

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

DealerSocket, Inc.,  
Petitioner

v.

AutoAlert, LLC,  
Patent Owner

---

Case CBM2014-00139  
Patent 8,396,791

---

**SECOND DECLARATION OF NEIL M. LIBROCK IN SUPPORT OF  
DEALERSOCKET, INC.'S PETITION**

Neil M. Librock declares:

1. I have 30+ years professional experience in consumer credit, automobile lending and leasing, and automated decision engines. I retired from Wells Fargo in 2012 where I served as the EVP / Chief Credit Officer for all consumer loan portfolios. I participated in auto leasing residual insurance, auto loan portfolio purchases, automated credit scoring and decision engine development, and Basel II modeling. I have a strong background in the mechanics of auto lending.

2. Additional details of my education, work experience, publications and prior testimony are set forth in my prior declaration in this matter (DS Exhibit 1013) and in my curriculum vitae, which is attached as Exhibit A thereto.

3. For my work in connection with the above-captioned action, I am paid \$500.00 per hour for my time, plus out-of-pocket expenses. My opinions are objective, and my compensation does not depend on the outcome of this matter.

4. I have been asked by counsel for DealerSocket, Inc. to review certain claims (specifically, claims 1, 5, and 7) in U.S. Patent 8,396,791 and describe and document how certain actions within those claims could be completed with a manual process.

5. All of my manual process steps would have been recognized in 2001 as standard industry practices and procedures by a skilled practitioner. The manual process steps could be completed using various tools including “paper and pencil”

loan payment and amortization tables and (optionally) a non-programmable financial calculator. I find no processes in the patent that uniquely require a computer system.

6. The following analysis follows the claims in order as presented in the patent. In reality, some of the individual process steps in the claims would occur in a different sequence when performing the specified tasks. An example of this is found at 25:5, where “a preset acceptable threshold value” would have been specified prior to actually performing the action of “determining whether the difference is less than or equal to...” at 25:4.

7. The following table documents the manual process steps to implement the patent claims. It should be read as (columns from left to right):

- Column 1: Patent reference (column : line) and reference to manual process (STEP “X”)
- Column 2: Item(s) cited in patent
- Column 3: Description and discussion of manual process steps and information sources
- MA: Consistent reference to “Manual Analyst”

8. The patent does not clearly distinguish two different forms of vehicle financing – installment loans and leases. I present first an analysis for loans and then a separate analysis for leases.<sup>1</sup>

---

<sup>1</sup> The patent and deposition testimony given by Dr. Jaime G. Carbonell on February 5, 2015, a transcript of which I have read, also reference balloon loans. This form of vehicle finance was rare and I do not include it in my analysis although the process would follow the same manual steps for amortizing installment loans.

9. The analysis specifically covers patent claims 1, 5, and 7. It identifies as needed references to specific claims.

10. In addition to my table that generally describes possible manual implementations of each process step in the patent claims, in schedules hereto I have documented an actual implementation of my “paper and pencil” process and calculations that replicates all the process steps in the patent. For my example, I have chosen the “first vehicle” as a 1997 Mustang and the “second vehicle” as a 2001 Mustang. I have endeavored to use tools and techniques that would have been widely available to an analyst in the 2001 time frame. I complete my analysis using two different techniques – (1) “paper and pencil” supported by loan payment and amortization tables and (2) using an HP-12C non-programmable financial calculator<sup>2</sup> to perform the required calculations. Manual steps satisfy all the actions in the Patent Claims 1, 5, and 7 but occur in a modified order because of utilizing manual tools.

11. My installment loan workflow analysis as follows:

---

<sup>2</sup> Readily available and in widespread use in the 1990’s. My personal HP-12c is vintage circa 1987. Calculator key strokes are documented in the HP-12C Owner’s Manual, Part # 00012-90001 dated July 1987.

<b>“1”</b>	<b>“2” – Items Cited</b>	<b>“3” – Discussion</b>
24:41  “A”	Retrieving at least a portion of customer information	MA would access data sources and record to a worksheet or pad of paper selected data, which might include: <ul style="list-style-type: none"> <li>• Prior customer demographic information, such as occupation, stated income, credit score<sup>3</sup></li> <li>• Customer contact information including home address, telephone number, and email address<sup>4</sup></li> <li>• Prior purchase activity with dealership<sup>5</sup></li> </ul>
24:41  “B”	[retrieving] first financial terms	MA would access data sources and record selected data, which might include: <ul style="list-style-type: none"> <li>• Contract term in months and start date</li> <li>• Total loan amount</li> <li>• Interest rate</li> <li>• Monthly loan payment<sup>6</sup></li> <li>• Loan payment history</li> <li>• Total payoff amount &amp; good through date<sup>7</sup></li> </ul>

---

<sup>3</sup> Data source is prior loan application (paper or electronic copy), loan approval worksheet, or scanned or otherwise stored customer record from prior transaction. In dealerships that have transitioned to computerized accounting systems (which had already become commonplace by 2001), this may involve a manual query against the dealer’s loan accounting system. Prior to the widespread adoption of computerized accounting systems, the same operation could have been performed using paper sources.

<sup>4</sup> Ibid.

<sup>5</sup> Record of all prior activity with dealership from dealer’s sales records.

<sup>6</sup> Obtained from installment loan contract signed by borrower or from dealer’s office records.

<sup>7</sup> Obtained from dealer’s or lender’s financial records for each customer. Typically it would be a loan accounting system

<b>“1”</b>	<b>“2” – Items Cited</b>	<b>“3” – Discussion</b>
24:43  “C”	[retrieving] first vehicle information	MA would access data sources and record selected data, which might include: <ul style="list-style-type: none"> <li>• VIN (Vehicle Identification Number)</li> <li>• Year / make / model</li> <li>• Additional comments<sup>8</sup></li> </ul>
24:44  “D”	Retrieving at least a portion of second vehicle information	MA, based on pre-determined criteria or judgment, would access and record data on a “new to the current customer” vehicle which might include: <ul style="list-style-type: none"> <li>• Year / make / model / MSRP that could be a suitable replacement for the first vehicle (like for like)<sup>9</sup></li> <li>• Year / make / model / MSRP that could provide new features compared to the first vehicle (new model or upgrade)<sup>10</sup></li> </ul>
24:45  “E”	[retrieving] second financial terms available to the customer for the second vehicle	MA would access data from one or more lender <sup>11</sup> loan data sources and capture: <ul style="list-style-type: none"> <li>• Loan metrics, including term, interest rate, and fees<sup>12</sup></li> <li>• Manufacturer incentives including rebates and subsidized loan financing<sup>13</sup></li> <li>• Dealer incentives<sup>14</sup></li> </ul>

---

<sup>8</sup> Obtained from dealer’s sales records, including vehicle options or add-on items included in sale.

<sup>9</sup> Obtained from dealer’s inventory of cars on the lot or in transit. MA would consult dealer reports and ledgers. MA could potentially contact other local dealers to search for availability for a specified vehicle. MA would be guided by “configuration request” discussed later in this document.

<sup>10</sup> Ibid.

<sup>11</sup> Lenders publish loan data on a periodic basis, typically weekly. Lenders typically publish loan pricing for both new and used autos. We will consider only new vehicles. The ’791 patent is silent on whether a used vehicle could be considered. A manual process could incorporate a used vehicle as the second vehicle. As an example, consider a three old Range Rover (second vehicle) as a replacement for two year old Jeep (first vehicle).



“1”	“2” – Items Cited	“3” – Discussion
“F”		<p>report and comparing the borrower’s current credit score to pre-established thresholds. In addition, he describes computing customer debt ratios (either auto loan debt or total household debt compared to income) and comparing them to pre-established thresholds. This is a potentially problematic process. The customer is not directly applying for credit so this process should be viewed as a “pre-screen” under the Fair Credit Reporting Act. FCRA regulations require, among other things, specific customer notifications and a <i>firm</i> offer of credit if the customer passes the screening thresholds. The Patent and Dr. Carbonell’s testimony are silent on this important issue.</p>
24:49 – 55  “G”	<p>Retrieving current information associated with at least one of the customer information, the first financial terms that the customer has for the first vehicle, the first vehicle information, the second vehicle information, or the second financial terms available to the customer for the second vehicle</p>	<p>MA would access most current customer, financing, and vehicle information and record the required parameters in a worksheet where calculations could be performed.</p> <p>Examples might include:</p> <ul style="list-style-type: none"> <li>• Current customer payment history on first financial terms</li> <li>• Current payoff amount on first vehicle</li> <li>• Current second financial terms such as interest rate</li> </ul> <p>All of these data lookups could be conducted using a manual process.</p>



<b>“1”</b>	<b>“2” – Items Cited</b>	<b>“3” – Discussion</b>
24:56 – 60  “H”	Determining whether the current retrieved information may affect whether it is favorable for the customer to replace a first vehicle and first financial terms with a second vehicle and second financial terms	It is difficult to understand how a process not involving the exercise of judgment could determine what is “favorable,” or the circumstances under which it may be affected. I understand from counsel that AutoAlert has specified that information may affect favorability if and only if, given that information, the difference between the monthly payment under the second financial terms and the monthly payment under the first financial terms is less than a preset acceptable threshold. <sup>17</sup> I will therefore use this definition in my manual process.
24:61 – 64  “I”	Calculating one or more new payments based on an estimated equity value of the first vehicle derived from the first financial terms, and based on the second financial terms	<p>The equity value in the first vehicle is calculated by subtracting the amount remaining amount owed under the first financial terms from the current value of the first vehicle. MA previously captured the loan pay-off amount<sup>18</sup> due if the first vehicle is replaced with a second vehicle. The resale value in the first vehicle must be determined.</p> <p>The process to determine the estimated equity value of the first vehicle is not clear from the patent. Dr. Carbonell<sup>19</sup> describes a complicated process to estimate current vehicle value based on starting MSRP adjusted for various factors. Among his factors are “...mileage, wear and tear, and location.” These factors are unique to each vehicle and could not be programmed into a</p>

<sup>17</sup> This definition ignores “substitution”. Would a customer view a second vehicle, with, say improved safety features and GPS, as favorable to a first vehicle even if the second financial terms had a higher monthly payment than the first financial terms associated with the first vehicle?

<sup>18</sup> Auto loans are installment loans with equal monthly payments that repay principal and interest off the life of the loan. If a customer replaces the first vehicle prior to making the last loan payment, there is a “pay-off” amount due that repays, in one lump sum, all principal due over the remaining term of the loan.

<sup>19</sup> Deposition, page 109.

“1”	“2” – Items Cited	“3” – Discussion
“I”		<p>general algorithm. Historic averages could be used but this would defeat the determination of a value for a specific vehicle.</p> <p>I would obtain the resale value from a reliable source and industry standard source such as the Kelley Blue Book.<sup>20</sup> Subtracting the loan pay-off amount from the KBB value would determine the equity value<sup>21</sup> in the first vehicle. MA would then calculate one or more new payments based on the amount financed (second vehicle total price – estimated equity in first vehicle) combined with various rate and term options available in the second financial information.</p>

---

<sup>20</sup> KBB estimates current value of used cars by monitoring resale values of cars across dealers and auctions in the US. KBB is widely used by dealers and consumers. It considers regional differences (a convertible is more desirable in California than Alaska), and accessories in determining a likely market value. According to <http://www.kbb.com/company/history/>, the KKB became available in hardcopy in 1926 and as an internet resource, available at kbb.com, in 1995. Seventy years of operational history, before launch of the website, demonstrates the feasibility of obtaining through a manual process the information now most commonly obtained from the internet.

<sup>21</sup> Equity value can be negative – the customer’s loan pay-off amount is greater than the current KBB value. This is a frequent occurrence and is often referred to as “negative equity” or “underwater.”





of the lease payments, the customer returns the vehicle to the dealer. The lease payments therefore focus on (1) a payment stream to rent the vehicle (depreciation) and (2) a payment stream for time value of money for the lessor to provide the vehicle.

14. Below is a similar workflow, for leasing. The leasing workflow largely replicates the installment loan workflow. Accordingly, both to simplify review of the largely duplicative matter and to emphasize the similarity of the leasing and installment loan workflows, the leasing workflow is shown as a redline of the installment loan workflow.

“1”	“2” – Items Cited	“3” - Discussion
24:41	Retrieving at least a portion of customer information	MA would access data sources and record to a worksheet or pad of paper selected data, which might include: <ul style="list-style-type: none"> <li>• Prior customer demographic information, such as occupation, stated income, credit score<sup>22</sup></li> <li>• Customer contact information including home address, telephone number, and email address<sup>23</sup></li> <li>• Prior purchase activity with dealership<sup>24</sup></li> </ul>

<sup>22</sup> Data source is prior ~~loan~~ *lease* application (paper or electronic copy), ~~loan~~ *lease* approval worksheet, or scanned or otherwise stored customer record from prior transaction. In dealerships that have transitioned to computerized accounting systems (which had already become commonplace by 2001), this may involve a manual query against the dealer’s loan / *lease* accounting system. Prior to the widespread adoption of computerized accounting systems, the same operation could have been performed using paper sources.

<sup>23</sup> Ibid.

<sup>24</sup> Record of all prior activity with dealership from dealer’s sales records.

“1”	“2” – Items Cited	“3” - Discussion
24:41	[retrieving] first financial terms	MA would access data sources and record selected data, which might include: <ul style="list-style-type: none"> <li>• Contract term in months and start date</li> <li>• Total <del>loan amount</del> <i>lease capitalized cost and residual amount</i></li> <li>• Interest rate</li> <li>• Monthly <del>loan</del> <i>lease</i> payment<sup>25</sup></li> <li>• <del>Loan</del> <i>lease</i> payment history</li> <li>• Total payoff amount &amp; good through date<sup>26</sup></li> <li>• <i>Security deposit</i><sup>27</sup></li> </ul>
24:43	[retrieving] first vehicle information	MA would access data sources and record selected data, which might include: <ul style="list-style-type: none"> <li>• VIN (Vehicle Identification Number)</li> <li>• Year / make / model</li> <li>• Additional comments<sup>28</sup></li> </ul>
24:44	Retrieving at least a portion of second vehicle information	MA, based on pre-determined criteria or judgment, would access and record data on a “new to the current customer” vehicle which might include: <ul style="list-style-type: none"> <li>• Year / make / model / MSRP that could be a suitable replacement for the first vehicle (like for like)<sup>29</sup></li> <li>• Year / make / model / MSRP that could provide new features compared to the first vehicle (new model or upgrade)<sup>30</sup></li> </ul>

<sup>25</sup> Obtained from ~~installment loan~~ *lease* contract signed by borrower or from dealer’s office records.

<sup>26</sup> Obtained from dealer’s or lender’s financial records for each customer. Typically it would be a loan / *lease* accounting system

<sup>27</sup> A lease is just a long term rental and a security deposit provides the dealer protection against abnormal vehicle wear and tear.

<sup>28</sup> Obtained from dealer’s sales records, including vehicle options or add-on items included in sale.

<sup>29</sup> Obtained from dealer’s inventory of cars on the lot or in transit. MA would consult dealer reports and ledgers. MA could potentially contact other local dealers to search

“1”	“2” – Items Cited	“3” - Discussion
24:45	[retrieving] second financial terms available to the customer for the second vehicle	MA would access data from one or more lender <sup>31</sup> <del>loan</del> <i>lease</i> data sources and capture: <ul style="list-style-type: none"> <li>• <del>Loan</del> <i>Lease</i> metrics, including term, interest rate<sup>32</sup>, and fees<sup>33</sup></li> <li>• Manufacturer incentives including rebates and subsidized <del>loan</del> <i>lease</i> financing<sup>34</sup></li> <li>• Dealer incentives<sup>35</sup></li> </ul>

for availability for a specified vehicle. MA would be guided by “configuration request” discussed later in this document.

<sup>30</sup> Ibid.

<sup>31</sup> Lenders publish ~~loan~~ *lease* data on a periodic basis, typically weekly. Lenders typically publish ~~loan~~ *lease* pricing for both new and used autos. We will consider only new vehicles. The ’791 patent is silent on whether a used vehicle could be considered. A manual process could incorporate a used vehicle as the second vehicle. As an example, consider a three old Range Rover (second vehicle) as a replacement for two year old Jeep (first vehicle).

<sup>32</sup> For leases, we would retrieve interest rates and convert them into “money factors” to account for the rental aspect of leasing.

<sup>33</sup> Lender data will show minimum acceptable quality borrower (FICO score), maximum vehicle advance rates based on vehicle model and age (a lender is willing to lend more on a newer, more expensive model) and contain a matrix of various ~~loan~~ *lease* maturities (in months) and interest rates. It may incorporate special financing incentives. The lender may be a subsidiary of the manufacturer (“captive”) or a third party such as a bank.

<sup>34</sup> Manufacturers, faced with an over-supply of certain models, may offer special incentives to stimulate sales. Rebates are a direct cash payment to the borrower which reduces the amount financed and subsidized financing lowers interest rates and monthly payments.

<sup>35</sup> Individual dealers may offer incentives to facilitate the sale of over-stocked vehicles.

“1”	“2” – Items Cited	“3” - Discussion
24:47	Receiving a configuration request	<p>The patent is not specific regarding the configuration request. Dr. Carbonell’s deposition testimony does not shed additional light on this process element. Elements might include:</p> <ul style="list-style-type: none"> <li>• Second vehicle should be a functional replacement for the first vehicle. We see this in the ‘791 Patent, FIG. 1A, where both the Existing Vehicle and New Vehicle are specified as “Q-Class”. The MA could perform this task manually.</li> <li>• MA could consider several combinations of interest rates / <del>loan</del> lease terms to be able to generate at least several new <del>loan</del> lease payments in the search for a “favorable” result. With a given interest rate, a longer <del>loan</del> lease term (say 60 months vs. 48 months) will always yield a lower payment. The configuration request might specify a minimum and maximum <del>loan</del> lease term.<sup>36</sup></li> </ul> <p>Dr. Carbonell’s deposition testimony<sup>37</sup> also describes obtaining an updated credit bureau report and comparing the borrower’s current credit score to pre-established thresholds. In addition, he describes computing customer debt ratios (either auto loan debt or total household debt compared to income) and comparing them to pre-established thresholds. This is a potentially problematic process. The customer is not directly applying for credit so this process should be viewed as a “pre-screen” under the Fair Credit Reporting Act. FCRA regulations require, among other things, specific customer notifications and a <i>firm</i> offer of credit if the customer passes the screening thresholds. The Patent and Dr. Carbonell’s testimony are silent on this important issue.</p>

---

<sup>36</sup> Minimum is based on lender profitability concerns (earning interest for sufficient time to cover up-front ~~loan~~ lease processing costs) and maximum is based on customer



“1”	“2” – Items Cited	“3” - Discussion
24:49 - 55	Retrieving current information associated with at least one of the customer information, the first financial terms that the customer has for the first vehicle, the first vehicle information, the second vehicle information, or the second financial terms available to the customer for the second vehicle	<p>MA would access most current customer, financing, and vehicle information and record the required parameters in a worksheet where calculations could be performed.</p> <p>Examples might include:</p> <ul style="list-style-type: none"> <li>• Current customer payment history on first financial terms</li> <li>• Current payoff amount on first vehicle</li> <li>• Current second financial terms such as interest rate</li> </ul> <p>All of these data lookups could be conducted using a manual process.</p>
24:56 - 60	Determining whether the current retrieved information may affect whether it is favorable for the customer to replace a first vehicle and first financial terms with a second vehicle and second financial terms	<p>It is difficult to understand how a process not involving the exercise of judgment could determine what is “favorable,” or the circumstances under which it may be affected. I understand from counsel that AutoAlert has specified that information may affect favorability if and only if, given that information, the difference between the monthly payment under the second financial terms and the monthly payment under the first financial terms is less than a preset acceptable threshold.<sup>38</sup> I will therefore use this definition in my manual process.</p>

---

repayment concerns (a customer is less likely to keep paying on a longer term ~~loan~~ *lease*. At 2001, typical maximum ~~loan~~ *lease* was in the range of 60 months).

<sup>37</sup> See pages 78 and 110-111

<sup>38</sup> This definition ignores “substitution”. Would a customer view a second vehicle, with, say improved safety features and GPS, as favorable to a first vehicle even if the second financial terms had a higher monthly payment than the first financial terms associated with the first vehicle?

“1”	“2” – Items Cited	“3” - Discussion
24:61 - 64	Calculating one or more new payments based on an estimated equity value of the first vehicle derived from the first financial terms, and based on the second financial terms	<p>The equity value in the first vehicle is calculated by subtracting the amount remaining amount owed under the first financial terms from the current value of the first vehicle. MA previously captured the <del>loan</del> lease pay-off amount<sup>39</sup> due if the first vehicle is replaced with a second vehicle. The resale value in the first vehicle must be determined.</p> <p>The process to determine the estimated equity value of the first vehicle in not clear from the patent. Dr. Carbonell<sup>40</sup> describes a complicated process to estimate current vehicle value based on starting MSRP adjusted for various factors. Among his factors are “...mileage, wear and tear, and location.” These factors are unique to each vehicle and could not be programmed into a general algorithm. Historic averages could be used but this would defeat the determination of a value for a specific vehicle.</p> <p>I would obtain the resale value from a reliable source and industry standard source such as the Kelley Blue Book. Subtracting the <del>loan</del> lease pay-off amount from the KBB value would determine the equity value<sup>41</sup> in the first vehicle. MA would then calculate one or more new payments based on the amount financed (second vehicle total price – estimated equity in first vehicle) combined with various rate and term options available in the second financial information.</p> <p>The vehicle equity could also be impacted if a security deposit was posted at lease inception. However, since the vehicle condition cannot be known without a dealership visual inspection, it is not possible to accurately incorporate the deposit into the equity calculation.</p>

“1”	“2” – Items Cited	“3” - Discussion
24:65 - 25:5	Determining if one or more new payments satisfy at least one condition based in least in part on the first financial terms and the second financial terms, wherein the determination comprises calculating a difference between the one or more new payments and an existing periodic payment for the first vehicle, and determining whether the difference is less than or equal to a preset acceptable threshold value	Although the language suggests that condition satisfaction might have broader scope, I understand from counsel that AutoAlert has specified that the condition is satisfied if and only if the difference between the monthly payment under the second financial terms and the monthly payment under the first financial terms is less than a preset acceptable threshold. MA can array his calculated one or more new payments [calculated above], calculate the difference for each one or more new payments compared to the known existing periodic payment, and determine if the calculated difference(s) meets a pre-established threshold value [either an absolute dollar amount or a percent change in monthly payment]. MA can accomplish all these steps using manual tools or a financial calculator.
25:7- 25:11	Generating a message if it is determined that the retrieved information may affect whether it is favorable for the customer to replace the first vehicle and financial terms with the second vehicle and second financial terms	MA can arrange all the previous calculations and determine by inspection whether one or more second vehicle / second financial terms payments are “favorable” (using AutoAlert’s definition) for the customer compared to the existing first vehicle / first financial terms. The message can then be composed based either on a pre-established template or in format chosen by MA.

<sup>39</sup> The pay-off amount for a lease reflects all the monthly payments remaining on the vehicle “rental”.

<sup>40</sup> Deposition, page 109.

<sup>41</sup> Equity value can be negative – the customer’s ~~loan~~ lease pay-off amount is greater than the current KBB value. This is a frequent occurrence and is often referred to as “negative equity” or “underwater.”

“1”	“2” – Items Cited	“3” - Discussion
25:12	Transmitting the message to a dealer	<p>MA can send the message to the dealer in a variety of ways, for example:</p> <ul style="list-style-type: none"> <li>• A face to face conversation in the dealership</li> <li>• A handwritten message left on a colleague’s desk</li> <li>• Telephone</li> <li>• Voicemail</li> <li>• Fax</li> <li>• Email</li> </ul> <p>The message(s) can be sent to one or more locations or one or more dealer staff based on a simple phone tree diagram.</p>
25:30	Claim 5 – The method of Claim 1, wherein the one or more new payments comprise payments for different respective time periods.	<p>MA can calculate payments for any time periods [<del>loan</del> lease term] using a readily available loan payment and amortization table or a simple financial calculator. Typical auto <del>loans</del> leases today do not exceed 7 years (84 months) in term and there are multiple sources to obtain loan tables that cover 7 years and a wide range of interest rates.</p>
26:31	Claim 7 – with respect to a plurality of customers	<p>Each customer and their financing is a distinct transaction and the calculations are unique to that customer’s circumstances. Results of one customer’s financing decisions do not alter or impact the results for another customer. The manual processes described above are applicable for one or more customers.</p>

15. Schedule 2 hereto reproduces my exemplary pen-and-paper implementation of the lease-specific elements of the foregoing workflow, using strictly manual calculations and formulas to perform the required calculations.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct, that all statements made herein of my

own knowledge are true and that all statements made on information and belief are believed to be true, and that these statement were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on this 23<sup>rd</sup> day of February, 2015, at Emeryville, California.

A handwritten signature in black ink, appearing to read "Neil M. Libroch", written over a horizontal line.

Neil M. Libroch

# SCHEDULE 1

STEP A: RETRIEVING CUSTOMER INFORMATION

M.A. RETRIEVES:

CUSTOMER CONTACT

- SAM SMITH
- 123 MAIN ST
- SAN FRANCISCO, CA 94104
- 415 XXX-XXXX
- SAMSMITH@AOL.COM

DEMOGRAPHIC

- SOCIAL SECURITY NUMBER
- PRIOR OCCUPATION
- PRIOR INCOME
- PRIOR CREDIT SCORE

STEP B: RETRIEVING FIRST FINANCIAL TERMS

- AMOUNT FINANCED = 22,000 , DECEMBER 1, 1997
- INTEREST RATE = 6%
- LOAN TERM = 48 MONTHS (4 YEARS)
- MONTHLY PAYMENT = \$ 516.78
- LOAN HISTORY = PAID AS AGREED (NO DELINQUENCY).
- LOAN PAYOFF = \$4534

FIRST LOAN MANUAL CALCULATIONS

- VEHICLE = 1997 MUSTANG COBRA 2 DOOR COUPE ①
- PRICE = MSRP \$25,335 + \$525 DESTINATION CHARGE = \$25,860  
(PRICE IS NEGOTIATED, BUT MSRP IS A GOOD PROXY).
- AMOUNT FINANCED
  - \$ 25,860 MSRP + DESTINATION
  - (6,000) TRADE-IN
  - 19,860
  - 1,688 TAXES @ 8.5%
  - 462 FEES (ASSUMED)
  - 22,000

① SOURCE: CARS.COM WEBSITE

MANUAL PROCESS IN 1997 WOULD HAVE BEEN MSRP/ "DS EXHIBIT 1024 INVOICE

• CALCULATE MONTHLY PAYMENT

MANUAL

• LOAN AMORTIZATION TABLE (ATTACHED)

- \$ 23.49 / 1000
- 22,000 LOAN
- $23.49 \times 22 = \$ 516.78$

HP-12C ①

CALCULATOR STEPS

- 22,000 'CHS', 'PV'
- 48 "n"
- 6 "g" fx, "i"
- 'PMT' \$ 516.67

~~INTEREST~~  
~~INTEREST~~

STEP C: MA RETRIEVES 6 RECORDS. NO CALCULATIONS.

STEP D: SECOND VEHICLE INFO.

- PARAMETERS EMBEDDED IN STEP F "CONFIGURATION REQUEST"
- IN THIS CASE, "LIKE FOR LIKE"
- 2ND VEHICLE - 2001 MUSTANG COBRA 2 DOOR COUPE ②

$$\begin{aligned} \text{MSRP} &= 28,650 \\ \text{DEST} &= \underline{600} \\ \text{TOTAL} &= \$ 29,250 \end{aligned}$$

STEP E: MA RETRIEVES RATE SHEETS FROM LENDERS.

- COPIES OF FAXES
- RECORD SELECTED RATES/TERMS IN A WORKSHEET FOR USE IN ~~STEP E~~ 'STEP F'

① OWNER'S MANUAL, P. 53-54.

② CARFAX.COM. MANUAL SOURCE WOULD HAVE BEEN MSRP/"WINDOW STICKER"/INVOICE



# STEP F: CONFIGURATION REQUEST

## CREDIT PRE-SCREEN

→ MA COULD "RE-UNDERWRITE" THE CUSTOMER:

- MINIMUM CREDIT SCORE - COMPARE PRIOR/NEW TO THRESHOLD
- MAXIMUM DEBT RATIO - CURRENT LOAN PAYMENT / INCOME < THRESHOLD

↓  
BECAUSE "FAVORABLE" MEANS 2ND PAYMENT  
NO MORE THAN CURRENT PAYMENT

## 'STEP I'

SKIP TO ~~STEP I~~ - THIS IS HOW A MANUAL PROCESS WOULD UNFOLD:

→ 1ST VEHICLE • \$ 22,000 FINANCED, 48 MOS, 6% RATE  
• MONTHLY PAYMENT = \$ 516.78

→ NOW, AT MARCH, 2001.

- 39 PAYMENTS MADE, NO DELINQUENCY
- POSSIBLE CUSTOMER PRE-SCREENING (DO NOT PROCEED IF BAD CREDIT (FICO SCORE) OR HIGH DEBT RATIO).
- 1ST VEHICLE - AMOUNT OWED

### MANUAL

• USE AMORTIZATION TABLE

FOR MOS 40-48 (9 PAYMENTS)

PRINCIPAL \$ x 22.

MO 40	\$ 22.45	x 22 = 493
41	\$ 22.57	= 497
42	\$ 22.68	= 499
43	\$ 22.79	= 501
44	\$ 22.91	= 504
45	\$ 23.02	= 506
46	\$ 23.14	= 509
47	\$ 23.25	= 511
48	\$ 23.37	= 514
		<u>\$ 4534</u>

### HP-12C ①

→ L "g" fx, i  
→ 22,000 'PV'  
→ 516.67 'CHS', 'PMT'  
→ 39 N  
→ "f" "AMORT"  
→ X ≥ Y  
→ "RCL" "PV" = \$ 4535

① OWNER MANUAL, p. 61-62

SO, CUSTOMER OWES

- 2ND VEHICLE \$29,250
- 1ST VEHICLE LOAN PAY-OFF 4,535

33,785

→ EQUITY IN FIRST VEHICLE

↳ USE KBB - NOTE: NOT POSSIBLE  
TO DO A RETRO ANALYSIS TO 2001

RULE OF THUMB:  $\frac{2}{3}$  DEPRECIATION.  
AFTER 4 YEARS.

VALUE:  $\frac{1}{3} \times 25,335$

8,360

25,425

2,160

TAXES (8.5%)

27,565

415

FEES

28,000

AMOUNT FINANCED - 2ND VEHICLE

CALCULATE "FAVORABLE"

→ FAVORABLE: 2ND FINANCIAL TERMS PAYMENT  $\leq$  1ST FINANCIAL  
TERMS PAYMENT

→ 1ST PAYMENT: ~~\$517~~ \$517 / MO.

(A) REPLICATE CURRENT FINANCIAL TERMS W/ 2ND LOAN AMOUNT

→ 48 MOS

→ 6%  $> 23.49 \times 28 = 657.72$  - NOT FAVORABLE.

(B) VARY LOAN TERM - 6% INTEREST

→ 60 MONTH  $19.33 \times 28 = \$542$  - NOT FAVORABLE

→ 72 MONTH  $16.57 \times 28 = \$464$  - FAVORABLE \*

(C) SUPPOSE 2ND FINANCIAL TERMS = 5% INTEREST

→ 48 MONTH  $23.03 \times 28 = \$644$  NOT FAVORABLE

→ 60 MONTH  $18.87 \times 28 = \$528$  NOT FAVORABLE

→ 72 MONTH  $16.10 \times 28 = \$450.80$  FAVORABLE \*

(D) MANUFACTURER REBATE: \$3,000 ON 2ND VEHICLE

→ AMOUNT FINANCED = \$28,000 - \$3,000 REBATE = \$25,000

→ 6% INTEREST

→ 60 MONTH  $19.33 \times 25 = \$483$  FAVORABLE \*

(E) MANUFACTURER SUBSIDIZED FINANCING - 2.9%.

NOTE: FOR EASE OF USE, USE HP-12C

→ 48 MO  $\$25,000 @ 2.9\% = \$552$  NOT FAVORABLE

→ 60 MO  $\$25,000 @ 2.4\% = \$446$  FAVORABLE

## Loan Amortization Table Calculator

Loan Summary	
Principal:	\$ <input style="width: 50px;" type="text" value="1000"/>
Interest Rate: <small>current mortgage rates</small>	<input style="width: 50px;" type="text" value="6"/> %
Term:	<input style="width: 50px;" type="text" value="4"/> years

Payment Summary							
Monthly Payment				Total Interest Paid		Total Paid	
<b>\$23.49</b>				<b>\$127.28</b>		<b>\$1,127.28</b>	
Amortization Table							
Payment	Principal	Interest	Balance	Payment	Principal	Interest	Balance
1 (\$23.49)	\$18.49	\$5.00	\$981.51	25 (\$23.49)	\$20.84	\$2.65	\$509.05
2 (\$23.49)	\$18.58	\$4.91	\$962.94	26 (\$23.49)	\$20.94	\$2.55	\$488.11
3 (\$23.49)	\$18.67	\$4.81	\$944.27	27 (\$23.49)	\$21.04	\$2.44	\$467.07
4 (\$23.49)	\$18.76	\$4.72	\$925.50	28 (\$23.49)	\$21.15	\$2.34	\$445.92
5 (\$23.49)	\$18.86	\$4.63	\$906.65	29 (\$23.49)	\$21.26	\$2.23	\$424.66
6 (\$23.49)	\$18.95	\$4.53	\$887.69	30 (\$23.49)	\$21.36	\$2.12	\$403.30
7 (\$23.49)	\$19.05	\$4.44	\$868.65	31 (\$23.49)	\$21.47	\$2.02	\$381.83
8 (\$23.49)	\$19.14	\$4.34	\$849.51	32 (\$23.49)	\$21.58	\$1.91	\$360.26
9 (\$23.49)	\$19.24	\$4.25	\$830.27	33 (\$23.49)	\$21.68	\$1.80	\$338.57
10 (\$23.49)	\$19.33	\$4.15	\$810.93	34 (\$23.49)	\$21.79	\$1.69	\$316.78
11 (\$23.49)	\$19.43	\$4.05	\$791.50	35 (\$23.49)	\$21.90	\$1.58	\$294.88
12 (\$23.49)	\$19.53	\$3.96	\$771.98	36 (\$23.49)	\$22.01	\$1.47	\$272.87
13 (\$23.49)	\$19.63	\$3.86	\$752.35	37 (\$23.49)	\$22.12	\$1.36	\$250.75
14 (\$23.49)	\$19.72	\$3.76	\$732.63	38 (\$23.49)	\$22.23	\$1.25	\$228.52
15 (\$23.49)	\$19.82	\$3.66	\$712.81	39 (\$23.49)	\$22.34	\$1.14	\$206.18
16 (\$23.49)	\$19.92	\$3.56	\$692.89	40 (\$23.49)	\$22.45	\$1.03	\$183.72
17 (\$23.49)	\$20.02	\$3.46	\$672.86	41 (\$23.49)	\$22.57	\$0.92	\$161.16
18 (\$23.49)	\$20.12	\$3.36	\$652.74	42 (\$23.49)	\$22.68	\$0.81	\$138.48
19 (\$23.49)	\$20.22	\$3.26	\$632.52	43 (\$23.49)	\$22.79	\$0.69	\$115.68
20 (\$23.49)	\$20.32	\$3.16	\$612.20	44 (\$23.49)	\$22.91	\$0.58	\$92.78
21 (\$23.49)	\$20.42	\$3.06	\$591.78	45 (\$23.49)	\$23.02	\$0.46	\$69.76
22 (\$23.49)	\$20.53	\$2.96	\$571.25	46 (\$23.49)	\$23.14	\$0.35	\$46.62
23 (\$23.49)	\$20.63	\$2.86	\$550.62	47 (\$23.49)	\$23.25	\$0.23	\$23.37
24 (\$23.49)	\$20.73	\$2.75	\$529.89	48 (\$23.49)	\$23.37	\$0.12	\$0.00

493  
497  
499  
501  
504  
506  
509  
511  
514

Σ = 4534

E

# Monthly Installment Loan Tables (\$1,000 loan with interest payments compounded monthly)

Loan  
Maturity  
(in months)

Interest	6	12	18	24	30	36	48	60	72	84	96
133.62	85.15	57.33	43.42	35.08	29.52	22.58	18.42	15.65	13.67	12.19	
133.74	85.26	57.44	43.54	35.19	29.64	22.69	18.53	15.76	13.78	12.31	
133.86	85.38	57.56	43.65	35.31	29.75	22.80	18.64	15.87	13.90	12.42	
133.98	85.49	57.67	43.76	35.42	29.86	22.92	18.76	15.99	14.02	12.54	
134.11	85.61	57.78	43.87	35.53	29.97	23.03	18.87	16.10	14.13	12.66	
134.23	85.72	57.89	43.98	35.64	30.08	23.14	18.99	16.22	14.25	12.78	
134.35	85.84	58.01	44.10	35.75	30.20	23.26	19.10	16.34	14.37	12.90	
134.47	85.95	58.12	44.21	35.87	30.31	23.37	19.22	16.46	14.49	13.02	
134.60	86.07	58.23	44.32	35.98	30.42	23.49	19.33	16.57	14.61	13.14	
134.72	86.18	58.34	44.43	36.09	30.54	23.60	19.45	16.69	14.73	13.26	
134.84	86.30	58.46	44.55	36.20	30.65	23.71	19.57	16.81	14.85	13.39	
134.96	86.41	58.57	44.66	36.32	30.76	23.83	19.68	16.93	14.97	13.51	
135.09	86.53	58.68	44.77	36.43	30.88	23.95	19.80	17.05	15.09	13.63	
135.21	86.64	58.80	44.89	36.55	30.99	24.06	19.92	17.17	15.22	13.76	
135.33	86.76	58.91	45.00	36.66	31.11	24.18	20.04	17.29	15.34	13.88	
135.45	86.87	59.03	45.11	36.77	31.22	24.30	20.16	17.41	15.46	14.01	
135.58	86.99	59.14	45.23	36.89	31.34	24.41	20.28	17.53	15.59	14.14	
135.70	87.10	59.25	45.34	37.00	31.45	24.53	20.40	17.66	15.71	14.26	
135.82	87.22	59.37	45.46	37.12	31.57	24.65	20.52	17.78	15.84	14.39	
135.95	87.34	59.48	45.57	37.23	31.68	24.77	20.64	17.90	15.96	14.52	
136.07	87.45	59.60	45.68	37.35	31.80	24.89	20.76	18.03	16.09	14.65	
136.19	87.57	59.71	45.80	37.46	31.92	25.00	20.88	18.15	16.22	14.78	
136.32	87.68	59.83	45.91	37.58	32.03	25.12	21.00	18.27	16.34	14.91	
136.44	87.80	59.94	46.03	37.70	32.15	25.24	21.12	18.40	16.47	15.04	
136.56	87.92	60.06	46.14	37.81	32.27	25.36	21.25	18.53	16.60	15.17	
136.68	88.03	60.17	46.26	37.93	32.38	25.48	21.37	18.65	16.73	15.31	
136.81	88.15	60.29	46.38	38.04	32.50	25.60	21.49	18.78	16.86	15.44	
136.93	88.27	60.40	46.49	38.16	32.62	25.72	21.62	18.91	16.99	15.57	
137.05	88.38	60.52	46.61	38.28	32.74	25.85	21.74	19.03	17.12	15.71	
137.18	88.50	60.63	46.72	38.40	32.86	25.97	21.87	19.16	17.25	15.84	
137.30	88.62	60.75	46.84	38.51	32.98	26.09	21.99	19.29	17.39	15.98	
137.42	88.73	60.87	46.96	38.63	33.10	26.21	22.12	19.42	17.52	16.12	
137.55	88.85	60.98	47.07	38.75	33.21	26.33	22.24	19.55	17.65	16.25	
137.67	88.97	61.10	47.19	38.87	33.33	26.46	22.37	19.68	17.79	16.39	
137.80	89.08	61.21	47.31	38.98	33.45	26.58	22.50	19.81	17.92	16.53	
137.92	89.20	61.33	47.42	39.10	33.57	26.70	22.63	19.94	18.06	16.67	
138.04	89.32	61.45	47.54	39.22	33.69	26.83	22.75	20.07	18.19	16.81	
138.17	89.43	61.56	47.66	39.34	33.81	26.95	22.88	20.21	18.33	16.95	
138.29	89.55	61.68	47.78	39.46	33.94	27.08	23.01	20.34	18.46	17.09	
138.41	89.67	61.80	47.89	39.58	34.06	27.20	23.14	20.47	18.60	17.23	
138.54	89.79	61.92	48.01	39.70	34.18	27.33	23.27	20.61	18.74	17.37	
138.66	89.90	62.03	48.13	39.82	34.30	27.45	23.40	20.74	18.88	17.51	
138.79	90.02	62.15	48.25	39.94	34.42	27.58	23.53	20.87	19.02	17.66	

# SCHEDULE 2

## PATENT 8,396,791 MANUAL CALCULATIONS

THE STEP BY STEP MANUAL PROCESS FOR AUTO LOANS INCLUDES VARIOUS DATA GATHERING STEPS. THESE STEPS ALSO APPLY TO AUTO LEASES.

FOR EASE OF READING, THE ~~FOR~~ LEASE PAYMENT CALCULATION STEPS ARE DOCUMENTED HERE.

GIVENS : (1) WE KNOW THE MONTHLY LEASE PAYMENT FROM THE FIRST FINANCIAL TERMS

(2) ANY POSITIVE OR NEGATIVE EQUITY IS ALSO KNOWN. WE WILL ASSUME NO EQUITY FROM FIRST VEHICLE.

(3) WE WILL USE MSRP FOR ~~THE~~ SECOND VEHICLE

4

MANUAL LEASE PAYMENT CALCULATION STEPS - 4 YEAR LEASE

- |                                |          |  |
|--------------------------------|----------|--|
| (1) PRICE OF CAR               | 29,250   | 2001 MUSTANG COBRA 2 DOOR.<br>MSRP - SAME AS LOAN CALC   |
| (2) RESIDUAL %                 | 40%      | GOOD ESTIMATE. IN 2001 I WOULD HAVE CONSULTED THE 'ALC LEASE GUIDE' HANDBOOK TO DETERMINE INDUSTRY-WIDE EXPECTED 4 YEAR LEASE RESIDUAL |
| (3) RESIDUAL VALUE             | 11,700   | CALCULATION  |
| (4) CAPITALIZED COST           | 29,250   | ASSUME SAME AS MSRP + DESTINATION CHARGE.  |
| (5) MINUS: RESIDUAL (#3)       | (11,700) |  |
| (6) EQUALS: 48 MO DEPRECIATION | 17,550   |  |
- > LEASING IS JUST RENTING A CAR FOR AN EXTENDED PERIOD. CUSTOMER PAYS FOR THE ACTUAL USAGE (DEPRECIATION) + A TIME VALUE OF MONEY (INTEREST RATE).

(2)

(6) 48 MO. DEPRECIATION

17,550

FROM PRIOR PAGE

(7) TERM - 48 MONTHS

÷ 48

CONVERT TO MONTHLY -  
PAYMENTS ARE MONTHLY(8) MONTHLY DEPRECIATION  
PAYMENT

366

---

CALCULATE INTEREST -  
FORMULA

(9) CAPITALIZED COST (#4)

29,250

(10) PLUS: RESIDUAL

+ 11,700

(11) TOTAL

40,950

(12) MONEY FACTOR

× 0.0025INTEREST RATE ON ~~1000000~~  
BORROWED MONEY

(13) INTEREST

102

MF = INTEREST RATE / 2400

(14) MONTHLY DEPRECIATION  
PAYMENT (#8)

366

(15) TOTAL <sup>LEASE</sup> PAYMENT5466

(16) TAXES - 8.5%

40(17) TOTAL ALL-IN  
PAYMENT\$506