

# EXHIBIT 7

# Exhibit 1

UPDATED CLAIM CHART FOR INFRINGEMENT OF U.S. PATENT NO. 6,314,420

Google AdWords

CLAIM 10	GOOGLE ADWORDS
<p>a. A search engine system comprising:</p>	<p>Google AdWords includes a search engine system that searches for information (e.g., advertisements) relevant to a search query. For example, when a user enters a search query into the search bar on Google's website and selects the "search" button, the user is presented a list of information, e.g., advertisements. See IPE0000051-IPE0000052. In certain configurations, these advertisements are displayed as "Sponsored Links" next to, above, and/or below the website results. <i>Id.</i>; see also G-IPE-0008836.</p> <p>Google AdWords is also used to display advertisements in response to search queries on websites in the "Google Search Network." IPE0000065; see also IPE0000054-IPE0000057 (describing various locations that AdWords advertisements will appear, including the "Google Network" which includes partner websites); G-IPE-0008837 (showing "Ads on Google sites"); G-IPE-0008842 (showing AdSense network).</p> <p>"Search queries are received by one of the Google Web Servers (GWS) . . . It passes that information to an Ad Server to choose a set of ads to return." G-IPE-0009731. "For a search results page, the end user visits google.com (or an AdSense for Search partner), enters a query, and sees results with ads." G-IPE-0009727. "On a search results page, we pick ads directly based on the user query . . . ." <i>Id.</i></p>
<p>b. a system for scanning a network to make a demand search for informons relevant to a query from an individual user;</p>	<p>Google AdWords includes at least a system for looking for or examining items in a network to make a single search engine query that is performed upon a user request for information relevant to a query from an individual user. For example, the search bar on Google's website (www.google.com) and other "search network" sites allows a user to enter a search query and run a single search engine query. See section a; IPE0000051-IPE0000053.</p>

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Google uses distributed databases in its systems, and the databases distribute information, including advertisement information, across several network locations. IPE0000011-IPE0000024; see also IPE0000026 (showing distributed systems):



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[REDACTED]

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[REDACTED]

[REDACTED]

Additionally, the system looks for and examines information on landing pages of advertisements on the Internet. IPE0000066 (“[t]he AdWords system retrieves advertiser landing pages to help us better understand the relevance and quality of your AdWords ads as a whole. . . . To fully understand the quality of your specified page, the system may follow other links on the page.”); see also G-IPE-0223570; G-IPE-0171697; G-IPE-0820298-99; G-IPE-0591639-40; G-IPE-0247648; G-IPE-0491639; G-IPE-0605010; G-IPE-0191539. This is another

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instance of looking for or examining items in a network.

To the extent any Defendant alleges that this element is not literally infringed because “scanning a network” occurs prior to receiving a query, nothing in the claim requires that particular order. Moreover, even if that particular order were required by the claim, Google AdWords would still be infringing under the doctrine of equivalents. Equivalency is found if the accused system performs substantially the same function as the patented system in substantially the same way to obtain the same result. There is no functional difference as to whether the system scans a network directly after a search to look for items to consider for relevancy to the query, or scans a network prior to the search to look for items to consider for relevancy to the query. Looking for or examining information by scanning prior to conducting the search performs substantially the same function as the claimed limitation (scanning a network to make a demand search), in substantially the same way (a scan/search for the information is performed) to achieve the same results (locating information relevant to a query).

c. a content-based filter system for receiving the informons from the scanning system and for filtering the informons on the basis of applicable content profile data for relevance to the query; and

Google AdWords includes a content-based filter system for receiving the information from the scanning system and for filtering the information on the basis of applicable content profile data for how well the information satisfies the individual user’s information need in the query. For example, Google AdWords receives and filters advertisements on the basis of content data (e.g., ad text, keyword, and landing page attributes) for relevance to the query. IPE0000058.

The Ad Shards and the Ad Mixer, using values computed by SmartASS, filter advertisements on the basis of applicable content profile data for relevance to the query. The “Quality Score” includes an analysis of the relevance of content data of the advertisement to the query. “AdWords uses a dynamic variable called ‘Quality Score’ to evaluate keyword relevance” and that “Quality Score is based [in part] on . . . the relevance of your ad text, keyword, and landing page.” *Id.*; see also IPE0000061-IPE0000062 (“[t]he Quality Score for Ad Rank on Google

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and the search network is determined by . . . the relevance of the keyword and the matched ad to the search query” and “[h]aving relevant keywords and ad text . . . will result in a higher position for your ad.”); G-IPE-0263334; G-IPE-0171132 (“Quality Score Formula [includes] . . . The relevance of the keyword to the ads in its ad group . . . The relevance of the keyword and the matched ad to the search query . . . [and] Other relevance factors”); G-IPE-0241639 (“Quality Score = . . . relevance of your ad text + . . . landing page quality + other relevancy factors”); G-IPE-0313104-106 (Quality Score includes “Relevancy” and “[Google] use[s] signals like linguistic processing to determine the relevancy of a query to a keyword.”); G-IPE-0247093 (ad quality signals include “ad text relevance”); G-IPE-0260682 (“In addition to keyword performance data Quality Score also takes into account other factors like the relevance of the keyword to your ad text . . . .”); G-IPE-0267523-24 (“Quality Score factors [include] . . . Keyword’s relevance to ad text . . . .” for example “Keyword appearing in domain (example: FTD appearing in FTD.com gives a boost to the score)” and “Synonyms of kw in ad text gives a boost”); G-IPE-0277078 (listing “Relevance of keyword to ads in ad group” and “Relevance of keyword and ad to search query” as factors of Quality Score); G-IPE-0264611 (“Factors include: Keyword’s Relevance to Ad Text”); G-IPE-0267523-24 (“Quality Score factors in order of importance: . . . Keyword’s relevance to ad text . . . .”); G-IPE-0247094 (Quality Score factors include “ad text relevance” and “keyword relevance”); G-IPE-0337659 (“The Quality Score for Ad Rank on Google and the search network is determined by: . . . The relevance of the keyword and the matched ad to the search query.”); G-IPE-0407258 (Quality Score factors include “The relevance of the keyword and the matched ad to the search query.”); G-IPE-0347560 (Quality Score is based on “Relevance – normalized, impression-weighted landing page quality”); G-IPE-0483110 (an ad’s quality is determined by “the semantic relevance of the ad copy relative to the keyword” and “the relevance and quality of the landing page.”); G-IPE-0264611 (Quality Score Factors include “Keyword’s Relevance to Ad Text”); AOL-01202786 (“The Quality Score is based on several factors. These include: . . . Ad text relevance (such as if the ad text contains a keyword).”: AOL-01202788: AOL-01202796: AOL-01202805-806.



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[REDACTED]

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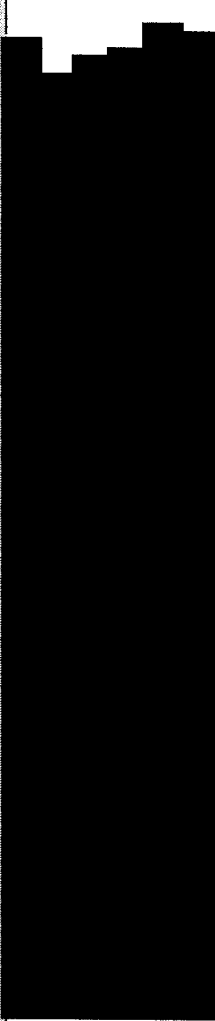
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[REDACTED]

[REDACTED]

To the extent any Defendant alleges that this element is not literally infringed, Google AdWords would still be infringing under the doctrine of equivalents. Equivalency is found if the accused system performs substantially the same function as the patented system in substantially the same way to obtain the same result.

[REDACTED]



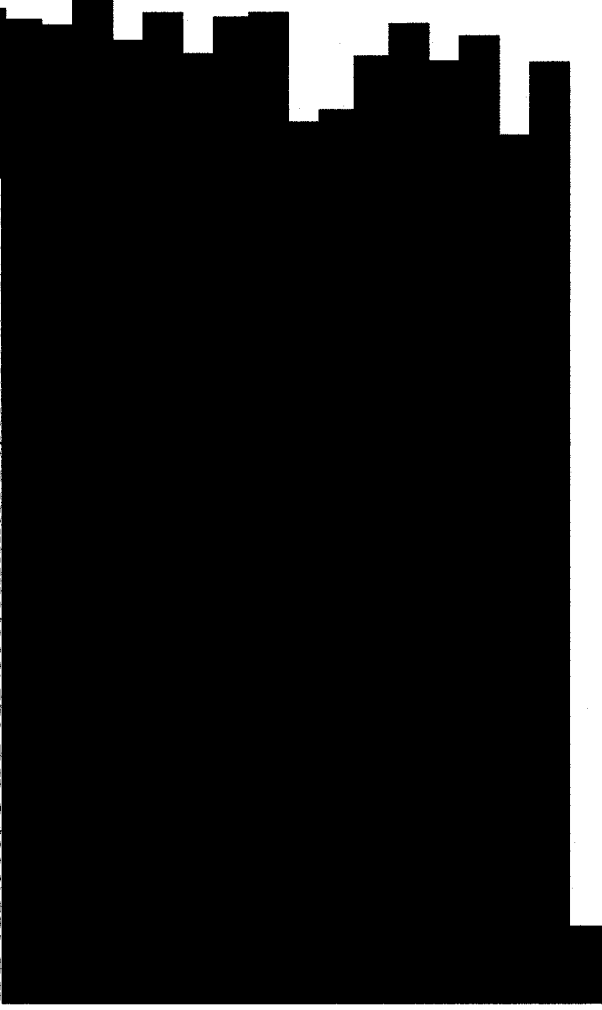
d. a feedback system for receiving collaborative feedback data from system users relative to informants considered by such users;

Google AdWords includes a system that receives data from system users with similar interests or needs regarding what information the users found to be relevant. For example, Google AdWords receives feedback (in the form of clickthrough data) about information, e.g., advertisements, considered by the other users via at least SmartASS, the stat servers, and the logs databases. See IPE0000064 (“Millions of users click on AdWords ads every day. Every single one of those clicks – and the even more numerous impressions associated with them – is analyzed by our filters (stage 1), which operate in real-time.”). Google AdWords uses the “dynamic variable called ‘Quality Score’ to evaluate keyword relevance.” IPE0000058. In AdWords, a component of the “Quality Score” is based on an advertisement’s “clickthrough rate (CTR).” *Id.*; see also IPE0000061-IPE0000062 (“[t]he historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered” and that “[h]aving . . . a strong CTR on Google . . . will result in a higher position for your ad.”). Google says that, of the three components of Quality Score, CTR is “the biggest one by far” and that “by allowing users to vote with their clicks, we have millions of people that are helping us to decide which ads are best for each search query.” IPE0000073; see also G-IPE-0260374 (“we do look at the historical performance of your particular ad text and your keyword with that ad text”); G-IPE-0313104-105 (Quality Score includes “Clickthrough rate”); G-IPE-0337659 (“The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered”).

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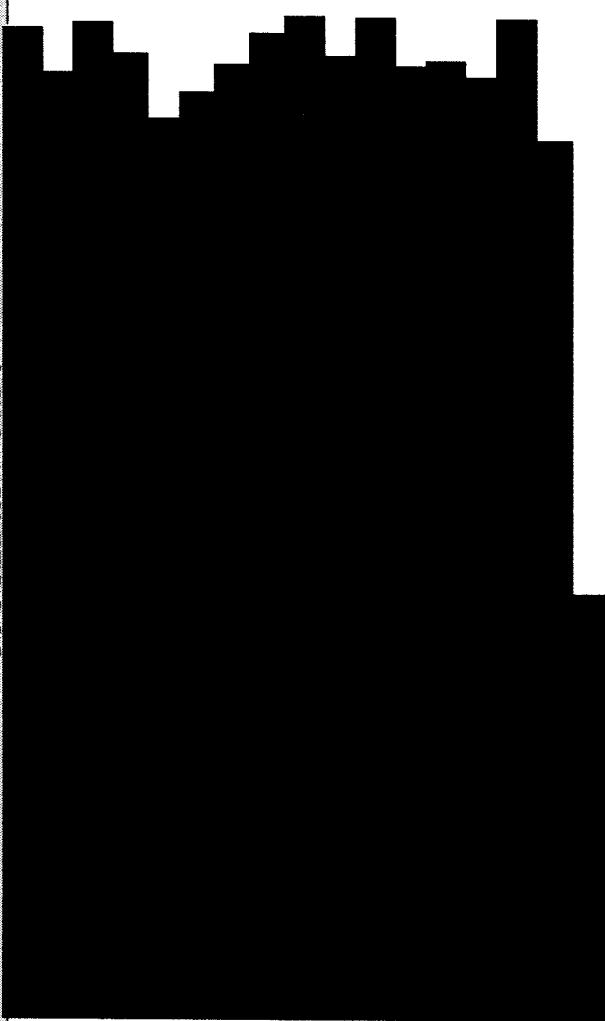
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0483110 (an ad's quality is determined by "historical performance across all advertisers who have used the keyword"); G-IPE-0264611 (Quality Score Factors include "Keyword's Historical CTR"); G-IPE-0267523-24 ("Quality Score factors in order of importance: Keyword Historical CTR . . ."); G-IPE-0171132 ("The historical clickthrough rate (CTR) of the keyword and the matched ad on the Google domain; note that CTR on non-Google sites (such as AOL.com) only ever impacts Quality Score on our search partners -- not on Google . . ."); AOL-01202786 ("The Quality Score is based on several factors. These include: • A keyword's click-through rate (CTR). This is the number of clicks an ad receives divided by the number of impressions. . . • Overall historical keyword performance with Google (i.e., how the keyword has performed in the past) . . . [and] • User experience on the landing page or site associated with an ad."); G-IPE-0171129; G-IPE-1711137; G-IPE-0407258; G-IPE-0224368; G-IPE-0224358; Alferness Deposition at 72:10-25.



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e. the filter system combining pertaining feedback data from the feedback system with the content profile data in filtering each informon for relevance to the query.

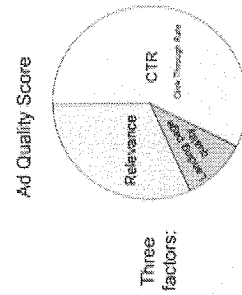
Google AdWords includes at least a filter system that combines pertaining feedback data with content data in filtering information for relevance to the query. The filter system includes the Ad Mixer and Ad Shards along with values computed by SmartASS. For example, Google states that AdWords uses a "Quality Score" to evaluate an advertisement's relevance. IPE00000063.

The Quality Score is a combination of factors including feedback data, i.e., "[a] keyword's clickthrough rate (CTR)," and content data, i.e., "the relevance of your ad text, keyword, and landing page." IPE00000063; see also IPE00000062 ("Having relevant keywords and ad text [and] a strong CTR on Google . . . will result in a higher position for your ad."); G-IPE-0337659 ("The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered . . . [and] the relevance of the keyword and the matched ad to the

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search query”); G-IPE-0483110 (an ad’s quality is determined by “historical performance across all advertisers who have used the keyword (which is a substantial amount of data), the semantic relevance of the ad copy relative to the keyword, the relevance and quality of the landing page, and other quality factors.”); G-IPE-0407258 (Quality Score includes “The historical clickthrough rate (CTR) of the keyword and the matched ad . . . [and] The relevance of the keyword and the matched ad to the search query.”); G-IPE-0247094 (“We put all of these signals and more together to create a *Quality Score* . . . . Currently, the formula is best represented as: Quality Score = keyword’s CTR, ad text relevance, keyword relevance, landing page relevance”); G-IPE-0267523-24 (“Quality Score factors in order of importance: Keyword Historical CTR, Keyword’s relevance to ad text . . . .”); G-IPE-0313104 (“Clickthrough rate” and “Relevancy” contribute to Quality Score”); G-IPE-0310824 (“we bucket Quality Score into 3 buckets (LPQ, Relevance, and CTR”); AOL-01202786 (“The Quality Score is based on several factors. These include: • A keyword’s click-through rate (CTR). This is the number of clicks an ad receives divided by the number of impressions. • Ad text relevance (such as if the ad text contains a keyword). • Overall historical keyword performance with Google (i.e., how the keyword has performed in the past). • User experience on the landing page or site associated with an ad.”); G-IPE-0347560-64; G-IPE-0223570; G-IPE-0224368; *see also* sections c and d above. The “Ad Quality Score” is illustrated as including three factors: “Relevance,” “CTR,” and “Landing page quality.” See G-IPE-0008850:



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<b>CLAIM 14</b> The system of claim 10 wherein the collaborative feedback data comprises passive feedback data.	<b>GOOGLE ADWORDS</b> Google AdWords collects and uses feedback data in the form of CTR. See claim 10 section d. The CTR recorded by Google AdWords is passive feedback data.
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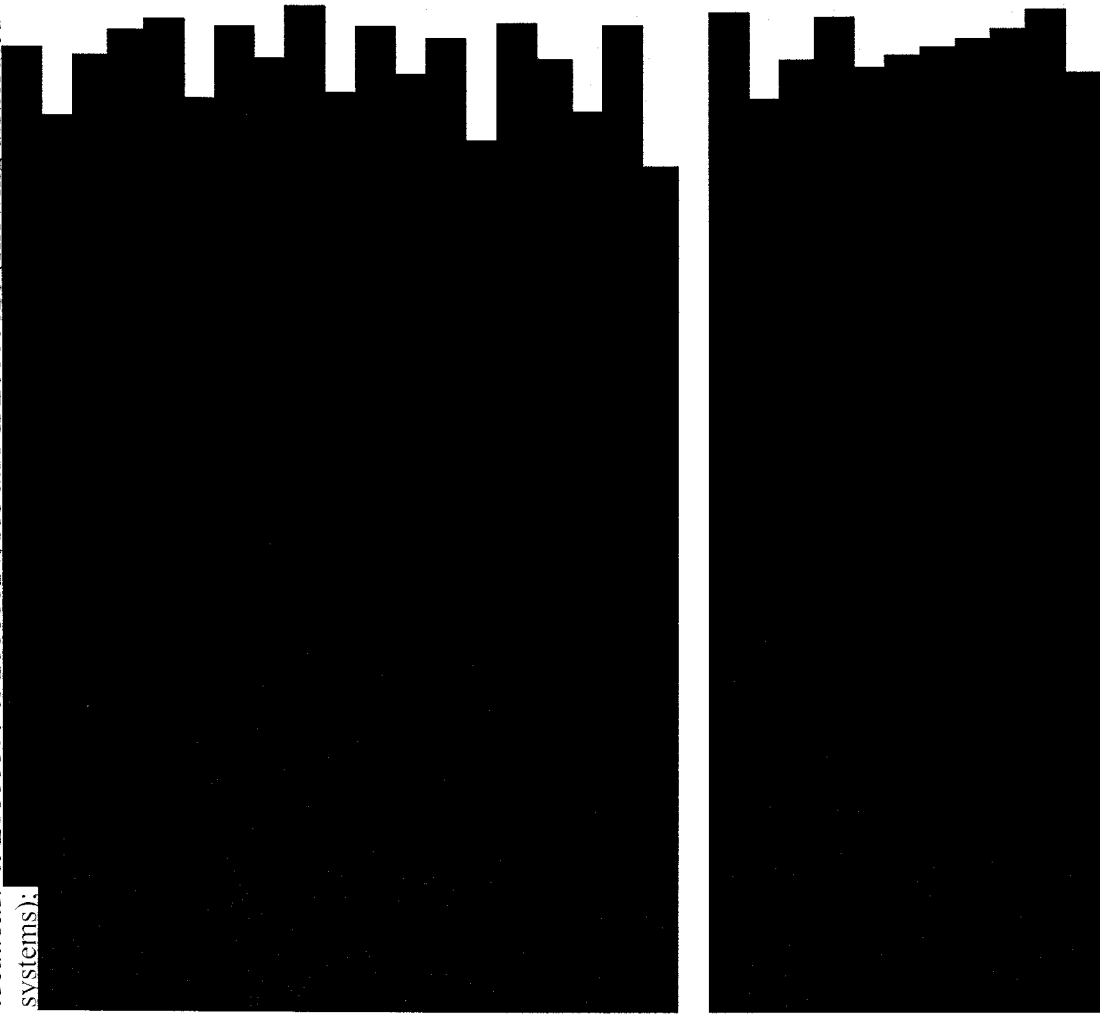
<b>CLAIM 15</b> The system of claim 14 wherein the passive feedback data is obtained by passively monitoring the actual response to a proposed informon.	<b>GOOGLE ADWORDS</b> Google AdWords passively monitors a user's behavior related to proposed advertisements. Google AdWords records the clickthrough rates of each respective advertisement. See claim 10 section d.
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CLAIM 25	GOOGLE ADWORDS
<p>a. A method for operating a search engine system comprising:</p>	<p>Google AdWords includes a search engine system that searches for information (e.g., advertisements) relevant to a search query. For example, when a user enters a search query into the search bar on Google's website and selects the "search" button, the user is presented a list of information, e.g., advertisements. See IPE0000051-IPE0000052. In certain configurations, these advertisements are displayed as "Sponsored Links" next to, above, and/or below the website results. <i>Id.</i>; see also G-IPE-0008836.</p> <p>Google AdWords is also used to display advertisements in response to search queries on websites in the "Google Search Network." IPE0000065; see also IPE0000054-IPE0000057 (describing various locations that AdWords advertisements will appear, including the "Google Network" which includes partner websites); G-IPE-0008837 (showing "Ads on Google sites"); G-IPE-0008842 (showing AdSense network).</p> <p>"Search queries are received by one of the Google Web Servers (GWS) . . . It passes that information to an Ad Server to choose a set of ads to return." G-IPE-0009731. "For a search results page, the end user visits google.com (or an AdSense for Search partner), enters a query, and sees results with ads." G-IPE-0009727. "On a search results page, we pick ads directly based on the user query . . . ." <i>Id.</i></p>
<p>b. scanning a network to make a demand search for informons relevant to a query from an individual user;</p>	<p>Google AdWords at least looks for or examines items in a network to make a single search engine query that is performed upon a user request for information (e.g., advertisements) relevant to a query from a user. For example, the search bar on Google's website (www.google.com) and other "search network" sites allows a user to enter a search query and run a single search engine query. See section a; IPE0000051-IPE0000053.</p> <p>Google uses distributed databases in its systems, and the databases distribute information, including advertisement information, across several network</p>

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locations. IPE0000011-IPE0000024; see also IPE0000026 (showing distributed systems);



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[REDACTED]

[REDACTED]

Additionally, the system looks for and examines information on landing pages of advertisements on the Internet. IPE0000066 (“[t]he AdWords system retrieves advertiser landing pages to help us better understand the relevance and quality of your AdWords ads as a whole. . . . To fully understand the quality of your specified page, the system may follow other links on the page.”); *see also* G-IPE-0223570; G-IPE-0171697; G-IPE-0820298-99; G-IPE-0591639-40; G-IPE-0247648; G-IPE-0491639; G-IPE-0605010; G-IPE-0191539. This is another instance of looking for or examining items in a network.

To the extent any Defendant alleges that this element is not literally infringed because “scanning a network” occurs prior to receiving a query, nothing in the claim requires that particular order. Moreover, even if that particular order were

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required by the claim Google AdWords would still be infringing under the doctrine of equivalents. Equivalency is found if the accused system performs substantially the same function as the patented system in substantially the same way to obtain the same result. There is no functional difference as to whether the system scans a network directly after a search to look for items to consider for relevancy to the query, or scans a network prior to the search to look for items to consider for relevancy to the query. Looking for or examining information by scanning prior to conducting the search performs substantially the same function as the claimed limitation (scanning a network to make a demand search), in substantially the same way (a scan/search for the information is performed) to achieve the same results (locating information relevant to a query).

c. receiving the informons in a content-based filter system from the scanning system and filtering the informons on the basis of applicable content profile data for relevance to the query;

Google AdWords receives information in a content-based filter system from the scanning system and filters the information on the basis of applicable content profile data for how well the information satisfies the individual user's information need in the query. For example, Google AdWords receives and filters advertisements on the basis of content data (e.g., ad text, keyword, and landing page attributes) for relevance to the query. IPE0000058.

The Ad Shards and the Ad Mixer, using values computed by SmartASS, filter advertisements on the basis of applicable content profile data for relevance to the query. The "Quality Score" includes an analysis of the relevance of content data of the advertisement to the query. "AdWords uses a dynamic variable called 'Quality Score' to evaluate keyword relevance" and that "Quality Score is based [in part] on . . . the relevance of your ad text, keyword, and landing page." *Id.*; see also IPE0000061-IPE0000062 ("[t]he Quality Score for Ad Rank on Google and the search network is determined by . . . the relevance of the keyword and the matched ad to the search query" and "[h]aving relevant keywords and ad text . . . will result in a higher position for your ad."); G-IPE-0263334; G-IPE-0171132 ("Quality Score Formula [includes] . . . The relevance of the keyword to the ads in its ad group . . . The relevance of the keyword and the matched ad to the search

query . . . [and] Other relevance factors"); G-IPE-0241639 ("Quality Score = . . . relevance of your ad text + . . . landing page quality + other relevancy factors"); G-IPE-0313104-106 (Quality Score includes "Relevancy" and "[Google] use[s] signals like linguistic processing to determine the relevancy of a query to a keyword."); G-IPE-0247093 (ad quality signals include "ad text relevance"); G-IPE-0260682 ("In addition to keyword performance data Quality Score also takes into account other factors like the relevance of the keyword to your ad text . . ."); G-IPE-0267523-24 ("Quality Score factors [include] . . . Keyword's relevance to ad text . . ." for example "Keyword appearing in domain (example: FTD appearing in FTD.com gives a boost to the score)" and "Synonyms of kw in ad text gives a boost"); G-IPE-0277078 (listing "Relevance of keyword to ads in ad group" and "Relevance of keyword and ad to search query" as factors of Quality Score); G-IPE-0264611 ("Factors include: Keyword's Relevance to Ad Text"); G-IPE-0267523-24 ("Quality Score factors in order of importance: . . . Keyword's relevance to ad text . . ."); G-IPE-0247094 (Quality Score factors include "ad text relevance" and "keyword relevance"); G-IPE-0337659 ("The Quality Score for Ad Rank on Google and the search network is determined by: . . . The relevance of the keyword and the matched ad to the search query."); G-IPE-0407258 (Quality Score factors include "The relevance of the keyword and the matched ad to the search query."); G-IPE-0347560 (Quality Score is based on "Relevance - normalized, impression-weighted landing page quality"); G-IPE-0483110 (an ad's quality is determined by "the semantic relevance of the ad copy relative to the keyword" and "the relevance and quality of the landing page."); G-IPE-0264611 (Quality Score Factors include "Keyword's Relevance to Ad Text"); AOL-01202786 ("The Quality Score is based on several factors. These include: . . . Ad text relevance (such as if the ad text contains a keyword)."); AOL-01202788; AOL-01202796; AOL-01202805-806.

[REDACTED]



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To the extent any Defendant alleges that this element is not literally infringed, Google AdWords would still be infringing under the doctrine of equivalents. Equivalency is found if the accused system performs substantially the same function as the patented system in substantially the same way to obtain the same result.

[REDACTED] to

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d. receiving collaborative feedback data from system users relative to informons considered by such users; and

Google AdWords also receives data from system users with similar interests or needs regarding what information the users found to be relevant. For example, Google AdWords receives feedback (in the form of clickthrough data) about information, e.g., advertisements, considered by the other users via at least SmartAss, the stat servers, and the logs databases. See IPE0000064 (“Millions of users click on AdWords ads every day. Every single one of those clicks – and the even more numerous impressions associated with them – is analyzed by our filters (stage 1), which operate in real-time.”). Google AdWords uses the “dynamic variable called ‘Quality Score’ to evaluate keyword relevance.” IPE0000058. In AdWords, a component of the “Quality Score” is based on an advertisement’s “clickthrough rate (CTR).” *Id.*; see also IPE0000061-IPE0000062 (“[t]he historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered” and that “[h]aving . . . a strong CTR on Google . . . will result in a higher position for your ad.”). Google says that, of the three components of Quality Score, CTR is “the biggest one by far” and that “by allowing users to vote with their clicks, we have millions of people that are helping us to decide which ads are best for each search query.” IPE0000073; see also G-IPE-0260374 (“we do look at the historical performance of your particular ad text and your keyword with that ad text”); G-IPE-0313104-105 (Quality Score includes “Clickthrough rate”); G-IPE-0337659 (“The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered”); [REDACTED] G-IPE-0483110 (an ad’s quality is determined by “historical performance across all advertisers who have used the keyword”); G-IPE-0264611 (Quality Score Factors include “Keyword’s Historical CTR”); G-IPE-0267523-24 (“Quality Score factors in order of importance: Keyword Historical CTR . . .”); G-IPE-0171132 (“The historical clickthrough rate (CTR) of the keyword and the matched ad on the Google

domain; note that CTR on non-Google sites (such as AOL.com) only ever impacts Quality Score on our search partners – not on Google . . . .”); AOL-01202786 (“The Quality Score is based on several factors. These include: • A keyword’s click-through rate (CTR). This is the number of clicks an ad receives divided by the number of impressions. . . . • Overall historical keyword performance with Google (i.e., how the keyword has performed in the past) . . . [and] • User experience on the landing page or site associated with an ad.”); G-IPE-0171129; G-IPE-1711137; G-IPE-0407258; G-IPE-0224368; G-IPE-0224358; Alferness Deposition at 72:10-25.

[REDACTED]



e. combining pertaining feedback data with the content profile data in filtering each informon for relevance to the query.

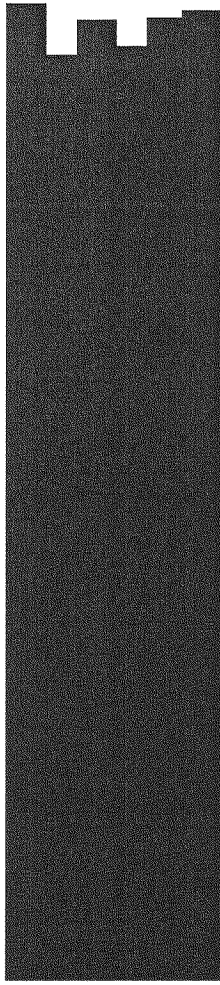
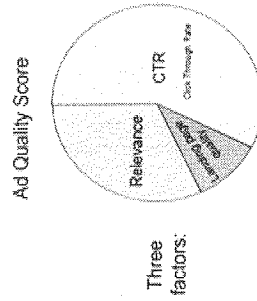
Google AdWords combines pertaining feedback data with content data in filtering information for relevance to the query. For example, Google AdWords uses a "Quality Score" to filter advertisements. IPE0000063.

The Quality Score is a combination of factors including feedback data, i.e., "[a] keyword's clickthrough rate (CTR)," and content data, i.e., "the relevance of your ad text, keyword, and landing page." IPE0000063; see also IPE0000062 ("Having relevant keywords and ad text [and] a strong CTR on Google . . . will result in a higher position for your ad."); G-IPE-0337659 ("The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered . . . [and] the relevance of the keyword and the matched ad to the search query"); G-IPE-0483110 (an ad's quality is determined by "historical performance across all advertisers who have used the keyword (which is a substantial amount of data), the semantic relevance of the ad copy relative to the keyword, the relevance and quality of the landing page, and other quality factors."); G-IPE-0407258 (Quality Score includes "The historical clickthrough rate (CTR) of the keyword and the matched ad . . . [and] The relevance of the keyword and the matched ad to the search query."); G-IPE-0247094 ("We put all

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of these signals and more together to create a *Quality Score* . . . . Currently, the formula is best represented as:  $Quality\ Score = keyword's\ CTR, ad\ text\ relevance, keyword\ relevance, landing\ page\ relevance$ "); G-IPE-0267523-24 ("Quality Score factors in order of importance: Keyword Historical CTR, Keyword's relevance to ad text . . ."); G-IPE-0313104 ("Clickthrough rate" and "Relevancy" contribute to Quality Score"); G-IPE-0310824 ("we bucket Quality Score into 3 buckets (LPQ, Relevance, and CTR"); AOL-01202786 ("The Quality Score is based on several factors. These include: • A keyword's click-through rate (CTR). This is the number of clicks an ad receives divided by the number of impressions. • Ad text relevance (such as if the ad text contains a keyword). • Overall historical keyword performance with Google (i.e., how the keyword has performed in the past). • User experience on the landing page or site associated with an ad."); G-IPE-0347560-64; G-IPE-0223570; G-IPE-0224368; see also sections c and d above. The "Ad Quality Score" is illustrated as including three factors: "Relevance," "CTR," and "Landing page quality." See G-IPE-0008850:



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[REDACTED]

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<b>CLAIM 27</b>	<b>GOOGLE ADWORDS</b>
The method of claim 25 wherein the collaborative feedback data provides passive feedback data.	Google AdWords collects and uses feedback data in the form of CTR. See claim 25 section d. The CTR recorded by Google AdWords is passive feedback data.

<b>CLAIM 28</b>	<b>GOOGLE ADWORDS</b>
The method of claim 27 wherein the passive feedback data is obtained by passively monitoring the actual response to a proposed informon.	Google AdWords passively monitors a user's behavior related to proposed advertisements. Google AdWords records the clickthrough rates of each respective advertisement. See claim 25 section d.

UPDATED CLAIM CHART FOR INFRINGEMENT OF U.S. PATENT NO. 6,775,664

Google AdWords

CLAIM 1	GOOGLE ADWORDS
<p>a. A search system comprising:</p>	<p>Google AdWords includes a system that searches for information (e.g., advertisements) relevant to a search query. For example, when a user enters a search query into the search bar on Google's website and selects the "search" button, the user is presented a list of information, e.g., advertisements. See IPE0000051-IPE0000052. In certain configurations, these advertisements are displayed as "Sponsored Links" next to, above, and/or below the website results. <i>Id.</i>; see also G-IPE-0008836.</p> <p>Google AdWords is also used to display advertisements in response to search queries on websites in the "Google Search Network." IPE0000065; see also IPE0000054-IPE0000057 (describing various locations that AdWords advertisements will appear, including the "Google Network" which includes partner websites); G-IPE-0008837 (showing "Ads on Google sites"); G-IPE-0008842 (showing AdSense network).</p> <p>"Search queries are received by one of the Google Web Servers (GWS) . . . It passes that information to an Ad Server to choose a set of ads to return." G-IPE-0009731. "For a search results page, the end user visits google.com (or an AdSense for Search partner), enters a query, and sees results with ads." G-IPE-0009727. "On a search results page, we pick ads directly based on the user query . . . ." <i>Id.</i></p>
<p>b. a scanning system for searching for information relevant to a query associated with a first user in a plurality of users;</p>	<p>Google AdWords includes a system for searching for information relevant to a query associated with a first user. For example, the search bar on Google's website (www.google.com) and other "search network" sites allows a user to enter a search query and run a search. See section a; IPE0000051-IPE0000053. Google AdWords searches for the information (e.g., advertisements), in part, on the basis of content data (e.g., ad text, keyword, and landing page attributes) for</p>

relevance to the query. IPE0000058.

“AdWords uses a dynamic variable called ‘Quality Score’ to evaluate keyword relevance” and that “Quality Score is based [in part] on . . . the relevance of your ad text, keyword, and landing page.” *Id.*; see also IPE0000061-IPE0000062 (“[t]he Quality Score for Ad Rank on Google and the search network is determined by . . . the relevance of the keyword and the matched ad to the search query” and “[h]aving relevant keywords and ad text . . . will result in a higher position for your ad.”); G-IPE-0263334; G-IPE-0171132 (“Quality Score Formula [includes] . . . The relevance of the keyword to the ads in its ad group . . . The relevance of the keyword and the matched ad to the search query . . . [and] Other relevance factors”); G-IPE-0241639 (“Quality Score = . . . relevance of your ad text + . . . landing page quality + other relevancy factors”); G-IPE-0313104-106 (Quality Score includes “Relevancy” and “[Google] use[s] signals like linguistic processing to determine the relevancy of a query to a keyword.”); G-IPE-0247093 (ad quality signals include “ad text relevance”); G-IPE-0260682 (“In addition to keyword performance data Quality Score also takes into account other factors like the relevance of the keyword to your ad text . . .”); G-IPE-0267523-24 (“Quality Score factors [include] . . . Keyword’s relevance to ad text . . .” for example “Keyword appearing in domain (example: FTD appearing in FTD.com gives a boost to the score)” and “Synonyms of kw in ad text gives a boost”); G-IPE-0277078 (listing “Relevance of keyword to ads in ad group” and “Relevance of keyword and ad to search query” as factors of Quality Score); G-IPE-0264611 (“Factors include: Keyword’s Relevance to Ad Text”); G-IPE-0267523-24 (“Quality Score factors in order of importance: . . . Keyword’s relevance to ad text . . .”); G-IPE-0247094 (Quality Score factors include “ad text relevance” and “keyword relevance”); G-IPE-0337659 (“The Quality Score for Ad Rank on Google and the search network is determined by: . . . The relevance of the keyword and the matched ad to the search query.”); G-IPE-0407258 (Quality Score factors include “The relevance of the keyword and the matched ad to the search query.”); G-IPE-0347560 (Quality Score is based on “Relevance – normalized, impression-weighted landing page quality”); G-IPE-

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0483110 (an ad's quality is determined by "the semantic relevance of the ad copy relative to the keyword" and "the relevance and quality of the landing page."); G- IPE-0264611 (Quality Score Factors include "Keyword's Relevance to Ad Text"); AOL-01202786 ("The Quality Score is based on several factors. These include: . . . Ad text relevance (such as if the ad text contains a keyword)."); AOL-01202788; AOL-01202796; AOL-01202805-806.



c. a feedback system for receiving information found to be relevant to the query by other users; and

Google AdWords includes a system for receiving information found to be relevant to the query by users of the system. For example, Google AdWords receives feedback (in the form of clickthrough data) about information, e.g.,

advertisements, considered by the other users via at least SmartASS, the stat servers, and the logs databases. See IPE0000064 (“Millions of users click on AdWords ads every day. Every single one of those clicks – and the even more numerous impressions associated with them – is analyzed by our filters (stage 1), which operate in real-time.”). Google AdWords uses the “dynamic variable called ‘Quality Score’ to evaluate keyword relevance.” IPE0000058. In AdWords, a component of the “Quality Score” is based on an advertisement’s “clickthrough rate (CTR).” *Id.*; see also IPE0000061-IPE0000062 (“[t]he historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered” and that “[h]aving . . . a strong CTR on Google . . . will result in a higher position for your ad.”). Google says that, of the three components of Quality Score, CTR is “the biggest one by far” and that “by allowing users to vote with their clicks, we have millions of people that are helping us to decide which ads are best for each search query.” IPE0000073; see also G-IPE-0260374 (“we do look at the historical performance of your particular ad text and your keyword with that ad text”); G-IPE-0313104-105 (Quality Score includes “Clickthrough rate”); G-IPE-0337659 (“The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered”); [REDACTED] G-IPE-0483110 (an ad’s quality is determined by “historical performance across all advertisers who have used the keyword”); G-IPE-0264611 (Quality Score Factors include “Keyword’s Historical CTR”); G-IPE-0267523-24 (“Quality Score factors in order of importance: Keyword Historical CTR . . .”); G-IPE-0171132 (“The historical clickthrough rate (CTR) of the keyword and the matched ad on the Google domain; note that CTR on non-Google sites (such as AOL.com) only ever impacts Quality Score on our search partners – not on Google . . .”); AOL-01202786 (“The Quality Score is based on several factors. These include: • A keyword’s click-through rate (CTR). This is the number of clicks an ad receives

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divided by the number of impressions. . . . Overall historical keyword performance with Google (i.e., how the keyword has performed in the past) . . . [and] • User experience on the landing page or site associated with an ad.”); G-IPE-0171129; G-IPE-1711137; G-IPE-0407258; G-IPE-0224368; G-IPE-0224358; Alferness Deposition at 72:10-25.

[REDACTED]

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d. content-based filter system for combining the information from the feedback system with the information from the scanning system and for filtering the combined information for relevance to at least one of the query and the first user.

[REDACTED]

Google AdWords includes at least a filter system for combining information from the feedback system with information from the scanning system to filter information for relevance to the query.

For example, Google states that AdWords uses a "Quality Score" to evaluate an advertisement's relevance. IPE00000063.

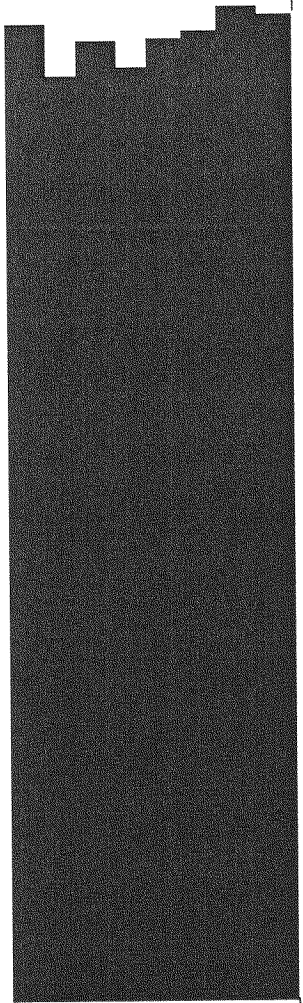
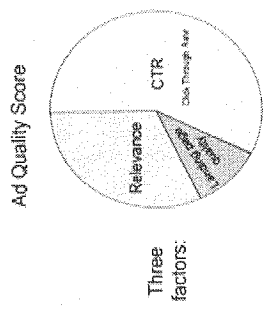
The Quality Score is a combination of factors including feedback data, i.e., "[a] keyword's clickthrough rate (CTR)," and content data, i.e., "the relevance of your ad text, keyword, and landing page." IPE00000063; see also IPE00000062 ("Having relevant keywords and ad text [and] a strong CTR on Google . . . will result in a higher position for your ad."); G-IPE-0337659 ("The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered . . . [and] the relevance of the keyword and the matched ad to the search query"); G-IPE-0483110 (an ad's quality is determined by "historical performance across all advertisers who have used the keyword (which is a substantial amount of data), the semantic relevance of the ad copy relative to the keyword, the relevance and quality of the landing page, and other quality factors."); G-IPE-0407258 (Quality Score includes "The historical clickthrough rate (CTR) of the keyword and the matched ad . . . [and] The relevance of the keyword and the matched ad to the search query."); G-IPE-0247094 ("We put all of these signals and more together to create a *Quality Score* . . . . Currently, the formula is best represented as:  $Quality\ Score = keyword's\ CTR, ad\ text$



**CLAIM I**

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relevance, keyword relevance, landing page relevance"); G-IPE-0267523-24 ("Quality Score factors in order of importance: Keyword Historical CTR, Keyword's relevance to ad text . . ."); G-IPE-0313104 ("Clickthrough rate" and "Relevancy" contribute to Quality Score"); G-IPE-0310824 ("we bucket Quality Score into 3 buckets (LPQ, Relevance, and CTR"); AOL-01202786 ("The Quality Score is based on several factors. These include: • A keyword's click-through rate (CTR). This is the number of clicks an ad receives divided by the number of impressions. • Ad text relevance (such as if the ad text contains a keyword). • Overall historical keyword performance with Google (i.e., how the keyword has performed in the past). • User experience on the landing page or site associated with an ad."); G-IPE-0347560-64; G-IPE-0223570; G-IPE-0224368; see *also* sections b and c above. The "Ad Quality Score" is illustrated as including three factors: "Relevance," "CTR," and "Landing page quality." See G-IPE-0008850:



CLAIM 1

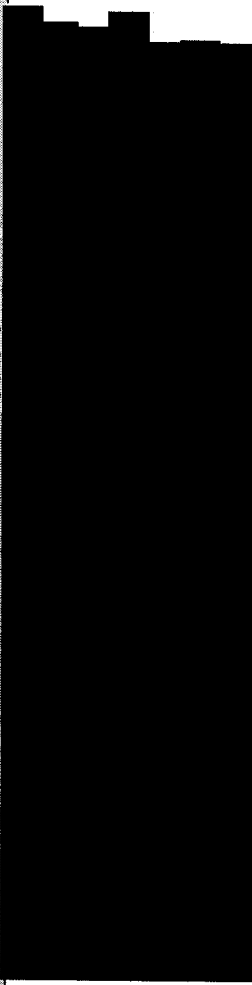
GOOGLE ADWORDS

[REDACTED]

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[REDACTED]

<b>CLAIM 1</b>	<b>GOOGLE ADWORDS</b>
	

<b>CLAIM 5</b>	<b>GOOGLE ADWORDS</b>
The search system of claim 1 wherein the filtered information is an advertisement.	Google AdWords filters advertisements. See claim 1 sections a-d.

<b>CLAIM 6</b>	<b>GOOGLE ADWORDS</b>
The search system of claim 1 further comprising an information delivery system for delivering the filtered information to the first user.	Google AdWords delivers information to a user in the form of links to websites with short descriptions. See IPE000051-IPE000053 (displaying an example search for "grill").

<b>CLAIM 21</b>	<b>GOOGLE ADWORDS</b>
The search system of claim 1 wherein the content-based filter system filters by extracting features from the information.	Google AdWords extracts features (e.g., text) from an advertisement to perform content-based filtering. IPE000058.

<b>CLAIM 22</b>	<b>GOOGLE ADWORDS</b>
The search system of claim 21 wherein the extracted features comprise content data indicative of the relevance to the at least one of the query and the user.	In Google AdWords, the extracted features described in claim 21 are content data that is used to indicate the relevance of an item to the user's query. See claim 1 section b.

<b>CLAIM 26</b>	<b>GOOGLE ADWORDS</b>
a. A method for obtaining information relevant to a first user comprising:	<p>Google AdWords includes a method for obtaining information relevant to a user. For example, when a user enters a search query into the search bar on Google's website and selects the "search" button, the user is presented a list of informations, e.g., advertisements. See IPE0000051-IPE0000052. In certain configurations, these advertisements are displayed as "Sponsored Links" next to, above, and/or below the website results. <i>Id.</i>; see also G-IPE-0008836.</p> <p>Google AdWords also includes methods for obtaining information relevant to a user for the purpose of displaying search results and/or advertisements on websites in the "Google Search Network." IPE0000065; see also IPE0000054-IPE0000057 (describing various locations that AdWords advertisements will appear, including the "Google Network" which includes partner websites); G-IPE-0008837 (showing "Ads on Google sites"); G-IPE-0008842 (showing AdSense network).</p> <p>"Search queries are received by one of the Google Web Servers (GWS) . . . It passes that information to an Ad Server to choose a set of ads to return." G-IPE-0009731. "For a search results page, the end user visits google.com (or an AdSense for Search partner), enters a query, and sees results with ads." G-IPE-0009727. "On a search results page, we pick ads directly based on the user query . . ." <i>Id.</i></p>
b. searching for information relevant to a query	Google AdWords searches for information relevant to a query associated with a

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associated with a first user in a plurality of users;

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first user. For example, the search bar on Google's website ([www.google.com](http://www.google.com)) and other "search network" sites allows a user to enter a search query and run a search. See section a; see IPE0000051-IPE0000053. Google AdWords searches the information, in part, on the basis of content data (e.g., ad text, keyword, and landing page attributes) for relevance to the query. IPE0000058.

"AdWords uses a dynamic variable called 'Quality Score' to evaluate keyword relevance" and that "Quality Score is based [in part] on . . . the relevance of your ad text, keyword, and landing page." *Id.*; see also IPE0000061-IPE0000062 ("[t]he Quality Score for Ad Rank on Google and the search network is determined by . . . the relevance of the keyword and the matched ad to the search query" and "[h]aving relevant keywords and ad text . . . will result in a higher position for your ad."); G-IPE-0263334; G-IPE-0171132 ("Quality Score Formula [includes] . . . The relevance of the keyword to the ads in its ad group . . . The relevance of the keyword and the matched ad to the search query . . . [and] Other relevance factors"); G-IPE-0241639 ("Quality Score = . . . relevance of your ad text + . . . landing page quality + other relevancy factors"); G-IPE-0313104-106 (Quality Score includes "Relevancy" and "[Google] use[s] signals like linguistic processing to determine the relevancy of a query to a keyword."); G-IPE-0247093 (ad quality signals include "ad text relevance"); G-IPE-0260682 ("In addition to keyword performance data Quality Score also takes into account other factors like the relevance of the keyword to your ad text . . ."); G-IPE-0267523-24 ("Quality Score factors [include] . . . Keyword's relevance to ad text . . . for example "Keyword appearing in domain (example: FTD appearing in FTD.com gives a boost to the score)" and "Synonyms of kw in ad text gives a boost"); G-IPE-0277078 (listing "Relevance of keyword to ads in ad group" and "Relevance of keyword and ad to search query" as factors of Quality Score); G-IPE-0264611 ("Factors include: Keyword's Relevance to Ad Text"); G-IPE-0267523-24 ("Quality Score factors in order of importance: . . . Keyword's relevance to ad text . . ."); G-IPE-0247094 (Quality Score factors include "ad text relevance" and "keyword relevance"); G-IPE-0337659 ("The Quality Score for Ad Rank on Google and the search network is determined by: . . . The

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relevance of the keyword and the matched ad to the search query.”); G-IPE-0407258 (Quality Score factors include “The relevance of the keyword and the matched ad to the search query.”); G-IPE-0347560 (Quality Score is based on “Relevance – normalized, impression-weighted landing page quality”); G-IPE-0483110 (an ad’s quality is determined by “the semantic relevance of the ad copy relative to the keyword” and “the relevance and quality of the landing page.”); G-IPE-0264611 (Quality Score Factors include “Keyword’s Relevance to Ad Text”); AOL-01202786 (“The Quality Score is based on several factors. These include: . . . Ad text relevance (such as if the ad text contains a keyword).”); AOL-01202788; AOL-01202796; AOL-01202805-806.

[REDACTED]



c. receiving information found to be relevant to the query by other users;

Google AdWords receives information found to be relevant to the query by users of the system. For example, Google AdWords receives feedback (in the form of clickthrough data) about information, e.g., advertisements, considered by the other users via at least SmartASS, the stat servers, and the logs databases. See IPE0000064 (“Millions of users click on AdWords ads every day. Every single one of those clicks – and the even more numerous impressions associated with them – is analyzed by our filters (stage 1), which operate in real-time.”). Google AdWords uses the “dynamic variable called ‘Quality Score’ to evaluate keyword relevance.” IPE0000058. In AdWords, a component of the “Quality Score” is based on an advertisement’s “clickthrough rate (CTR).” *Id.*; see *also* IPE0000061-IPE0000062 (“[t]he historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered” and that “[h]aving . . . a strong CTR on Google . . . will result in a higher position for your ad.”). Google says that, of the three components of Quality Score, CTR is “the biggest one by far” and that “by allowing users to vote with their clicks, we have millions of people that are helping us to decide which ads are best for each search query.” IPE0000073; see *also* G-IPE-0260374 (“we do look at the historical performance of your particular ad text and your keyword with that ad text”); G-IPE-0313104-105 (Quality Score includes “Clickthrough rate”); G-IPE-0337659 (“The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered”).

**[REDACTED]** G-IPE-0483110 (an ad’s quality is determined by “historical performance across all advertisers who have used the keyword”); G-IPE-0264611 (Quality Score Factors include “Keyword’s Historical CTR”); G-IPE-0267523-24 (“Quality Score



factors in order of importance: Keyword Historical CTR . . . ."); G-IPE-0171132 ("The historical clickthrough rate (CTR) of the keyword and the matched ad on the Google domain; note that CTR on non-Google sites (such as AOL.com) only ever impacts Quality Score on our search partners – not on Google . . . ."); AOL-01202786 ("The Quality Score is based on several factors. These include: • A keyword's click-through rate (CTR). This is the number of clicks an ad receives divided by the number of impressions. . . . • Overall historical keyword performance with Google (i.e., how the keyword has performed in the past) . . . [and] • User experience on the landing page or site associated with an ad."); G-IPE-0171129; G-IPE-1711137; G-IPE-0407258; G-IPE-0224368; G-IPE-0224358; Alferness Deposition at 72:10-25.

[REDACTED]

[REDACTED]

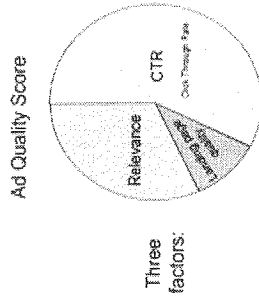
224360; G-IPE-0224366; Alferness

Deposition at 23:9-24:6; 195:9-14.

d. combining the information found to be relevant to the query by other users with the searched information; and

Google AdWords combines information found to be relevant to the query with the searched information. For example, Google states that AdWords uses a "Quality Score" to evaluate an advertisement's relevance. IPE0000063. The Quality Score is a combination of factors including feedback data, i.e., "[a] keyword's clickthrough rate (CTR)," and content data, i.e., "the relevance of your ad text, keyword, and landing page." IPE0000063; *see also* IPE0000062 ("Having relevant keywords and ad text [and] a strong CTR on Google . . . will result in a higher position for your ad."); G-IPE-0337659 ("The Quality Score for Ad Rank on Google and the search network is determined by: . . . The historical clickthrough rate (CTR) of the keyword and the matched ad on Google; if the ad is appearing on a search network page, its CTR on that search network partner is also considered . . . [and] the relevance of the keyword and the matched ad to the search query"); G-IPE-0483110 (an ad's quality is determined by "historical performance across all advertisers who have used the keyword (which is a substantial amount of data), the semantic relevance of the ad copy relative to the keyword, the relevance and quality of the landing page, and other quality factors."); G-IPE-0407258 (Quality Score includes "The historical clickthrough rate (CTR) of the keyword and the matched ad . . . [and] The relevance of the keyword and the matched ad to the search query."); G-IPE-0247094 ("We put all

of these signals and more together to create a *Quality Score* . . . . Currently, the formula is best represented as:  $Quality\ Score = keyword's\ CTR, ad\ text\ relevance, keyword\ relevance, landing\ page\ relevance$ "; G-IPE-0267523-24 ("Quality Score factors in order of importance: Keyword Historical CTR, Keyword's relevance to ad text . . . ."); G-IPE-0313104 ("Clickthrough rate" and "Relevancy" contribute to Quality Score"); G-IPE-0310824 ("we bucket Quality Score into 3 buckets (LPQ, Relevance, and CTR"); AOL-01202786 ("The Quality Score is based on several factors. These include: • A keyword's click-through rate (CTR). This is the number of clicks an ad receives divided by the number of impressions. • Ad text relevance (such as if the ad text contains a keyword). • Overall historical keyword performance with Google (i.e., how the keyword has performed in the past). • User experience on the landing page or site associated with an ad."); G-IPE-0347560-64; G-IPE-0223570; G-IPE-0224368; see also sections b and c above. The "Ad Quality Score" is illustrated as including three factors: "Relevance," "CTR," and "Landing page quality." See G-IPE-0008850:



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e. content-based filtering the combined information for relevance to at least one of the query and the first user.

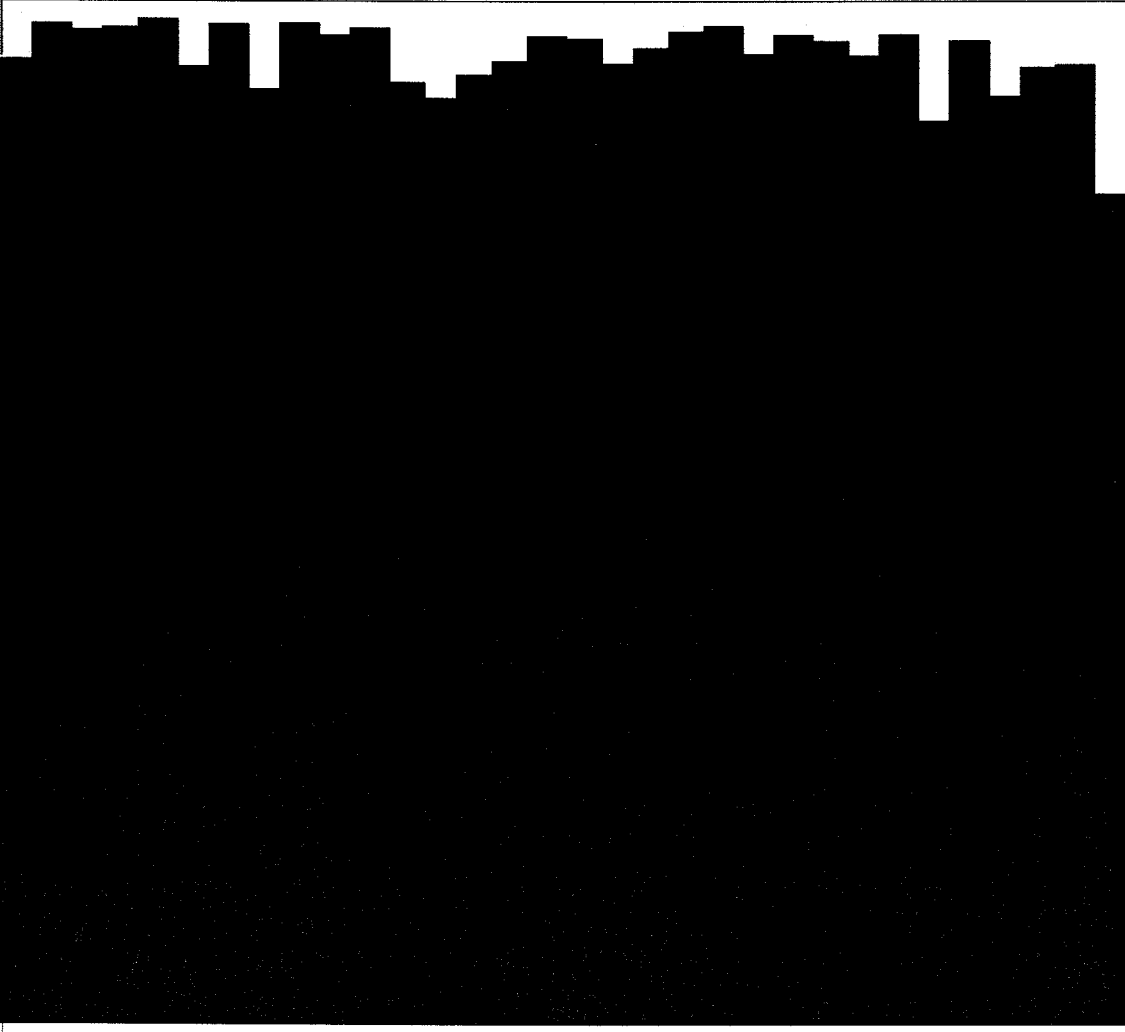
[REDACTED]


Google AdWords calculates a "Quality Score" for each advertisement, which combines content and feedback information. See claim 26 section d. The "Quality Score" is used to determine the relevance of the advertisement to the query and/or the user. IPE0000058 ("For AdWords ads, the most important factor in relevance and ranking is the ad's quality, also called the Quality Score.").

[REDACTED]

CLAIM 26

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<b>CLAIM 26</b>	<b>GOOGLE ADWORDS</b>
	

<b>CLAIM 28</b>	<b>GOOGLE ADWORDS</b>
28. The method of claim 26 further comprising the step of delivering the filtered information to the first user.	Google AdWords delivers filtered information to a user in the form of links to websites with short descriptions. See IPE0000051-IPE0000053 (displaying an example search for "grill").

<b>CLAIM 38</b>	<b>GOOGLE ADWORDS</b>
38. The method of claim 26 wherein the searching step comprises scanning a network in response to a demand search for the information relevant to the query associated with the first user.	Google AdWords at least looks for or examines items in a network to make a single search engine query that is performed upon a user request for information relevant to a query from a user. For example, the search bar on Google's website (www.google.com) and other "search network" sites allows a user to enter a search query and run a single search engine query. See claim 26 section b; IPE0000051-IPE0000053.

CLAIM 38

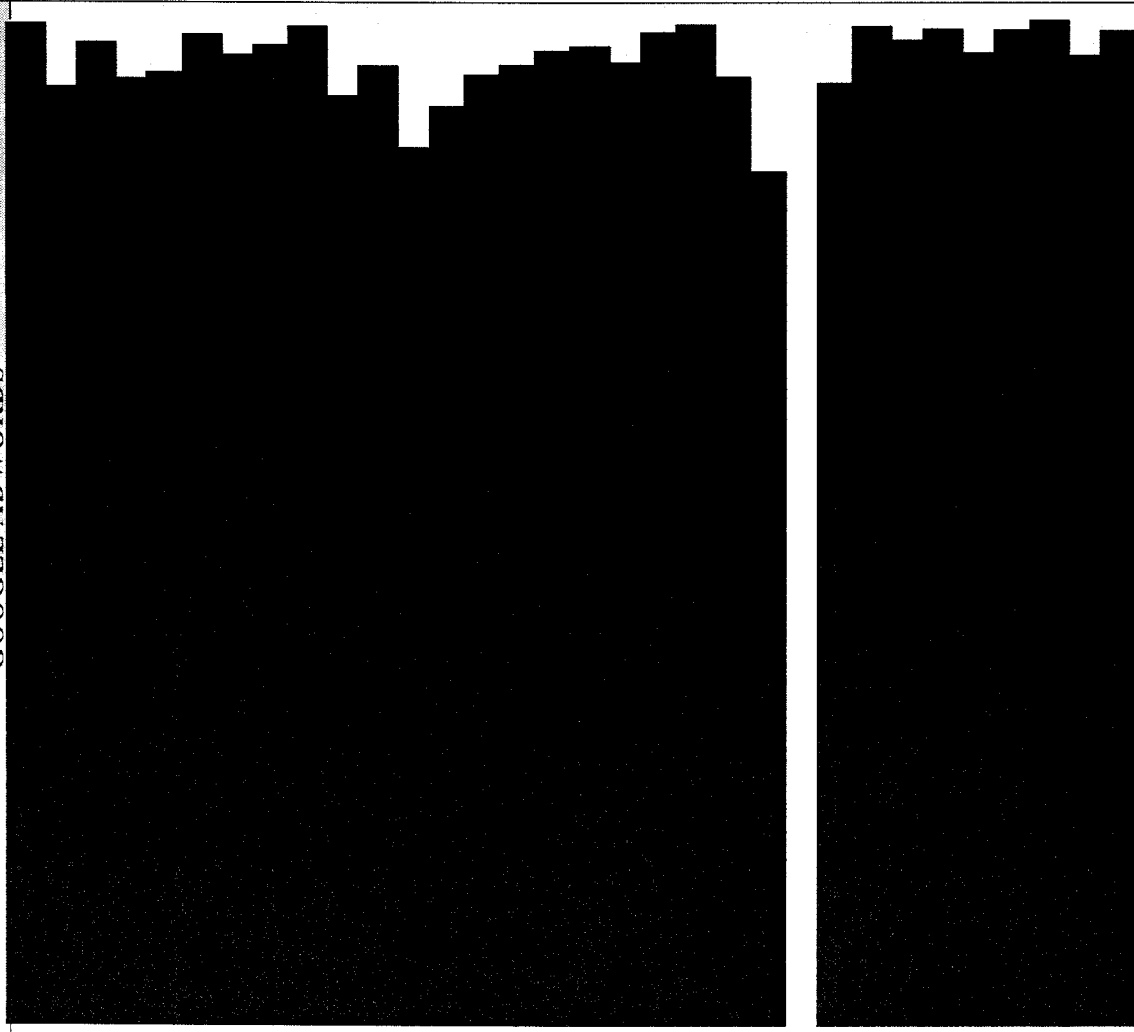
GOOGLE ADWORDS

Google uses distributed databases in its systems, and the databases distribute information, including advertisement information, across several network locations. IPE0000011-IPE0000024; see also IPE0000026 (showing distributed systems):



CLAIM 38

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[REDACTED]