988/1	A radius of ten miles or more but fewer than a hundred miles.	
"identification information for a corresponding Wi-Fi access point"	'694/1 '988/1	An identifier (*e.g.*, a MAC address) for a corresponding Wi-Fi access point.	
"WiFi access points having a recorded location within a predefined threshold distance of the reference point"	'897/3	WiFi access points having a recorded location that is within a certain distance of the reference point. That distance was previously defined.	
"WiFi access points having a recorded location in excess of the predefined threshold distance of the reference point"	'897/3	WiFi access points having a recorded location that exceeds a certain distance from the reference point. That distance was previously defined.	
"a simple signal strength weighted average model"	'245/6	An algorithm that includes taking a simple average of the calculated locations of identified Wi-Fi access points weighted according to a function of their received signal strengths.	
"a triangulation technique"	'245/8	An algorithm that includes (1) estimating the distances from the user device to at least two identified Wi-Fi access points using their received signal strengths and (2) determining a location based on the estimated distances.	
"a weighted centroid position"	'988/3	A position determined by weighted averaging of position information.	

II. Disputed Claim Terms

The parties present twelve claim terms, or related groups of claim terms, for construction. Listed below are the terms to be construed, prioritized in the order of importance, and a joint claim construction chart, setting out each individual claim term:

1) the "location" terms (including "calculated position information" for the Wi-Fi access point, "calculated positions of the Wi-Fi access points," "calculated locations," and "recorded location information");
2) "target area";
3) "arterial bias" and "avoid(s) arterial bias";
4) "reference symmetry," and "wherein the database records for substantially all Wi-Fi access points in the target area provide reference symmetry within the target area";
5) "recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point so that the multiple readings have reference symmetry relative to other Wi-Fi access points in the target area and so that the calculation of the position of the Wi-Fi access point avoids arterial bias in the calculated position information" and "recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point so that the multiple readings avoid arterial bias in the calculated position information of the Wi-Fi access point";
6) "substantially all Wi-Fi access points" and "for substantially all Wi-Fi access points in the target area";
7) "said chosen algorithm being suited for the number of identified Wi-Fi access points";
8) "providing a reference database of calculated locations of Wi-Fi access points in a target area";

9) the “logic” terms;

10) “rules” and “predefined rules”;

11) “in response to a user application request to determine a location of a user-device having a Wi-Fi radio” and “a user-device having a Wi-Fi radio”; and

12) “a WiFi-enabled device communicating with WiFi access points within range of the WiFi-enabled device so that observed WiFi access points identify themselves.”

Term	Claims	Skyhook’s Construction	Google’s Construction	Court's Construction
"calculated locations"	'245/1,2	Estimated physical locations of Wi-Fi access points calculated using characteristics of signals transmitted by such Wi-Fi access points. Support: Ex. 1 ('245 Patent) *see, e.g.*, Abstract, Figs. 3-6, 9, 4:21-23, 5:1-10, 5:15-17, 5:66-6:1, 7:41-49, 8:58-66, 12:3-14, 12:22-13:28; Ex. 3 ('988 Patent) Fig. 4, 5:1-3, 8:28-34, 8:41-44; Ex. 14 (Kotz Decl.) at ¶¶ 130-33; Ex. 15 (Acampora Dep. Tr.) 110:2-11, 191:11-192:3, 224:24-225:19.	The physical location (*i.e.*, latitude and longitude) attributed to each Wi-Fi access point determined mathematically from readings recorded along a shortest planned route throughout all drivable roads in the target area (*i.e.*, by following the Chinese Postman routing algorithm). The "calculated position information" cannot be based on randomly, or non-systematically, collected readings of Wi-Fi access points. Support: Ex. 23 (‘988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12,	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			GSHFED0000234; Ex. 24 ('245 Prosecution History) GSHFED0000089-90; Ex. 25 ('694 Prosecution History) GSHFED0000287, GSHFED0000295-299; Ex. 26 ('897 Prosecution History) GSHFED0000394-95; Ex. 3 ('988 Patent) 3:12-26, 3:59-4:9, 7:52-8:59, 9:6-21, 9:57-10:4, 11:67-13:30, Fig. 3, 5 & 9 and corresponding disclosures in the '694 patent; Ex. 1 ('245 Patent) 3:13-15, 4:21-23, 4:30-31, 4:36-40, 4:41-45; "calculated position information" in the '988 and '694 patents, "calculated positions of the Wi-Fi access points" in the '988 patent claim 3, "calculated locations" in the '245 patent claims 1 and 2, as well as "recorded location information" in the '897 patent claims 1 and 3, respectively; Ex. 27 (The Compact Oxford English Dictionary) at 87 [sub-page 781], 92 [sub-page 823], 132 [sub-page 166], 200 [sub-page 777], 1991 [sub-pages 456-457],	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 452, 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379, 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 42, 56-57 (5th ed. 2002); Ex. 29 (The Merriam-Webster Dictionary) at 48 (6th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"calculated position information"	'694/1 '988/1	Estimated physical position of the observed Wi-Fi access point calculated using characteristics of its transmitted signal. Support: Ex. 2 ('694 Patent) *see, e.g.*, Abstract, Figs. 4, 9, 4:2-10, 4:34-35, 5:6-26, 6:58-7:4, 8:16-24, 11:18-42, 11:51-12:54; Ex. 3 ('988 Patent) *see, e.g.*,	The physical location (*i.e.*, latitude and longitude) attributed to each Wi-Fi access point determined mathematically from readings recorded along a shortest planned route throughout all drivable roads in the target area (*i.e.*, by following the Chinese Postman routing algorithm). The "calculated position	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		Abstract, Figs. 4, 9, 4:31-40, 5:1-3, 5:14-15, 5:53-6:7, 7:39-52, 8:28-34, 8:41-44, 8:63-9:4, 11:64-12:20, 12:29-13:31; Ex. 14 (Kotz Decl.) at ¶¶ 130-33; Ex. 15 (Acampora Dep. Tr.) 110:2-11, 191:11-192:3, 224:24-225:19.	information" cannot be based on randomly, or non-systematically, collected readings of Wi-Fi access points. Support: Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12, GSHFED0000234; Ex. 24 ('245 Prosecution History) GSHFED0000089-90; Ex. 25 ('694 Prosecution History) GSHFED0000287, GSHFED0000295-299; Ex. 26 ('897 Prosecution History) GSHFED0000394-95; Ex. 3 ('988 Patent) 3:12-26, 3:59-4:9, 7:52-8:59, 9:6-21, 9:57-10:4, 11:67-13:30, Fig. 3, 5 & 9 and corresponding disclosures in the '694 patent; Ex. 1 ('245 Patent) 3:13-15, 4:21-23, 4:30-31, 4:36-40, 4:41-45; "calculated positions of the Wi-Fi access points" in the '988 patent claim 3, "calculated locations" in the '245 patent claims 1 and 2, as	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			well as "recorded location information" in the '897 patent claims 1 and 3, respectively; Ex. 27. (The Compact Oxford English Dictionary) at 87 [sub-page 781], 92 [sub-page 823], 132 [sub-page 166], 200 [sub-page 777], 1991 [sub-pages 456-457], 2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 452, 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379, 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 42, 56-57 (5th ed. 2002); Ex. 29 (The Merriam-Webster Dictionary) at 48 (6th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"calculated positions of the Wi-Fi access points"	'988/3	Estimated physical positions of the observed Wi-Fi access points	The physical location (*i.e.*, latitude and longitude) attributed to each Wi-Fi access	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		calculated using characteristics of their transmitted signals. *See* "Wi-Fi access points." Support: Ex. 3 ('988 Patent) *see, e.g.*, Abstract, Figs. 4, 9, 4:50-57, 5:1-3, 5:14-15, 5:66-6:1, 7:39-52, 8:28-34, 8:41-44, 8:63-9:4, 11:64-12:20, 12:29-13:31; Ex. 14 (Kotz Decl.) at ¶¶ 130-33; Ex. 15 (Acampora Dep. Tr.) 110:2-11, 191:11-192:3, 224:24-225:19.	point determined mathematically from readings recorded along a shortest planned route throughout all drivable roads in the target area (*i.e.*, by following the Chinese Postman routing algorithm). The "calculated position information" cannot be based on randomly, or non-systematically, collected readings of Wi-Fi access points. Support: Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12, GSHFED0000234; Ex. 24 ('245 Prosecution History) GSHFED0000089-90; Ex. 25 ('694 Prosecution History) GSHFED0000287, GSHFED_0000295-299; Ex. 26 ('897 Prosecution History) GSHFED0000394-95; Ex. 3 ('988 Patent) 3:12-26, 3:59-4:9, 7:52-8:59, 9:6-21, 9:57-10:4, 11:67-13:30, Fig. 3, 5 & 9	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			and corresponding disclosures in the '694 patent; Ex. 1 ('245 Patent) 3:13-15, 4:21-23, 4:30-31, 4:36-40, 4:41-45; "calculated position information" in claim 1 of the '988 and '694 patents, "calculated locations" in the '245 patent claims 1 and 2, as well as "recorded location information" in the '897 patent claims 1 and 3, respectively; Ex. 27 (The Compact Oxford English Dictionary) at 87 [sub-page 781], 92 [sub-page 823], 132 [sub-page 166], 200 [sub-page 777], 1991 [sub-pages 456-457], 2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 452, 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379, 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 42, 56-57 (5th ed. 2002); Ex. 29 (The Merriam-Webster Dictionary) 48 (6th ed. 2004); Ex. 30 (The Compact	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"recorded location information"	'897/1,3	Estimated physical location of Wi-Fi access points calculated using characteristics of signals transmitted by such Wi-Fi access points. Support: Ex. 4 ('897 Patent) *see, e.g.*, Abstract, Fig. 1, 4:50-58, 4:63-5:4, 5:12-13, 7:30-34; Ex. 3 ('988 Patent) Fig. 4, 5:1-3, 8:28-34, 8:41-44; Ex. 14 (Kotz Decl.) at ¶¶ 130-33; Ex. 15 (Acampora Dep. Tr.) 110:2-11, 191:11-192:3, 224:24-225:19.	The physical location (*i.e.*, latitude and longitude) attributed to each Wi-Fi access point determined mathematically from readings recorded along a shortest planned route throughout all drivable roads in the target area (*i.e.*, by following the Chinese Postman routing algorithm). The "calculated position information" cannot be based on randomly, or non-systematically, collected readings of Wi-Fi access points. Support: Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12, GSHFED0000234; Ex. 24 ('245 Prosecution History) GSHFED0000089-90; Ex. 25 ('694	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			Prosecution History) GSHFED0000287, GSHFED0000295-299; Ex. 26 ('897 Prosecution History) GSHFED0000394-95; Ex. 3 ('988 Patent) 3:12-26, 3:59-4:9, 7:52-8:59, 9:6-21, 9:57-10:4, 11:67-13:30, Fig. 3, 5 & 9 and corresponding disclosures in the '694 patent; Ex. 1 ('245 Patent) 3:13-15, 4:21-23, 4:30-31, 4:36-40, 4:41-45; "calculated position information" in claim 1 of the '988 and '694 patents, "calculated positions of the Wi-Fi access points" in the '988 patent claim 3, "calculated locations" in the '245 patent claims 1 and 2; Ex. 27 (The Compact Oxford English Dictionary) at 87 [sub-page 781], 92 [sub-page 823], 132 [sub-page 166], 200 [sub-page 777], 1991 [sub-pages 456-457], 2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 452, 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379, 455 (3rd ed. 2000); Ex. 34 (The	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 42, 56-57 (5th ed. 2002); Ex. 29 (The Merriam-Webster Dictionary) at 48 (6th ed. 2004); Ex. 35 (Newton's Telecom Dictionary) at 689 (20th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"target area"	'245/1 '694/1,2 '988/1	A targeted geographic area. Support: Ex. 1 ('245 Patent) *see, e.g.*, Abstract, 4:21-23, 5:29-31, 7:36-42; Ex. 2 ('694 Patent) *see, e.g.*, Abstract, 3:66-4:2, 4:47-49, 6:58-63; Ex. 3 ('988 Patent) *see, e.g.*, Abstract, Fig. 4, 4:28-31, 5:1-3, 5:27-29, 7:39-44, 8:28-34, 8:41-44; Ex. 5 (*Compact Oxford English Dictionary* (2d ed. 1991)) at 2011, subpage 642; Ex. 14 (Kotz Decl.) at ¶¶ 130-33; Ex. 15	A pre-identified geographic region throughout which a shortest route is planned along all drivable roads. Support: Ex. 3 ('988 Patent) Abstract, claim 1, 4:28-40, 5:27-37, 7:37-44, 8:28-59 and corresponding disclosures in the '694, and '245 patents; Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91,	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		(Acampora Dep. Tr.) 110:2-11, 224:24-225:19.	GSHFED0000200-12; Ex. 36 (U.S. Patent 7,403,762) GSHFED_0001671; Ex. 37 (US2008/0139217 Patent Application Pub.) GSHFED_0001360-61; Ex. 38 (U.S. Patent No. 7,818,017) 14:25-16:7; Ex. 27 (The Compact Oxford English Dictionary) at 87 [sub-page 781], 1501 [sub-pages 107-108], 2011 [sub-pages 640-642]; Ex. 32 (Microsoft Computer Dictionary) at 42 (5th ed. 2002); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"arterial bias"	'694/1 '988/1	The deviation of the calculated position information for a Wi-Fi access point towards heavily trafficked roads and away from the actual geographic location of the access point. Support: Ex. 2 ('694 Patent) *see, e.g.*, Abstract, Figs. 3, 4, 11, 2:52-57, 4:2-10, 4:19-23, 4:38-40, 7:7-8:12, 8:22-41, 9:3-23; Ex. 3 ('988 Patent) *see, e.g.*, Abstract, Figs. 3, 4, 11, 3:12-	The deviation of the calculated position information for a Wi-Fi access point toward heavily trafficked roads and away from the actual geographic location of the access point due to the tendency of random scanning to result in a greater number of scans from heavily trafficked roads. Support: Ex. 3 ('988 Patent), Abstract, 3:12-26, 4:4-9, 4:28-	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		18, 4:31-40, 4:66-5:3, 5:17-20, 7:55-8:59, 9:2-21, 9:51-10:4; Ex. 15 (Acampora Dep. Tr.) 191:11-192:3.	46, 5:24-37, 7:34-8:59, 9:2-10, 9:14-19, 9:57-61, 9:64-10:4, Figs. 1-5, 8 & 11 and corresponding disclosures in the '694 patent; Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12, ('694 Prosecution History) GSHFED_0000295-299; Ex. 27 (The Compact Oxford English Dictionary) at 132 [sub-page 166], 200 [sub-page 777], 1718 [sub-page 33], 1991 [sub-pages 456-457]; Ex. 32 (Microsoft Computer Dictionary) at 42, 56-57, 474 (5th ed. 2002); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 448 (8th ed. 2003).	
"avoid(s) arterial bias"	'694/1 '988/1	Reduce(s) the effects of arterial bias. *See* "arterial bias." Support: Ex. 2 ('694	Indefinite under 35 U.S.C. § 112, ¶ 2 because it does not apprise one skilled in the art of the bounds of the claim.	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		Patent) *see, e.g.*, Abstract, Figs. 3, 4, 11, 2:52-57, 4:2-10, 4:19-23, 4:38-40, 7:7-8:12, 8:22-41, 9:3-23; Ex. 3 ('988 Patent) *see, e.g.*, Abstract, Figs. 3, 4, 11, 3:12-18, 4:31-40, 4:66-5:3, 5:17-20, 7:55-8:59, 9:2-21, 9:51-10:4; Ex. 11 (*Merriam-Webster's Collegiate Dictionary* (10th ed. 2001)) at 80; Ex. 14 (Kotz Decl.) at ¶¶ 119-129; Ex. 15 (Acampora Dep. Tr.) 191:11-192:3.	In the alternative, "eliminates arterial bias." Support: Ex. 23 ('988 Prosecution) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; Ex. 25 ('694 Prosecution History) GSHFED0000295-299; Ex. 29 (The Merriam-Webster Dictionary 6th ed. 2004) GSHFED_0004600; Ex. 3 ('988 Patent), 3:12-26, 4:4-9, 4:28-46, 5:24-37, 7:34-8:59, 9:2-10, 9:14-19, 9:57-61, 9:64-10:4, Figs. 1-5, 8 & 11, claim 1; Ex. 39 (U.S. Patent App. Pub. 2009/0075672), Ex. 40 (U.S. Patent No. 7,493,127); Ex. 27 (The Compact Oxford English Dictionary) at 92 [sub-page 823], 132 [sub-page 166]; Ex. 32 (Microsoft Computer Dictionary) at 56-57 (5th ed. 2002); Ex. 29 (The Merriam-Webster Dictionary) 48 (6th ed. 2004).	
"reference symmetry"	'694/1 '988/1	From the perspective of a user whose	Indefinite under 35 U.S.C. § 112, ¶ 2	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		location is being calculated, the calculated positions of observed Wi-Fi access points in range of the user tend to be distributed around the user with reduced arterial bias. Support: Ex. 2 ('694 Patent) *see, e.g.*, Abstract, Figs. 5, 6, 11, 4:2-10, 4:24-28, 4:38-40, 9:3-23; Ex. 3 ('988 Patent) *see, e.g.*, Abstract, Figs. 5, 6, 11, 4:4-9; 4:31-40, 5:4-8, 5:17-20, 5:33-37; 9:51-10:4; Ex. 14 (Kotz Decl.) at ¶¶ 95-118; Ex. 15 (Acampora Dep. Tr.) at 170:15-171:5, 168:11-18, 167:14-21; 173:2-179:11, 181:21-182:13; Ex. 22 (Acampora Dep. Ex. 1) at Figs. 3,4.	because it does not apprise one skilled in the art of the bounds of the claim. In the alternative, "the balanced or symmetrical distribution of numerous access points on all sides of the user device and within range of the user device's WiFi radio." Support: Ex. 3 ('988 Patent), claim 1, 2:53-57, 4:38, 5:4-8, 9:2-19, 9:49-10:4, Figs. 2-6, 8, 11 and corresponding disclosures in the '694 patent; Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; Ex. 25 ('694 Prosecution History) GSHFED_0000295-299; Ex. 27 (The Compact Oxford English Dictionary) at 87 [sub-page 781], 200 [sub-page 777], 1991 [sub-pages 456-457]; Ex. 30 (The Compact Oxford English Dictionary of Current English) at	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"wherein the database records for substantially all Wi-Fi access points in the target area provide reference symmetry within the target area"	'694/1	Wherein the database records for substantially all Wi-Fi access points in the target area are distributed such that when the database records are used to calculate a user's location, the calculated positions of the observed Wi-Fi access points in range of the user tend to be distributed around the user with reduced levels of arterial bias. See "substantially all Wi-Fi access points," "target area," "Wi-Fi access points," and "reference symmetry." Support: Ex. 2 ('694 Patent) *see, e.g.*, Abstract, Figs. 3-6, 11, 4:2-10, 4:19-28, 4:38-40, 7:47-8:12, 9:3-23; Ex. 3 ('988 Patent) at 4:4-9, 5:33-37; Ex. 13 ('988 patent prosecution history) Reply to Non-Final Office Action of Nov. 30, 2007, p. 8; Ex. 14	Indefinite under 35 U.S.C. § 112, ¶ 2 because it does not apprise one skilled in the art of the bounds of the claim, and in particular fails to apprise the person of ordinary skill in the art as to what it means to "provide reference symmetry within the target area." Support: Ex. 2 ('694 Patent), claim 1, 2:25-29, 4:8-9, 4:27-28, 5:38-49, 7:32-35, 7:62-66, 9:3-23, Fig. 5, Fig. 6, Fig. 11; Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; Ex. 41 (*David Nichols & Nichols Lures v. Strike King Lure Co.*, 2000 U.S. Dist. LEXIS 15781), 31-32 (N.D. Tex. Oct. 25, 2000); Ex. 27 (The Compact Oxford English Dictionary) at 389 [sub-page 261],	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		(Kotz Decl.) at ¶¶ 95-118; Ex. 15 (Acampora Dep. Tr.) at 170:15-171:5, 168:11-18, 167:14-21; 173:2-179:11, 181:21-182:13; Ex. 22 (Acampora Dep. Ex. 1) at Figs. 3,4.	1991 [sub-pages 456-457], 2011 [sub-pages 640-642]; Ex. 32 (Microsoft Computer Dictionary) at 141 (5th ed. 2002); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 232, 689, 916 (20th ed. 2004); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 123 (8th ed. 2003).	
"recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point so that the multiple readings avoid arterial bias in the calculated position information of the Wi-Fi access point"	'694/1	Multiple scans of a Wi-Fi access point are recorded. The scans are taken at different locations around the Wi-Fi access point. The multiple readings avoid arterial bias in the calculated position information of the Wi-Fi access point. *See* "Wi-Fi access points," "avoid arterial bias," and "calculated position information." Support: Ex. 2 ('694 Patent) *see, e.g.*, Abstract, Figs. 3-6, 11, 4:2-10, 4:19-28, 4:38-40, 7:47-8:12, 8:22-41, 9:3-23; Ex. 3 ('988 Patent) Fig. 4, 5:1-3, 8:28-34, 8:41-44; Ex. 14 (Kotz Decl.) at ¶¶ 130-33;	Indefinite under 35 U.S.C. § 112, ¶ 2 because it does not apprise one skilled in the art of the bounds of the claim, and in particular impermissibly recites a method step in an apparatus claim. In the alternative, "storing Wi-Fi access point signals received while scanning along a shortest planned route along each drivable road throughout each target area, *e.g.*, Chinese Postman and not using random scanning or collection methods to avoid the tendency of random scanning to result in a greater number of scans of the Wi-Fi access point from	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		Ex. 15 (Acampora Dep. Tr.) 110:2-11, 191:11-192:3, 224:24-225:19.	heavily trafficked roads." Support: Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; Ex. 25 ('694 Prosecution History) GSHFED0000287, GSHFED0000297-98; Ex. 3 ('988 patent) 7:52-8:59, 9:14-19, 9:64-10:4, Figs. 4 & 11, claim 1; Ex. 39 (U.S. Patent App. Pub. 2009/0075672); Ex. 40 (U.S. Patent No. 7,493,127); Ex. 27 (The Compact Oxford English Dictionary) at 87 [sub-page 781], 200 [sub-page 777], 1991 [sub-pages 456-457] , 2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 42 (5th ed. 2002); Ex. 35	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			(Newton's Telecom Dictionary) at 39-40, 689, 916 (20th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point so that the multiple readings have reference symmetry relative to other Wi-Fi access points in the target area"	'988/1	Multiple scans of a Wi-Fi access point are recorded. The scans are taken at different locations around the Wi-Fi access point. This results in the following: (a) the multiple readings produce a calculated position of the Wi-Fi access point having reference symmetry relative to other Wi-Fi access points in the target area and (b) the calculated position of the Wi-Fi access point reduces the effects of arterial bias. *See* "Wi-Fi access points," "reference symmetry," "avoids arterial bias," and "calculated position information." Support: Ex. 3 ('988	Indefinite under 35 U.S.C. § 112, ¶ 2 because it does not apprise one skilled in the art of the bounds of the claim, and in particular (1) impermissibly recites a method step in an apparatus claim; and (2) fails to apprise the person of ordinary skill in the art as to what it means for "multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point" to "have reference symmetry *relative to other Wi-Fi access points* in the target area." In the alternative, "systematically driving each road in the target area using a predesigned Chinese Postman scanning	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		Patent) *see, e.g.*, Abstract, Figs. 3-6, 11, 2:55-56, 4:4-9, 4:31-40, 4:66-5:8, 5:17-20, 5:33-37, 8:28-59, 9:2-21, 9:51-10:4; Ex. 13 ('988 patent prosecution history) Reply to Non-Final Office Action of Nov. 30, 2007, p. 8; Ex. 10 (*The Cassell Dictionary and Thesaurus* (1999)) at 510-11; Ex. 14 (Kotz Decl.) at ¶¶ 95-118, 130-33; Ex. 15 (Acampora Dep. Tr.) at 110:2-11, 170:15-171:5, 168:11-18, 167:14-21; 173:2-179:11, 181:21-182:13, 191:11-192:3, 224:24-225:19; Ex. 22 (Acampora Dep. Ex. 1) at Figs. 3,4.	route so as to collect multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point so that the multiple readings have reference symmetry relative to other Wi-Fi access points in the target area." Support: Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; Ex. 3 ('988 patent) 7:52-8:59, 9:14-19, 9:64-10:4, Figs. 4 & 11, claim 1; Ex. 39 (U.S. Patent App. Pub. 2009/0075672); Ex. 40 (U.S. Patent No. 7,493,127); Ex. 27 (The Compact Oxford English Dictionary) at 87 [sub-page 781], 200 [sub-page 777], 1991 [sub-pages 456-457], 2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 42 (5th ed. 2002); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 689, 916 (20th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 36 (8th ed. 2003).	
"recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point so that the . . . calculation of the position of the Wi-Fi access point avoids arterial bias in the calculated position information"	'988/1	Multiple scans of a Wi-Fi access point are recorded. The scans are taken at different locations around the Wi-Fi access point. This results in the following: (a) the multiple readings produce a calculated position of the Wi-Fi access point having reference symmetry relative to other Wi-Fi access points in the target area and (b) the calculated position of the Wi-Fi access point reduces the effects of arterial bias. *See* "Wi-Fi access points," "reference	Indefinite in violation of 35 U.S.C. § 112, ¶ 2 because it does not apprise one skilled in the art of the bounds of the claim, and in particular (1) impermissibly recites a method step in an apparatus claim; and (2) fails to provide any measure of when "recording multiple readings . . . around the Wi-Fi access point . . . so that the calculation of the position of the Wi-Fi access point avoids arterial bias" is achieved. In the alternative, "storing Wi-Fi access point signals received	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		symmetry," "avoids arterial bias," and "calculated position information." Support: Ex. 3 ('988 Patent) *see, e.g.*, Abstract, Figs. 3-6, 11, 2:55-56, 4:4-9, 4:31-40, 4:66-5:8, 5:17-20, 5:33-37, 8:28-59, 9:2-21, 9:51-10:4; Ex. 13 ('988 patent prosecution history) Reply to Non-Final Office Action of Nov. 30, 2007, p. 8; Ex. 10 (*The Cassell Dictionary and Thesaurus* (1999)) at 510-11; Ex. 14 (Kotz Decl.) at ¶¶ 95-118, 130-33; Ex. 15 (Acampora Dep. Tr.) at 110:2-11, 170:15-171:5, 168:11-18, 167:14-21; 173:2-179:11, 181:21-182:13, 191:11-192:3, 224:24-225:19; Ex. 22 (Acampora Dep. Ex. 1) at Figs. 3,4.	while scanning along a shortest planned route along each drivable road throughout each target area, e.g., Chinese Postman, and not using random scanning or collection methods." Support: Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; ('694 Prosecution History) GSHFED0000295; Ex. 3 ('988 Patent) Abstract, 3:12-26, 4:4-9, 4:28-46, 5:24-37, 7:34-8:59, 9:2-10, 9:14-19, 9:57-10:4, Figs. 1-5, 8 & 11, claim 1; Ex. 39 (U.S. Patent App. Pub. 2009/0075672); Ex. 40 (U.S. Patent No. 7,493,127); Ex. 27 (The Compact Oxford English Dictionary) at 92 [sub-page 823], 132 [sub-page 166], 200 [sub-page 777], 2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 543 (7th ed. 2005);	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			Ex. 28 (The American Heritage College Dictionary) at 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 56-57 (5th ed. 2002); Ex. 35 (Newton's Telecom Dictionary) 39-40, 689, 916 (20th ed. 2004); Ex. 29 (The Merriam-Webster Dictionary) at 48 (6th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005).	
"substantially all Wi-Fi access points"	'694/1 '988/1	Substantially all observed Wi-Fi access points. *See* "Wi-Fi access points." Support: Ex. 2 ('694 Patent) *see, e.g.*, Abstract, 4:2-10, 4:47-54, 5:19-21, 5:54-56, 6:55-7:5, 7:63-66, 9:41-43, 10:57-67; Ex. 3 ('988 Patent) *see, e.g.*, Abstract, 4:31-40, 5:27-34, 5:66-6:1, 6:35-37, 7:35-55,	All but an insignificant number of Wi-Fi access points in the target area. Support: Ex. 3 ('988 Patent), 4:28-46, 5:24-37, 6:19-30, 8:13-16, 8:44-47, 9:12-19 and corresponding disclosures in the '694 patent; Ex. 23 ('988 Prosecution History) GSHFED0000181-91; Ex. 41 (*David*	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		8:44-47, 10:21-23, 11:35-45; Ex. 15 (Acampora Dep. Tr.) 37:1-4, 38:22-25, 238:2-239:17, 245:8-246:17, 247:2-247:21.	*Nichols & Nichols Lures v. Strike King Lure Co.*, 2000 U.S. Dist. LEXIS 15781), 31-32 (N.D. Tex. Oct. 25, 2000); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 232, 689, 916 (20th ed. 2004); Ex. 27 (The Compact Oxford English Dictionary) at 2011 [sub-pages 640-642].	
"for substantially all Wi-Fi access points in the target area"	'694/1 '988/1	For substantially all observed Wi-Fi access points in the target area. *See* "Wi-Fi access points" and "target area." Support: Ex. 2 ('694 Patent) *see, e.g.*, Abstract, 4:2-10, 4:47-54, 5:19-21, 5:54-56, 6:55-7:5, 7:63-66, 9:41-43, 10:57-67; Ex. 3 ('988 Patent) *see, e.g.*, Abstract, 4:31-40, 5:27-34, 5:66-6:1, 6:35-37, 7:35-55, 8:44-47, 10:21-23, 11:35-45; Ex. 15 (Acampora Dep. Tr.) 37:1-4, 38:22-25, 238:2-239:17, 245:8-246:17, 247:2-247:21.	All but an insignificant number of Wi-Fi access points in the target area. Support: Ex. 3 ('988 Patent), 4:28-46, 5:24-37, 6:19-30, 8:13-16, 8:44-47, 9:12-19 and corresponding disclosures in the '694 patent; Ex. 23 ('988 Prosecution History) GSHFED0000181-91; Ex. 41 (*David Nichols & Nichols Lures v. Strike King Lure Co.*, 2000 U.S. Dist. LEXIS 15781), 31-32 (N.D. Tex. Oct. 25, 2000); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 232, 689, 916 (20th ed. 2004); Ex. 27 (The Compact Oxford English Dictionary) at	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			2011 [sub-pages 640-642].	
"said chosen algorithm being suited for the number of identified Wi-Fi access points"	'245/1	Does not need to be construed. But if construed: The chosen location-determination algorithm is suited for the number of Wi-Fi access points that are identified. *See* "Wi-Fi access points." Support: Ex. 1 ('245 Patent) *see, e.g.*, 4:33-40, 5:45-48, 7:7-13; Ex. 5 (*English Dictionary* (2d ed. 1991)) at 1956-57, subpage 149; Ex. 14 (Kotz Decl.) at ¶¶ 86-88.	Indefinite under 35 U.S.C. § 112, ¶ 2 because it does not apprise one skilled in the art of the bounds of the claim, and in particular fails to apprise the person of ordinary skill in the art which algorithm(s) is (are) "suited" for a particular number of identified Wi-Fi access points. Support: Ex. 1 ('245 Patent), 5:45-48, 7:3-12, 7:23-24, 12:29-32; Ex. 24 '245 Prosecution History) GSHFED0000089-90; Ex. 42 (McGraw-Hill Dictionary of Scientific and Technical Terms), 66, 2287 (6th ed. 2003); Ex. 43 (The American Heritage Science Dictionary) at 17 (2005); Ex. 27 (The Compact Oxford English Dictionary) at 1956-57 [sub-pages 146-150], 2289 [sub-page 100]; Ex. 28 (The American Heritage College Dictionary) at 1358, 1530 (3rd ed. 2000); Ex. 35 (Newton's Telecom Dictionary)	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			39-40, 916 (20th ed. 2004); Ex. 44 (Webster's New World College Dictionary) at 1432 (4th ed. 2004); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 14-15 (8th ed. 2003).	
"providing a reference database of calculated locations of Wi-Fi access points in a target area"	'245/1	Does not need to be construed. But if construed: Providing a database of calculated locations of Wi-Fi access points in a target area. The database is used to locate a user device having a Wi-Fi radio. *See* "calculated locations," "Wi-Fi access points," and "target area." Support: Ex. 1 ('245 Patent) *see, e.g.*, Abstract, Fig. 9, 4:21-23, 5:15-17, 6:29-36, 8:58-64, 14:4-5; Ex. 3 ('988 Patent) Fig. 4, 5:1-3, 8:28-34, 8:41-44; Ex. 14 (Kotz Decl.) at ¶¶ 130-33; Ex. 15 (Acampora Dep. Tr.) 110:2-11, 191:11-192:3, 224:24-225:19.	A database that contains calculated locations for all the Wi-Fi access points collected in the pre-identified target area by scanning a shortest planned route along all drivable roads. The database does not include information about Wi-Fi access points gathered using random or end-user based collection methods. *See also* "a database of Wi-Fi access points for at least one target area" in the '988 and '694 patents. Support: Ex. 3 ('988 Patent), Abstract, claim 1, 3:12-18, 4:28-40, 5:27-30, 5:55-6:3, 7:39-44, 8:28-34, 8:41-44, 8:56-59; Ex. 2 '694 Patent), 2:51-57, 5:8-24 and corresponding disclosures in the	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			'245 patent; Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; Ex. 27 (The Compact Oxford English Dictionary) at 200 [sub-page 777], 389 [sub-page 261], 2011 [sub-pages 640-642]; Ex. 33 (Collins English Dictionary) at 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 32 (Microsoft Computer Dictionary) at 141 (5th ed. 2002); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 232, 916 (20th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 123 (8th ed. 2003).	
"logic to recalculate position	'988/1	Software and/or hardware to recalculate position	Indefinite under 35 U.S.C. § 112, ¶ 2 because the	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
information for Wi-Fi access points previously stored in the database to utilize position information for the newly-discovered readings of previously stored Wi-Fi access points"		information for Wi-Fi access points previously stored in the database. This recalculation utilizes new position information for such Wi-Fi access points calculated using scans taken after the previously stored Wi-Fi access points were stored. *See* "Wi-Fi access points." Support: Ex. 3 ('988 Patent) *see, e.g.*, Figs. 8, 9, 4:40-46, 5:11-13, 5:37-41, 11:47-13:31, 14:14; Ex. 7 (*The American Heritage College Dictionary* (3rd ed. 1997)) at 797; Ex. 8 (*Wiley Electrical and Electronics Engineering Dictionary* (2004)) at 432; Ex. 9 (*of Scientific and Technical Terms* (4th ed. 1989)) at 1101; Ex. 14 (Kotz Decl.) at ¶¶ 32, 58-60, 66-68; Ex. 15 (Acampora Dep. Tr.) 69:2-6, 204:16-19, 208:2-17, 208:21-25, 219:14-220:19; Ex. 16 (Anthony S. Acampora, *An Introduction to Broadband Networks* (1994)) at 1; Ex. 17	specification does not disclose a structure corresponding to the claimed "logic" capable of performing the recited function of "recalculat[ing] position information for Wi-Fi access points previously stored in the database to utilize position information for the newly-discovered readings of previously stored Wi-Fi access points." Support: Ex. 3 ('988 Patent), 12:29-13:31; Ex. 27 (The Compact Oxford English Dictionary) at 200 [sub-page 777], 389 [sub-page 261], 992 [sub-pages 1107-1108]; Ex. 32 (Microsoft Computer Dictionary) at 141, 317 (5th ed. 2002); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 232, 916 (20th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 123 (8th ed. 2003).	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		(U.S. Patent No. 4,425,639) at 7:60-63; Ex. 18 (U.S. Patent Application No. 20080039130) at ¶ 76; Ex. 19 (U.S. Patent No. 7,869,667 B1) at 12:48; Ex. 20 (U.S. Patent No. 7,627,548) at 5:61-62; Ex. 21 (U.S. Patent No. 7,751,592) at 12:51-54.		
"computer-implemented logic to add records to the database for newly-discovered Wi-Fi access points"	'988/1	Computer-implemented software and/or hardware to add data records to the database for newly-discovered Wi-Fi access points. *See* "Wi-Fi access points" and "database records." Support: Ex. 3 ('988 Patent) *see, e.g.*, Figs. 8, 9, 4:40-46, 5:11-13, 5:37-41, 11:47-13:31, 14:14; Ex. 7 (*The American Heritage College Dictionary* (3rd ed. 1997)) at 797; Ex. 8 (*Wiley Electrical and Electronics Engineering Dictionary* (2004)) at 432; Ex. 9 (*McGraw-Hill Dictionary of Scientific and Technical Terms* (4th ed. 1989)) at 1101; Ex. 14 (Kotz Decl.) at ¶¶ 32, 58-60, 63; Ex.	Indefinite under 35 U.S.C. § 112, ¶ 2 because the specification does not disclose a structure corresponding to the claimed "computer-implemented logic" capable of performing the recited function of "add[ing] records to the database for newly-discovered Wi-Fi access points." Support: Ex. 3 ('988 Patent), 11:64-12:6, 12:29-38, 12:39-13:31; Ex. 23 ('988 Prosecution History) GSHFED0000169-72, GSHFED0000181-91, GSHFED0000200-12; Ex. 27 (The Compact Oxford English Dictionary) at 389 [sub-page 261], 992 [sub-pages 1107-1108]; Ex. 32 (Microsoft Computer	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		15 (Acampora Dep. Tr.) 69:2-6, 204:16-19, 208:2-17, 208:21-25, 219:14-220:19; Ex. 16 (Anthony S. Acampora, *An Introduction to Broadband Networks* (1994)) at 1; Ex. 17 (U.S. Patent No. 4,425,639) at 7:60-63; Ex. 18 (U.S. Patent Application No. 20080039130) at ¶ 76; Ex. 19 (U.S. Patent No. 7,869,667 B1) at 12:48; Ex. 20 (U.S. Patent No. 7,627,548) at 5:61-62; Ex. 21 (U.S. Patent No. 7,751,592) at 12:51-54.	Dictionary) at 141, 317 (5th ed. 2002); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 232, 689, 916 (20th ed. 2004); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 123 (8th ed. 2003).	
"computer-implemented clustering logic to identify position information based on error prone GPS information"	'988/2	Computer-implemented software and/or hardware to identify when position information for a Wi-Fi access point based on GPS readings is likely to be erroneous. The software and/or hardware identifies position information that is not located within a certain threshold distance of other position information for the Wi-Fi access point. Support: Ex. 3 ('988 Patent) *see, e.g.*, Figs. 8, 9, 4:47-49, 5:11-13, 11:47-13:31,	Indefinite under 35 U.S.C. § 112, ¶ 2 because (1) it does not apprise one skilled in the art of the bounds of the claim, and in particular fails to apprise the person of ordinary skill in the art what constitutes "error prone GPS information"; and (2) in violation of 35 U.S.C. § 112, ¶ 2 because the specification does not disclose a structure corresponding to the claimed "computer-implemented clustering logic" capable of performing the recited function of	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		14:14; Ex. 7 (*The American Heritage College Dictionary* (3rd ed. 1997)) at 797; Ex. 8 (*Wiley Electrical and Electronics Engineering Dictionary* (2004)) at 432; Ex. 9 (*McGraw-Hill Dictionary of Scientific and Technical Terms* (4th ed. 1989)) at 1101; Ex. 14 (Kotz Decl.) at ¶¶ 32, 58-60, 70-71; Ex. 15 (Acampora Dep. Tr.) 69:2-6, 204:16-19, 208:2-17, 208:21-25, 219:14-220:19; Ex. 16 (Anthony S. Acampora, *An Introduction to Broadband Networks* (1994)) at 1; Ex. 17 (U.S. Patent No. 4,425,639) at 7:60-63; Ex. 18 (U.S. Patent Application No. 20080039130) at ¶ 76; Ex. 19 (U.S. Patent No. 7,869,667 B1) at 12:48; Ex. 20 (U.S. Patent No. 7,627,548) at 5:61-62; Ex. 21 (U.S. Patent No. 7,751,592) at 12:51-54.	"identify[ing] position information based on error prone GPS information." Support: Ex. 3 ('988 Patent), 12:6-13; Ex. 27 (The Compact Oxford English Dictionary) at 992 [sub-pages 1107-1108], 1718 [sub-page 33]; Ex. 32 (Microsoft Computer Dictionary) at 317, 474 (5th ed. 2002); Ex. 35 (Newton's Telecom Dictionary) at 737 (20th ed. 2004); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 448 (8th ed. 2003).	
"logic to determine a weighted centroid position for all position information reported for an access point"	'988/3	Software and/or hardware to determine a weighted centroid position for a Wi-Fi access point. The weighted centroid position is determined using all	Indefinite under 35 U.S.C. § 112, ¶ 2 because the specification does not disclose a structure corresponding to the claimed "logic" capable of performing	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		position information reported for that Wi-Fi access point. *See* "weighted centroid position" and "Wi-Fi access points." Support: Ex. 3 ('988 Patent) *see, e.g.*, Figs. 8, 9, 4:50-57, 5:11-13, 11:47-13:31, 14:14; Ex. 7 (*The American Heritage College Dictionary* (3rd ed. 1997)) at 797; Ex. 8 (*Wiley Electrical and Electronics Engineering Dictionary* (2004)) at 432; Ex. 9 (*McGraw-Hill Dictionary of Scientific and Technical Terms* (4th ed. 1989)) at 1101; Ex. 14 (Kotz Decl.) at ¶¶ 32, 58-60, 74-75; Ex. 15 (Acampora Dep. Tr.) 69:2-6, 204:16-19, 208:2-17, 208:21-25, 219:14-220:19; Ex. 16 (Anthony S. Acampora, *An Introduction to Broadband Networks* (1994)) at 1; Ex. 17 (U.S. Patent No. 4,425,639) at 7:60-63; Ex. 18 (U.S. Patent Application No. 20080039130) at ¶ 76; Ex. 19 (U.S. Patent No. 7,869,667 B1) at 12:48; Ex. 20 (U.S. Patent	the recited function of "determin[ing] a weighted centroid position for all position information reported for an access point." Support: Ex. 3 ('988 Patent), 3:20-26, 12:11-20, 12:24-28, 12:35-13:31; Ex. 42 (McGraw-Hill Dictionary of Scientific and Technical Terms) at 357, 2287 (6th ed. 2003); Ex. 27 (The Compact Oxford English Dictionary) at 200 [sub-page 777], 229 [sub-page 1040], 992 [sub-pages 1107-1108], 2289 [sub-page 100]; Ex. 32 (Microsoft Computer Dictionary) at 317 (5th ed. 2002); Ex. 33 (Collins English Dictionary) at 277, 452 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379, 1530 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 230 (11th ed. 2004); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 916 (20th ed. 2004); Ex. 30 (The Compact Oxford	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		No. 7,627,548) at 5:61-62; Ex. 21 (U.S. Patent No. 7,751,592) at 12:51-54.	English Dictionary of Current English) at 133 (3rd ed. 2005).	
"logic to identify position information that exceeds a statistically-based deviation threshold amount away from the centroid position"	'988/3	Software and/or hardware to identify position information whose distance from the centroid position exceeds a certain threshold distance. This threshold distance is based on the distribution of the position information used to calculate the centroid position. *See* "weighted centroid position." Support: Ex. 3 ('988 Patent) *see, e.g.*, Figs. 8, 9, 4:50-57, 5:11-13, 11:47-13:31, 14:14; Ex. 7 *The American Heritage College Dictionary* (3rd ed. 1997)) at 797; Ex. 8 (*Wiley Electrical and Electronics Engineering Dictionary* (2004)) at 432; Ex. 9 (*McGraw-Hill Dictionary of Scientific and Technical Terms* (4th ed. 1989)) at 1101; Ex. 14 (Kotz Decl.) at ¶¶ 32, 58-60, 77-80; Ex. 15 (Acampora Dep. Tr.) 69:2-6, 204:16-19, 208:2-17,	Indefinite under 35 U.S.C. § 112, ¶ 2 because the specification does not disclose a structure corresponding to the claimed "logic" capable of performing the recited function of "identify[ing] position information that exceeds a statistically-based deviation threshold amount away from the centroid position." Support: Ex. 3 ('988 patent), 12:6-20; Ex. 42 (McGraw-Hill Dictionary of Scientific and Technical Terms) at 357, 2287 (6th ed. 2003); Ex. 27 (The Compact Oxford English Dictionary) at 229 [sub-page 1040], 992 [sub-pages 1107-1108], 2289 [sub-page 100]; Ex. 32 (Microsoft Computer Dictionary) at 317 (5th ed. 2002); Ex. 33 (Collins English Dictionary) at 277 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 1530	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		208:21-25, 219:14-220:19; Ex. 16 (Anthony S. Acampora, *An Introduction to Broadband Networks* (1994)) at 1; Ex. 17 (U.S. Patent No. 4,425,639) at 7:60-63; Ex. 18 (U.S. Patent Application No. 20080039130) at ¶ 76; Ex. 19 (U.S. Patent No. 7,869,667 B1) at 12:48; Ex. 20 (U.S. Patent No. 7,627,548) at 5:61-62; Ex. 21 (U.S. Patent No. 7,751,592) at 12:51-54.	(3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 230 (11th ed. 2004).	
"the clustering logic . . . excludes such deviating position information from the database and from influencing the calculated positions of the Wi-Fi access points"	'988/3	The software and/or hardware excludes such deviating position information from being stored in the database of WiFi access points. Such deviating position information is not used to determine the calculated positions of the Wi-Fi access points. *See* "computer-implemented clustering logic . . . " and "Wi-Fi access points." Support: Ex. 3 ('988 Patent) *see, e.g.*, Figs. 8, 9, 4:50-57, 5:11-15, 5:37-41, 11:47-13:31, 14:14; Ex. 7 (*The American Heritage College*	Indefinite under 35 U.S.C. § 112, ¶ 2 because the specification does not disclose a structure corresponding to the claimed "clustering logic" capable of performing the recited function of "exclude[ing] such deviating position information from the database and from influencing the calculated positions of the Wi-Fi access points." Support: Ex. 3 ('988 patent), 12:7-20; Ex. 42 (McGraw-Hill Dictionary of Scientific and Technical Terms), 357, 2287 (6th ed. 2003); Ex. 27 (The	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		Dictionary (3rd ed. 1997)) at 797; Ex. 8 (*Wiley Electrical and Electronics Engineering Dictionary* (2004)) at 432; Ex. 9 (*McGraw-Hill Dictionary of Scientific and Technical Terms* (4th ed. 1989)) at 1101; Ex. 14 (Kotz Decl.) at ¶¶ 32, 58-60, 74, 82-84; Ex. 15 (Acampora Dep. Tr.) 69:2-6, 204:16-19, 208:2-17, 208:21-25, 219:14-220:19; Ex. 16 (Anthony S. Acampora, *An Introduction to Broadband Networks* (1994)) at 1; Ex. 17 (U.S. Patent No. 4,425,639) at 7:60-63; Ex. 18 (U.S. Patent Application No. 20080039130) at ¶ 76; Ex. 19 (U.S. Patent No. 7,869,667 B1) at 12:48; Ex. 20 (U.S. Patent No. 7,627,548) at 5:61-62; Ex. 21 (U.S. Patent No. 7,751,592) at 12:51-54.	Compact Oxford English Dictionary) at 200 [sub-page 777], 229 [sub-page 1040], 389 [sub-page 261], 992 [sub-pages 1107-1108], 2289 [sub-page 100]; Ex. 32 (Microsoft Computer Dictionary) at 141, 317 (5th ed. 2002); Ex. 33 (Collins English Dictionary) at 277 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 1530 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 230 (11th ed. 2004); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 232, 916 (20th ed. 2004); Ex. 30 (The Compact Oxford English Dictionary of Current English) at 133 (3rd ed. 2005); Ex. 31 (Barron's Dictionary of Computer and Internet Terms) at 123 (8th ed. 2003).	
"using the recorded location information for each of the observed WiFi access points in conjunction with predefined rules to determine	'897/1	Does not need to be construed. But if construed: Predefined rules are used to determine whether each observed WiFi access point should be	Indefinite under 35 U.S.C. § 112, ¶ 2 because (a) it does not apprise one skilled in the art of the bounds of the claim, and in particular fails to apprise the person of	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
whether an observed WiFi access point should be included or excluded from a set of WiFi access points"		included or excluded from a set of WiFi access points that is to be used to calculate location. The predefined rules consider recorded location information for each of the observed WiFi access points. *See* "recorded location information" and "WiFi access points." Support: Ex. 4 ('897 Patent) *see, e.g.*, Figs. 5, 6, 4:35-42, 4:50-52, 5:20-23, 5:37-43, 5:65-6:12, 7:34-52, 9:11-16, 10:6-23; Ex. 6 (*Webster's Third New International Dictionary Unabridged* (2002)) at 1785; Ex. 7 (*The American Heritage College Dictionary* (3rd ed. 1997)) at 1192; Ex. 14 (Kotz Decl.) at ¶¶ 87-88, 91-92; Ex. 15 (Acampora Dep. Tr.) at 221:14-19, 222:11-223:5.	ordinary skill in the art what constitutes the claimed "predefined rules." Support: Ex. 4 ('897 patent), 6:3-12, 7:3-12, 7:34-48, 8:46-10:31, 9:11-15; Ex. 26 ('897 Prosecution History) GSHFED_0000394-95; Ex. 33 (Collins English Dictionary) at 452 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379; Ex. 34 (The Concise Oxford English Dictionary) at 836 (11th ed. 2004); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 689, 916 (20th ed. 2004).	
"rules to determine a reference point and to compare the recorded location information for each of the observed WiFi	'897/3	Does not need to be construed. But if construed: Rules that (1) first determine a reference point and (2) then compare the recorded	Indefinite under 35 U.S.C. § 112, ¶ 2 because (a) it does not apprise one skilled in the art of the bounds of the claim, and in particular fails to	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
access points to the reference point"		location information for each of the observed WiFi access points to the reference point. *See* "recorded location information" and "WiFi access points." Support: Ex. 4 ('897 Patent) *see, e.g.*, Fig. 6, 4:63-5:4, 5:22-23, 5:65-6:12, 8:52-10:3; Ex. 6 (*Webster's Third New International Dictionary Unabridged* (2002)) at 1785; Ex. 7 (*The American Heritage College Dictionary* (3rd ed. 1997)) at 1192; Ex. 14 (Kotz Decl.) at ¶¶ 87-88, 91-92; Ex. 15 (Acampora Dep. Tr.) at 221:14-19, 222:11-223:5.	apprise the person of ordinary skill in the art what constitutes the claimed "rules." Support: Ex. 4 '897 patent, 8:61-9:15; Ex. 33 (Collins English Dictionary) at 452 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379; Ex. 34 (The Concise Oxford English Dictionary) at 836 (11th ed. 2004); Ex. 35 (Newton's Telecom Dictionary) at 39-40, 689, 916 (20th ed. 2004).	
"in response to a user application request to determine a location of a user-device having a Wi-Fi radio"	'245/1	In response to a request made by an application running on a user-device having a Wi-Fi radio to determine the location of the user-device. *See* "a user-device having a Wi-Fi radio." Support: Ex. 1 ('245 Patent) *see, e.g.*, Fig.	In response to a request made by an end-user facing application, *i.e.*, not by the operating system, to determine the location of an end user-device using a Wi-Fi radio. Support: Ex. 1 ('245 patent), 1:31-50, 3:53-63, 6:7-9, 6:12-29, 6:52-64, 7:12, 8:27, 9:10, 9:54-55,	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
		9, 4:23-24, 5:15-17, 6:12-29.	Figs. 1 & 9; Ex. 33 (Collins English Dictionary) at 452, 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 379, 455 (3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472, 836 (11th ed. 2004); Ex. 45 (Microsoft Computer Dictionary) at 30-31, 33, 193, 378 & 544 (5th ed. 2002); Ex. 46 (Webster's New World Computer Dictionary) at 22-24, 129, 264-265, 387 (4th ed. 2004); Ex. 47 (PC Magazine Encyclopedia definition at "API") *available at* http://www.pcmag.com/encyclopedia_term/0,2542,t=API&i=37856,00.asp.	
"a user-device having a Wi-Fi radio"	'245/1	Does not need to be construed. But if construed: A user device having a Wi-Fi radio. Support: Ex. 1 ('245 Patent) *see, e.g.*, Fig. 1, 4:20-21, 4:64-65, 5:55-61, 6:14-29.	An end user or consumer device having a Wi-Fi radio. Support: Ex. 1 ('245 patent), 1:36-40, 1:48-50, 8:27; 9:10; 9:54-55; Ex. 33 (Collins English Dictionary) at 543 (7th ed. 2005); Ex. 28 (The American Heritage College Dictionary) at 455	

Term	Claims	Skyhook's Construction	Google's Construction	Court's Construction
			(3rd ed. 2000); Ex. 34 (The Concise Oxford English Dictionary) at 472 (11th ed. 2004); Ex. 45 (Microsoft Computer Dictionary) at 193; Ex. 46 (Webster's New World Computer Dictionary) at 129, 387.	
"a WiFi-enabled device communicating with WiFi access points within range of the WiFi-enabled device so that observed WiFi access points identify themselves"	'897/1	A user device having a Wi-Fi radio communicates with Wi-Fi access points within range of the user device. Communications received by the user device include an identifier (*e.g.*, a MAC address) for observed Wi-Fi access points. *See* "WiFi access points." Support: Ex. 4 ('897 Patent) *see, e.g.*, Figs. 1, 3, 4:43-47, 5:12-13, 5:16-17, 5:65-67, 6:13-16, 6:52-60, 7:4-8, 7:13-26; Ex. 12 (*The IEEE Standard Dictionary of Electrical and Electronics Terms* (6th ed. 1996)) at 182	A user device having a Wi-Fi radio actively searching for Wi-Fi access points by transmitting a signal to all Wi-Fi access points within range and receiving a response that includes a unique identifier (*e.g.*, a MAC address) from each such Wi-Fi access point. Support: Ex. 4 ('897 patent), Abstract, 6:13-21, 6:47-59, 7:12-26, Fig. 2, Fig. 5; Ex. 35 (Newton's Telecom Dictionary) at 39-40, 916 (20th ed. 2004); Ex. 48 (Leary et al., "Wireless LAN Fundamentals: Mobility," Jan. 9, 2004), *available at* http://www.ciscopress.com/articles/article.asp?p=102282&seqNum=2; Ex. 49 (IEEE 802.11 standard).	

III. Tutorials

Per the Court's December 14, 2010 Order, the parties will present tutorials on the relevant technology on October 21, 2011. This is 19 days before the claim construction hearing on November 9, 2011. Skyhook intends to present its tutorial in the form of a Power Point presentation by Ted Morgan and/or counsel. Google objects to Skyhook's proposal that Mr. Morgan—who is Skyhook's CEO, a co-inventor of each of the patents-in-suit, and a fact witness in this case—make a presentation at the technology tutorial. Google intends to present its tutorial in the form of a Power Point presentation by counsel.

IV. Anticipated Length Of Time For Claim Construction Hearing

Skyhook and Google anticipate the claim construction hearing will last approximately 3 hours.

V. Witnesses

Neither Skyhook nor Google intends to call any witnesses to testify at the claim construction hearing. Both parties, however, reserve the right to call a witness if the other chooses to do so.

VI. Proposed Order Of Arguments

Skyhook and Google jointly propose the arguments proceed on a term-by-term basis.

Respectfully submitted,

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By their attorneys

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Respectfully submitted,

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Certificate of Service

I, Samuel K. Lu, hereby certify that this document filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) on October 13, 2011.

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