

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

CARVANA, LLC,

Plaintiff,

v.

INTERNATIONAL BUSINESS MACHINES
CORPORATION,

Defendant.

Case No. 1:23-cv-8616 (KMK) (VR)

CARVANA'S SUPPLEMENTAL INVALIDITY CONTENTIONS

I. INTRODUCTION

Pursuant to the Court's April 15, 2024 Scheduling Order (D.I. 67) and Local Patent Rule 7, Plaintiff Carvana, LLC ("Carvana") hereby serves its Supplemental Invalidity Contentions on Defendant International Business Machines Corporation ("IBM") for U.S. Patent Nos. 7,543,234 ("the '234 patent"), and 7,631,346 ("the '346 Patent"), 7,702,719 ("the '719 Patent") (collectively, the "Patents-in-Suit").¹

These Invalidity Contentions are directed to preliminary invalidity issues only and do not address claim construction, non-infringement, or unenforceability. Carvana reserves all rights with respect to such issues, including but not limited to its position that claims of the Patents-in-Suit are to be construed in a particular manner and are not infringed.

These Invalidity Contentions are preliminary and are based on Carvana's current knowledge, understanding, and belief as to the facts and information available as of the date of these contentions. Carvana has not yet completed its investigation, discovery, or analysis of information related to this action, and additional discovery may require Carvana to supplement or amend its Invalidity Contentions. While Carvana has made a good-faith effort to provide a comprehensive list of prior art relevant to this case, Carvana also reserves the right to amend or supplement these contentions to the extent allowed by the Federal Rules of Civil Procedure, the Local Patent Rules and Local Rules of this Court, and any applicable scheduling orders, including the Court's Case Management Plan and Scheduling Order (D.I. 39). Moreover, discovery is ongoing and Carvana reserves the right to pursue all other defenses that may be available to it.

¹ IBM has dismissed U.S. Patent No. 7,072,849 since the Carvana served its initial Invalidity Contentions, on January 26, 2024.

the art with reasonable certainty as to the scope and meaning of “performing a preliminary user account creation operation” and “performing a concluding user account creation operation.”

Claims 11 and 14 are indefinite because the specification fails to provide one of ordinary skill in the art with reasonable certainty as to the scope and meaning of the limitations reciting a “fourth system.”

IV. U.S. Patent No. 7,702,719

The '719 Patent, entitled “Methods and Apparatus for Reducing the Number of Server Interactions in Network-Based Applications Using a Dual-MVC Approach,” issued on April 20, 2010. The '719 Patent issued from Application No. 09/500,208, filed on February 8, 2000.

Carvana does not concede that the Asserted Claims of the '719 Patent are entitled to a priority date prior to February 8, 2000.

A. Identification of Prior Art

Carvana hereby identifies each item of prior art that anticipates and/or renders obvious one or more of the Asserted Claims of the '719 Patent.

Carvana further identifies and incorporates by reference, as if originally set forth herein, all prior art references cited in and/or on the cover of the '719 Patent and its prosecution histories. Carvana reserves the right to identify additional prior art references including patents, non-patent publications, as well as non-patent and non-publication prior art systems that were sold, offered for sale, used, etc. prior to the priority date of the '719 Patent, to the extent any such prior art becomes known during discovery in this case. Exhibits D-1 to D-25 attached hereto, identify examples of where each element in each Asserted Claim is disclosed, described, or taught in the prior art.

1. Prior Art Patents and Published Patent Applications

Number	First Named Inventor	Filing Date / Priority Date	Publication / Issue Date	Short Name
U.S. 6,810,528	Masayuki Chatani	12/3/1999	10/26/2004	Chatani
U.S. 6,108,687	Russell O. Craig	3/2/1998	8/22/2000	Craig
U.S. 6,272,673	Geoffrey W. Dale	11/25/1997	8/7/2001	Dale
U.S. 5,838,906	Michael D. Doyle	10/17/1994	11/17/1998	Doyle
U.S. 6,170,109	Holger Dresel	12/10/1997	1/2/2001	Dresel
U.S. 6,253,228	Michael Ferris	3/31/1997	6/26/2001	Ferris
U.S. 6,430,576	Patrick Gates	5/10/1999	8/6/2002	Gates
U.S. 5,768,510	Sheri L. Gish	7/1/1996	6/16/1998	Gish
U.S. 5,987,454	Allen Hobbs	6/9/1997	11/16/1999	Hobbs
U.S. 6,161,136	Arn Close Hyndman	10/16/1998	12/12/2000	Hyndman
U.S. 6,484,149	Pierre J. Jammes	10/10/1997	11/19/2002	Jammes
U.S. 6,446,111	Keith A. Lowery	6/18/1999	9/3/2002	Lowery
U.S. 6,163,779	Murthy L. Mantha	9/29/1997	12/19/2000	Mantha
U.S. 6,356,933	David C. Mitchell	9/7/1999	3/12/2002	Mitchell
U.S. 6,272,493	Sandro Pasquali	1/21/1999	8/7/2001	Pasquali
U.S. 5,838,909	H. Scott Roy	5/23/1996	11/17/1998	Roy
U.S. 6,222,551	Bengt-Olaf Schneider	1/13/1999	4/24/2001	Schneider
U.S. 6,224,486	Jay S. Walker	2/24/1998	5/1/2001	Walker
U.S. 5,778,367	Ralph E. Wesinger, Jr.	12/14/1995	7/7/1998	Wesinger
U.S. 6,409,602	Michael S. Wiltshire	11/24/1998	6/25/2002	Wiltshire

Number	First Named Inventor	Filing Date / Priority Date	Publication / Issue Date	Short Name
U.S. 6,415,317	Joshua Michael Yelon	10/1/1999	7/2/2002	Yelon

2. Prior Art Non-Patent Publications

Title	Author and/or Publisher	Publication Date	Short Name
Experience with Distributed Smalltalk	John K. Bennett	1990	Bennett
Interactive Mail Access Protocol – Version 2	M. Crispin	1990	Crispin
Has anyone seen this program? Synchronous and asynchronous help for novice programmers	John Domingue	1997	Domingue
The Videotex and Teletex Handbook	Paul Hurly	1985	Hurly
Dynamic Documents: Wireless Access to the WWW	M. Frans Kaashoek	1994	Kaashoek
Rover: A Toolkit for Mobile Information Access	Anthony D. Joseph	1995	Rover

3. Prior Art Systems / Services

System / Service	Earliest Public Use and/or Offer for Sale	Short Name
Diablo, patch version 1.07 (Diablo 1's multiplayer mode, released on December 31, 1996, uses a client-server architecture to manage and update the game data (model), ensuring player synchronization. This synchronization is achieved by storing the game data (model), rendering the data (view), and handling updates to the game data (controller) on both the client and the server.)	1998	Diablo

4. Additional Background References

In addition to the anticipatory and obviousness references identified above, Carvana may also rely on (1) the references in the table below and (2) any reference cited in the references identified above or herein to establish the state of the art and the knowledge of a person of ordinary skill in the art at the time of the alleged inventions of the asserted claims. The basic concepts and components in the asserted claims were all well-known to persons of ordinary skill in the art prior to the alleged priority date of the '719 Patent as reflected in the references lists in the below table.

Title or Pat. No. / Pub. No.	Author / Publisher or Inventor	Issue, Publication, or Filing Date
A Cookbook for Using the Model-View-Controller User Interface Paradigm in Smalltalk-80, Journal of Object- Oriented Programming, 1(3):26-49 ("Pope")	Glenn E. Krasner, Stephen T. Pope	August/September, 1988

Title or Pat. No. / Pub. No.	Author / Publisher or Inventor	Issue, Publication, or Filing Date
A Method for Partitioning and Allocating Application Components on Client-Server Systems, IEEE SMC'99 Conference Proceedings. 1999 IEEE International Conference on Systems, Man, and Cybernetics	Chen, Huo Yan	October 1999
Online maps in GeoMed, Internet mapping. Online GIS and their application in collaborative spatial decision-making	Claus Rinner	1998
Internet Today! Email Searching The World Wide Web, Franklin, Beedle	Ernest C. Ackermann, Karen Hartman	1999
A Practical Approach towards Active Hyperlinked Documents, Computer Networks and ISDN Systems, Volume 30, Issues 1-7	Eckhart Koppen, Gustaf Neumann	April, 1998
User Interface Issues in Mobile Computing, Proceedings of the Fourth Workshop on Workstation Operating Systems, Napa, CA, October 1993	James A. Landay, Todd R. Kaufmann	October 1993
Programming Internet Email, Chapter 11: The Internet Message Access Protocol, O'Reilly Media Network Working Group	David Wood	August 1999
Request for Comments: 2192 (IMAP URL Scheme)	C. Newman	September 1997
Issues in Building Mobile-Aware Applications with the Rover Toolkit, Master's thesis, Massachusetts Institute of Technology	Joshua Tauber	June 1996
Building Reliable Mobile-Aware Applications using the Rover Toolkit, Proceedings of the 2nd ACM International Conference on Mobile Computing and Networking	Anthony Joseph, M. Frans Kaashoek	November 1996
Mobile Computing with the Rover Toolkit, IEEE Transactions On Computers, Vol. 46, No. 3	Anthony Joseph, Joshua Tauber, M. Frans Kaashoek	March 1997
Rover Mosaic: E-mail Communication for a Full-Function Web Browser, Master's thesis, Massachusetts Institute of Technology	Alan F. deLospinasse	June 1995
Customizing Mobile Applications, Proceedings USENIX Symposium on Mobile & Location-independent Computing	Bill N. Schilit, Marvin M. Theimer, Brent B. Welch	August 1993

Title or Pat. No. / Pub. No.	Author / Publisher or Inventor	Issue, Publication, or Filing Date
Distributed Object Management in Thor, International Workshop on Distributed Object Management, pages 79-91.	Barbara Liskov, Mark Day, and Liuba Shrira	1992
Browsing the Web with a Mail/News Reader, UIST '95: Proceedings of the 8th annual ACM symposium on User interface and software technology	Marc H. Brown	November 1995
US 6,810,528, System and method for providing an on-line gaming experience through a CATV broadband network	Masayuki Chatani	Filed December 3, 1999, issued October 26, 2004
US 6,430,576, Distributing and synchronizing objects	Patrick Gates, Craig Federighi, Eric Noyau	Filed May 10, 1999, issued August 6, 2002
History of PHP, available at < https://www.php.net/manual/en/history.php.php > ("History of PHP")	The PHP Documentation Group	1994-2004
A Java-Based Approach for Developing Web Application System ("Chunlin")	Li Chunlin	1999

5. Past Disclosures

Carvana incorporates by reference all invalidity contentions and any supplemental or amended invalidity contentions of prior art for the '719 Patent served on IBM in any other litigation or patent office proceeding. Carvana additionally incorporates by reference all petitions for post grant review, include but not limited to petitions for *inter partes* review. For example, and without limitation, Carvana incorporates by reference the disclosures of prior art from *International Business Machines Corporation v. Zynga, Inc. et al.*, No. 1:22-cv-00590-GBW (D. Del.).

B. Invalidity Under 35 U.S.C. § 102 and/or § 103

IBM asserts claims 1-4, 8, 10-12, 26 of the '719 Patent against Carvana. All of those claims are invalid because the '719 Patent fails to meet one or more of the requirements for

patentability under 35 U.S.C. §§ 102 and/or 103.

1. Identification of Prior Art and Combinations of Prior Art

Some or all of the Asserted Claims of the '719 Patent are invalid as anticipated under 35 U.S.C. § 102 in view of the prior art references identified above as and for the reasons indicated in the claim charts attached as Exhibits D-1 to D-25, which identify specific examples of where each limitation of the Asserted Claims is found in the prior art references, as well as in the incorporated disclosures from other proceedings. The cited portions of prior art references identified in the attached claim charts are exemplary only and representative of the content and teaching of the prior art references, and should be understood in the context of the reference as a whole and as they would be understood by a person of ordinary skill in the art.

To the extent any limitation is deemed not to be exactly met by an item of prior art listed above, then any purported differences are such that the claimed subject matter as a whole would have been obvious to one skilled in the art at the time of the alleged invention, in view of the state of the art and knowledge of those skilled in the art. The item of prior art would, therefore, render the relevant claims invalid for obviousness under 35 U.S.C. § 103(a).

In addition, the references identified above render one or more Asserted Claims of the '719 Patent obvious when read in combination with each other, and/or when read in view of the state of the art and knowledge of those skilled in the art as and for the reasons indicated in Carvana's claim charts and incorporated disclosures. Each and every reference identified is also relevant to the state of the art at the time of the alleged invention. Any of the references disclosed above may be combined to render obvious (and therefore invalid) each of IBM's Asserted Claims. In particular, to the extent that any charted reference or combination of references may not disclose one or more limitations of any Asserted Claim, it would be obvious to combine that reference or combination with the disclosure of such limitations in any other charted reference or

combination in view of the overlapping teachings and objectives of all the charted references and combinations in the same technological field as understood by those skilled in the art. Carvana may rely upon a subset of the above identified references or all of the references identified above, including all references in the claim charts, for purposes of obviousness depending on the Court's claim construction and further investigation and discovery.

Although Carvana has identified at least one citation per limitation for each reference, each and every disclosure of the same limitation in the same reference is not necessarily identified. Rather, in an effort to focus the issues, Carvana has cited representative portions of identified references in its claim charts, even where a reference may contain additional support for a particular claim element. In addition, persons of ordinary skill in the art generally read a prior art reference as a whole and in the context of other publications and literature. Thus, to understand and interpret any specific statement or disclosure within a prior art reference, such persons would rely on other information within the reference, along with other publications and their general scientific knowledge. Carvana may rely upon uncited portions of the prior art references and on other publications and expert testimony to provide context, and as aids to understanding and interpreting the portions that are cited. Carvana may also rely on uncited portions of the prior art references, other disclosed publications, and the testimony of experts to establish that a person of ordinary skill in the art would have been motivated to modify or combine certain of the cited references so as to render the claims obvious.

2. Motivations to Combine

In *KSR*, the Supreme Court emphasized that an idea that is the result of ordinary innovation, ordinary skill, or common sense should not be patentable. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). The Supreme Court held that a person of ordinary skill in the art is “a person of ordinary creativity, not an automaton” and “in many cases a person of ordinary

skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 420-21. Although a patent challenger is not required to show that one of ordinary skill in the art would have had a specific motivation to combine prior art references, such a showing may be helpful to the obviousness analysis. *Id.* at 418; *see also id.* at 402.

One of ordinary skill in the art would have been motivated to combine the references identified herein because, for example, the identified combinations fall into one or more of the following categories:

- A combination of elements known in the prior art according to known methods to yield a predictable result;
- A combination that is a simple substitution of one or more known elements for another to obtain a predictable result;
- A combination that involves using a known technique to improve a similar device or method in the same way;
- A combination that involves applying a known technique to a known device or method ready for improvement to yield a predictable result;
- A combination that results from a finite number of identified, predictable solutions with a reasonable expectation of success, such that the solution was one which was “obvious to try”;
- A combination that results from known work in one field of endeavor prompting variations of it for use either in the same field or a different field based on design incentives or other market forces in which the variations were predictable to one of ordinary skill in the art; and
- A teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art reference or to combine the teachings of various prior art references to arrive at the claimed invention.

Further, the Federal Circuit has held that a motivation to combine references may be implicit for patents claiming an “improvement”:

[A]n implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the “improvement” is technology-independent and the combination of references results in a product or process that is more desirable,

for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal—and even commonsensical—we have held that there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves. In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him capable of combining the prior art references.

DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1368

(Fed. Cir. 2006). The prior art references identified herein and as discussed more specifically in the charts in the attached exhibits explicitly or implicitly refer to other prior art references, share common authors or inventors, and/or were developed at common companies, institutions, or organizations, all of which would motivate one of ordinary skill in the art to combine them. These references are also within the fields of the '719 Patent and are directed to similar subject matter within those fields. Additionally, any products, devices, or processes described in the references existed and/or were invented before or during the period in which the claimed inventions were developed, providing further motivation to combine them.

Thus, the motivation to combine the teachings of the prior art references disclosed herein is found in the references themselves and: (1) the nature of the problem(s) being solved, (2) the express, implied, and inherent teachings of the prior art, (3) the knowledge of persons of ordinary skill in the art, (4) the fact that the prior art is generally directed towards methods and systems for graphical user interfaces, including the display of advertisements, and (5) the predictable results obtained in combining the different elements of the prior art. Additionally, one would be motivated to address at least the alleged problems or achieve the purported objectives identified in the descriptions of the '719 Patent.

C. Invalidity Based on 35 U.S.C. § 101

Carvana asserts that each Asserted Claim of the '719 Patent is invalid as directed to

subject matter not eligible for patent protection under 35 U.S.C. § 101. Each Asserted Claim of the '719 Patent is directed to the abstract idea of reducing interactions between a client and a server through distributed parallel information processing.

The Asserted Claims fail to include any inventive steps that would transform the abstract ideas into patentable inventions as the claims recite only the result of splitting information processing between two places and performing it in parallel, without any specific technique for doing so, following an MVC (Model-View-Controller) model that the '719 Patent expressly attributes to the prior art. For example, the '719 Patent does not specify a particular means of achieving this reduction in interaction other than through broad, generic computing functions (storing, executing). The '719 Patent merely configures a server and a client to perform typical computing tasks that do not go beyond the general implementation of the abstract idea using conventional and generic computer functions. Moreover, at the time of the '719 Patent, network-based client/server applications were well known and commonplace, as was the fact that application logic could reside on both a client and a server. And that in at least the case of “fat-client applications,” a client was able to perform parts of an application without server interaction. There is no specific technological improvement or inventive concept to transform the '719 abstract idea into a patent-eligible invention. The '719 Patent claims thus lack any inventive concept that would warrant a technological solution to a technological problem, as merely configuring computers to reduce interaction through common tasks is a routine and conventional activity in computer science and technology.

Carvana's investigation concerning invalidity of the '719 Patent under Section 101 is ongoing. For example, Plaintiff has not provided adequate infringement contentions and discovery is ongoing. Carvana thus reserves the right to supplement and/or amend its invalidity

contentions with respect to Section 101.

D. Invalidity Based on 35 U.S.C. § 112

Carvana lists below exemplary grounds upon which it contends that the Asserted Claims are invalid, under at least IBM's apparent construction of the claims in its Infringement Contentions, for failure to meet one or more requirements of 35 U.S.C. § 112. This is particularly the case with respect to the apparent overbroad constructions that IBM is applying to the Asserted Claims, which go beyond (and are not adequately described or enabled by) the purported inventions disclosed in the '719 Patent. To the extent the Asserted Claims may eventually be construed so broadly as to cover the accused products, such a construction would render the Asserted Claims invalid for failure to meet the requirements of 35 U.S.C. § 112. A more detailed discussion of Carvana's written description, enablement, and indefiniteness defenses will be set forth in Carvana's expert report(s) on invalidity.

Asserted Claims 1-4, 8, 10-12, 26 are indefinite because the patent specification fails to provide one of ordinary skill in the art with a sufficiently clear indication of the scope or meaning of "execute the view-generating and controller logic associated therewith."

Asserted Claims 1-4, 8, 10-12, 26 are indefinite because the patent specification fails to provide one of ordinary skill in the art with a sufficiently clear indication of the scope or meaning of "performed at the client without the client having to interact with the server."

Claims 4, 8, 10, 11 are indefinite because it is not clear which "configuring step" of claim 1 is being narrowed.

Asserted Claim 26 is indefinite because the patent specification fails to provide one of ordinary skill in the art with a sufficiently clear indication of the scope or meaning of "a model comprises application data, rules, and algorithms affecting the data."

Asserted Claim 26 is indefinite because the patent specification fails to provide one of

ordinary skill in the art with a sufficiently clear indication of the scope or meaning of “a view comprises a screen or window representation of a subset of the model that the application chooses to display.”

Asserted Claim 26 is indefinite because the patent specification fails to provide one of ordinary skill in the art with a sufficiently clear indication of the scope or meaning of “a controller comprises the logic that processes user requests, and causes the model to be changed and the view to be refreshed.”

Carvana’s investigation concerning invalidity under 35 U.S.C. § 112 is ongoing. For example, IBM has not provided adequate infringement contentions and discovery is ongoing. Thus, Carvana reserves the right to supplement and/or amend its invalidity contentions with respect to §112. Such supplementation and/or amendments may include, but are not limited to, invalidity contentions based on indefiniteness, lack of written description, and/or lack of enablement should the claims be construed under 35 U.S.C. § 112(6).

DATED: July 10, 2024

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on July 10, 2024, I caused the foregoing to be served on the following counsel of record by electronic mail:

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