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AUTOALERT, INC.

IN THE UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA

AUTOALERT, INC.,
Plaintiff,

v.

DOMINION DEALER
SOLUTIONS, LLC; AUTOBASE,
INC.; and 110 REYNOLDS, LLC,
Defendants.

AND RELATED
COUNTERCLAIMS

SACV12-01661 JLS (JPRx)

**DECLARATION OF DR. JAIME G.
CARBONELL IN SUPPORT OF
AUTOALERT'S OPENING BRIEF
ON CLAIM CONSTRUCTION**

Markman Hearing:

Date: September 9, 2014

Time: 9:00 a.m.

Ctrm: 10A

The Hon. Josephine L. Staton

1 I, Jaime G. Carbonell, hereby declare as follows:

2 1. I have personal knowledge of the matters set forth below, and if
3 called upon to testify I could and would testify competently to them.

4 2. I am the Allen Newell Professor of Computer Science at Carnegie
5 Mellon University, and I have been retained by AutoAlert, Inc. to provide expert
6 opinions on the technology at issue in this lawsuit.

7 3. I submit this declaration in support of AutoAlert's opening brief on
8 claim construction.

9 **A. Background and Qualifications**

10 4. A brief overview of my background and qualifications is provided
11 below. A more complete presentation is set forth in my curriculum vitae, which is
12 attached to this declaration as **Exhibit A**.

13 5. I received Bachelor of Science degrees in both Physics and
14 Mathematics in 1975 from the Massachusetts Institute of Technology. I received
15 M.S., M.Phil., and Ph.D. degrees in Computer Science from Yale University in
16 1976, 1977, and 1979, respectively.

17 6. I have held the position of Allen Newell Professor of Computer
18 Science at Carnegie Mellon University from 1995 to the present. I first joined
19 Carnegie Mellon as an Assistant Professor of Computer Science in 1979. In
20 1987, I was appointed as a Professor of Computer Science at Carnegie Mellon.

21 7. Since 1979 I have taught a wide variety of graduate and
22 undergraduate courses at Carnegie Mellon that fall within the general field of
23 Computer Science, including courses in software engineering, data mining,
24 information retrieval, and web-based architectures.

25 8. I have been involved in a number of different professional
26 organizations and activities, including memberships in the Association of
27 Computing Machinery ("ACM"), the Association for the Advancement of
28 Artificial Intelligence ("AAAI"), and the Cognitive Science Society. I have also

1 held leadership positions within professional organizations. From 1983 to 1985, I
2 served as Chair of the ACM's Special Interest Group on Artificial Intelligence
3 ("SIGART"). From 1988 to the present, I have been a Fellow of the AAAI.
4 From 1990 to 1992, I served on the AAAI executive committee.

5 9. I received a "recognition of service" award from the Association for
6 Computing Machinery for my role as chair of SIGART between 1983 and 1985.
7 In 1986, I received the Sperry Fellowship for excellence in artificial intelligence
8 research. In 1987, I received the Carnegie Mellon University Computer Science
9 Department's teaching award.

10 10. I have also worked as a technical consultant on Computer Science
11 applications for a variety of industrial clients. This includes consulting on data
12 mining applications for Industrial Scientific Corporation (data mining to improve
13 workplace safety); Carnegie Group Inc. (financial data mining); Citicorp
14 (financial data mining); Wisdom Technologies (financial optimization and data
15 mining for corporate treasuries); Dynamix Technologies (large-scale data mining
16 engine with applications to Homeland Security); Peak Strategy (financial data
17 mining); The Boeing Company (designed their intensive data mining course); and
18 Citibank (financial data mining). My consulting services relating to data mining
19 have included such applications as financial data mining, transactional fraud
20 detection, instant-credit bad-debt minimization, collection effectiveness, cash-
21 flow optimization (sweep/invest/float), and data mining for risk/cost tradeoff
22 minimization (FX, interest rate, counterparty, debt). During my consulting
23 engagements, I have designed or co-designed three data mining engines, and I
24 have evaluated and helped to improve many other data mining engines, including
25 improving the machine learning algorithms at their core.

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1 **B. MATERIALS CONSIDERED**

2 11. In forming my opinions, I have reviewed the following documents
3 and materials:

- 4 • AutoAlert's five U.S. patents asserted in this case: U.S. Patent No.
5 7,827,099; U.S. Patent No. 8,005,752; U.S. Patent No. 8,086,529; U.S.
6 Patent No. 8,095,461; and U.S. Patent No. 8,396,791; and
7 • The file histories associated with AutoAlert's U.S. patents.

8 **C. Person Of Ordinary Skill In The Art**

9 12. It is my opinion that the AutoAlert patents are directed at the
10 technical field of data mining and analytics applied to networked database
11 systems to promote auto dealership sales.

12 13. I understand that a "person of ordinary skill in the art" is a theoretical
13 person from the art of the patent that is "ordinary" in his or her skill and
14 creativity. This theoretical person is not a novice in the field; nor is this person
15 exceptional in their abilities.

16 14. I understand that the following factors may be considered in
17 determining the level of ordinary skill in the art: (1) the educational level and
18 experience of the inventor at the time of the invention; (2) the type of problems
19 encountered in the field at the time of the invention; (3) the prior art solutions to
20 related problems in the field at the time of the invention; (4) the rapidity with
21 which innovations were made in the field at the time of the invention; (5) the
22 sophistication of the technology in the field at the time of the invention; and (6)
23 the educational level and experience of active workers in the field at the time of
24 the invention.

25 15. It is my opinion that a person of ordinary skill in the art would have
26 at least a Bachelor's Degree in Computer Science, Computer Engineering,
27 Management Information Systems, or a related discipline, several years of
28 industry experience in the use, customization, and implementation of database

1 management applications and data mining engines, and familiarity with
2 automobile financing.

3 **D. The Meaning of Certain Claim Terms**

4 16. I have reviewed the five patents being asserted in this case, and the
5 file histories associated with those patents.

6 17. I understand that the following eight claim terms are being presented
7 for possible construction by the Court: (1) “changed information,” (2) “client,”
8 (3) “configuration request,” (4) “configured to retrieve the changed information,”
9 (5) “[in] real-time,” (6) “may affect whether it is favorable,” (7) “message,” and
10 (8) “preset acceptable threshold value.”

11 18. I understand that patent claims are ordinarily understood to have the
12 plain and ordinary meaning that a person of ordinary skill in the art would ascribe
13 to the claim language at the time of the invention as informed by the disclosure in
14 the patent considered in its entirety. I further understand that when going beyond
15 the plain and ordinary meaning of terms, intrinsic evidence from the patent
16 specification is generally of greater probative value than extrinsic evidence.

17 19. Many of the claim terms in dispute are not technical in nature. Two
18 of the terms are technical in nature: “configuration request,” and “[in] real-time.”
19 I address the meanings of those two technical terms below.

20 20. I also submitted a declaration in the *AutoAlert v. DealerSocket*
21 lawsuit, which I executed on April 13, 2014, that presented my opinion on the
22 meanings of the claim terms “configuration request” and “in real-time.” My April
23 2014 declaration is attached hereto as **Exhibit B**.

24 21. In addition, I understand that the Defendants in this lawsuit contend
25 that three of the claim terms listed above are indefinite, namely: “configured to
26 retrieve the changed information,” “may affect whether it is favorable,” and
27 “preset acceptable threshold value.”

28 22. I understand that a claim term is indefinite if, viewed in light of the

specification and prosecution history, the claim fails to inform a person of ordinary skill in the art about the scope of the invention with reasonable certainty.

23. I address the meaning of “configured to retrieve the changed information,” “may affect whether it is favorable,” and “preset acceptable threshold value” below as well.

1. “Configuration request”

24. The term “configuration” is a known term in the field of computer science. In the context of computer software, the term “configuration” is used to refer either to how software modules are connected to each other or to the selection or setting of attributes associated with the software. In the context of the patents-in-suit, the latter meaning is applicable unambiguously: selection or setting of attributes associated with the software.

25. To a person of ordinary skill in the art at the time of the invention, considering each of the patents in its entirety, the term “configuration request” as used in the claims means “a request to the computer system that is configurable to define the scope of the request,” where “configurable” means having attributes that are selected or set.

2. “Configured to retrieve the changed information”

26. The term “configured to retrieve the changed information” appears in Claim 7 of the ’791 patent. Claim 7 depends from Claim 6 of the ’791 patent, which is an independent claim.

27. Independent Claim 6 of the ’791 patent recites in part:

1. A computer system comprising:

a processor; and a computer readable medium storing machine-executable

instructions . . . to cause the computing system to:

retrieve at least a portion of customer information . . . ;

retrieve at least a portion of second vehicle information . . . ;

in response to the configuration request, *retrieve current information*

1 associated with at least a portion of the customer information, . . . ,
2 the second vehicle information . . .
3 generate a message if it is determined that the *current retrieved*
4 *information* may affect (Emphasis added.)

5 28. Dependent Claim 7 of the '791 patent recites: "The computing
6 system of claim 6, wherein the computing system is *configured to retrieve the*
7 *changed information* with respect to a plurality of customers." (Emphasis
8 added.)

9 29. While Claim 6 does not use the term "changed information," it is my
10 opinion that a person of ordinary skill in the art at the time of the invention
11 reading these claims with knowledge of the patent specification would discern
12 from context that the "the changed information" recited in Claim 7 is another way
13 of referring to the "current information" recited in independent Claim 6. In fact,
14 the recitation of "current information" in Claim 6 is the only reasonable
15 antecedent for the recitation of "changed information" in Claim 7 given that
16 Claim 7 depends from Claim 6.

17 30. A person of ordinary skill in the art would understand that the
18 "current information" recited in Claim 6 is acquired by retrieving underlying
19 information (customer information, first vehicle information, first financial terms
20 information, etc.) some of which is changing over time. ('791 patent at col. 10,
21 lines 61–64; col. 11, line 67 – col. 12, line 1; col. 15, lines 62–64.) A person of
22 ordinary skill would have recognized that "to retrieve the changed information"
23 recited in Claim 7 is another way of referring to a retrieval of the "current
24 information" (which is changing over time and thus "changed" at each new
25 retrieval) recited in Claim 6.

26 31. Other than the step of retrieving "current information" as discussed
27 above, there is no other step of retrieving information in Claim 6 for which a
28 person of ordinary skill in the art would find it reasonable to refer to the retrieved

1 information as “changed information.”

2 32. Accordingly, a person of ordinary skill in the art at the time of the
3 invention, considering the patent in its entirety, would have understood the scope
4 of the claim term “configured to retrieve the changed information” in Claim 7 of
5 the ’791 patent with reasonable certainty. Specifically, that person would
6 understand “configured to retrieve the changed information” in that claim to mean
7 “configured to retrieve the current information” referenced in Claim 6.

8 **3. “(In) real-time”**

9 33. The term “real-time” is a known term in the field of computer
10 science, where it has the meaning “pertaining to a mode of operation in which
11 computation is performed during the actual time that an external process occurs,
12 in order that the computation results can be used to respond in a timely manner to
13 the external process.” Generally, the external process may be a user waiting for a
14 response, or other systems or processes that need a timely response.

15 34. To a person of ordinary skill in the art at the time of the invention, the
16 term “(in) real-time” is being used in the claims with its ordinary meaning as
17 understood in the field of computer science.

18 35. In the AutoAlert patent claims, the term “real-time” is not limited to
19 applications where a dealer is trying to quickly generate results while a particular
20 customer is visiting a dealership.

21 36. For example, several claims contemplate that the real-time processing
22 recited in the claims can be performed as batch processes (with emphases added):

- 23 • See “The method of claim 13, wherein the retrieving **in real time** of
24 changed information is performed as a **batch process**.” (’099 patent at
25 Claim 20.)
- 26 • Compare “electronically access **in real-time** information that has
27 changed...” (’529 patent at Claim 10) *with* “The computing system of
28 claim 10, wherein the computing system is configured to access the

1 changed information as a **batch process**.” (’529 patent at Claim 13.)

- 2 • *Compare* “retrieve **in real-time** changed information...” (’461 patent at
3 Claim 7) *with* “The computing system of claim 7, wherein the computing
4 system is configured to retrieve the changed information as a **batch**
5 **process**.” (’461 patent at Claim 10.)

6 37. To a person of ordinary skill in the art, a “batch process” is a known
7 term in the field of computer science, where it has the meaning “a computer
8 process performed on accumulated data that executes without manual or other
9 human intervention.”

10 38. For a process to be “in real-time,” computations must take place
11 quickly enough so that the computation results can be used to respond in a timely
12 manner to an external process. If the computations associated with a batch process
13 occur rapidly enough that its computation results can be used to respond in a
14 timely manner to an external process, that batch process is also in real-time.
15 There is no mutual exclusivity between “batch process” and “in real-time”; both
16 can be true at the same time if the batch process takes place with sufficient speed
17 to produce timely results.

18 39. In some contexts, when an external process includes rapid changes
19 (such as the second-to-second fluctuations of the stock market), the computations
20 associated with a batch process would typically not occur rapidly enough that its
21 results could be used to respond in a timely manner to the external process. In
22 those contexts, the batch process would not be in real-time.

23 40. In the AutoAlert patent claims, the term “real-time” is used in
24 connection with the retrieving of information associated with customer
25 information, first vehicle information, first financial terms that a customer has for
26 a first vehicle, second vehicle information, and second financial terms that a
27 customer has for a second vehicle. The information in question does not change
28 rapidly (unlike the stock market), but rather gradually, on the time scale of a day,

1 a week, or a month. These time scales are long enough to allow processing to be
2 performed “in real-time” as a “batch process.”

3 41. Because a batch process is run on accumulated data, it would be
4 unnecessary to use batch processing to perform the calculations disclosed in the
5 AutoAlert patents for a single customer visiting a dealer. Batch processes are
6 typically run on a preset schedule, often at night when computers are otherwise
7 idle or lightly used. It is not the type of process normally used during the
8 business day to generate quick results during the short duration of a customer’s
9 visit to a dealership.

10 **4. “May affect whether it is favorable”**

11 42. In my opinion, a person of ordinary skill in the art at the time of the
12 invention, with knowledge of the patent specification in its entirety, would have
13 understood the claim term “may affect whether it is favorable” to have a plain and
14 ordinary meaning that requires no construction. But if construed, it is my opinion
15 that a person of ordinary skill would have understood that claim term to mean
16 “may affect whether it may be acceptable.”

17 43. A person of ordinary skill in the art would have understood that the
18 inventions are directed at proactively identifying prospective customers without
19 input from the customers. A person of ordinary skill in the art would have further
20 understood that the inventions do not determine a deal that is *actually* acceptable
21 to any single customer, but rather is searching for deals that *may* be deemed
22 acceptable to prospective customers. The use of the term “may” reflects the fact
23 that the inventions are directed at notifying dealerships of potentially acceptable
24 sales opportunities, such as opportunities that result in equal or lesser monthly
25 payments to the customer if the customer trades in his or her current vehicle and
26 finances the purchase of a new vehicle. However these are sales opportunities,
27 not actual sales. The inventions are not directed at, and do not result in,
28 completed sales transactions.

1 **5. “Preset acceptable threshold value”**

2 44. In my opinion, a person of ordinary skill in the art at the time of the
3 invention, with knowledge of the patent specification in its entirety, would have
4 understood the claim term “present acceptable threshold value” to have a plain
5 and ordinary meaning that requires no construction. But if construed, it is my
6 opinion that a person of ordinary skill would have understood that claim term to
7 mean “a value set in advance for assessing whether it may be acceptable for a
8 customer to replace a first vehicle and first financial terms with a second vehicle
9 and second financial terms.” The patent specification provides specific
10 embodiments of said threshold values, such as the same or less than current
11 monthly payments, or the same of less than 10% above current monthly
12 payments.

13 45. As discussed above, the inventions are directed at proactively
14 identifying potentially acceptable sales opportunities for prospective customers
15 without input from those customers. The patents teach using the recited “preset
16 acceptable threshold value” as a predictor for sales opportunities that may be
17 acceptable to a customer. The preset acceptable threshold value is not based on
18 input from a customer, and for any given customer it is unknown whether the
19 threshold will result in sales opportunities that are agreeable to the customer.

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