

Declaration of Trevor Smedley, Ph.D. in Support
of Patent Owner's Preliminary Response to Petition for
Inter Partes Review of U.S. Patent No. 9,959,023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BUMBLE TRADING INC.,
Petitioner,

v.

MATCH GROUP, LLC,
Patent Owner.

Case IPR2019-01000
Patent No. 9,959,023 B2

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Submitted Electronically via the Patent Review Processing System

**DECLARATION OF TREVOR SMEDLEY, PH.D. IN SUPPORT OF
PATENT OWNER'S PRELIMINARY RESPONSE**

Duration Media v. Rich Media Club
IPR 2023-00953 (Patent 11,443,329)

Rich Media Club Exhibit 2012

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I, Trevor Smedley, Ph.D., declare as follows:

I. INTRODUCTION

1. I have been retained as a technical expert on behalf of patent owner Match Group, LLC (“Match Group” or “Patent Owner”) in connection with the above-captioned Petition for *Inter Partes* Review (“IPR”) of U.S. Patent No. 9,959,023 (“the ‘023 Patent”) (Ex. 1001) requested by Bumble Trading Inc. (“Bumble” or “Petitioner”).

2. I understand that Petitioner challenged Claims 1-6 (the “Challenged Claims”) of the ‘023 Patent as allegedly unpatentable under 35 U.S.C. § 103 in view of certain alleged prior art references. *See* Petition at 3-4. Specifically, I understand that Petitioner challenged the claims of the ‘023 Patent on the following grounds:

- Ground 1: Claims 1-6 under 35 U.S.C. § 103 as allegedly being obvious over U.S. Patent No. 9,122,757 to Wernick (“*Wernick*”) in view of U.S. Patent Application Publication No. 2012/0246231 A1 by Norena (“*Norena*”);
- Ground 2: Claims 1-6 under 35 U.S.C. § 103 as allegedly being obvious over *Wernick* in view of U.S. Patent Application Publication No. 2012/0143779 A1 by Chang (“*Chang*”);
- Ground 3: Claims 1-6 under 35 U.S.C. § 103 as allegedly being

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obvious over U.S. Patent Application Publication No. 2011/0072470 A1
by Morris ("*Morris*") in view of *Norena*;

- Ground 4: Claims 1-6 under 35 U.S.C. § 103 as allegedly being
obvious over *Morris* in view of *Chang*;

- Ground 5: Claims 1-6 under 35 U.S.C. § 103 as allegedly being
obvious over *Morris* in view of U.S. Patent Application Publication No.
2011/0087974 A1 to Kulas ("*Kulas*") and *Norena*

- Ground 6: Claims 1-6 under 35 U.S.C. § 103 as allegedly being
obvious over *Morris* in view of *Kulas* and *Chang*.

See id.

3. I am familiar with the technology at issue, including during the period
prior to June 6, 2012.¹ I have reviewed Match Group's Patent Owner's Preliminary
Response to the Petition for *Inter Partes* Review of U.S. Patent No. 9,959,023
("Preliminary Response"), including the exhibits attached thereto. I make this
Declaration in support of the Preliminary Response.

¹ I understand that Patent Owner contends that each of the asserted claims of the
'023 Patent is entitled to a priority date of no later than June 6, 2012. *See* Ex. 1009
at 4.

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4. I have been asked to consider how a person having ordinary skill in the art ("PHOSITA") would understand the claims of the '023 patent and the applied references. In reaching the opinions stated herein, I have considered the '023 patent and the alleged prior art references identified by the Petition in the context of my own education, training, research, and knowledge, as well as my personal and professional experience.

5. I have been asked to provide my technical opinions regarding Grounds 1-6 in Petitioner's Petition for IPR of the '023 Patent.

6. In reaching the opinions stated herein, I have considered the materials identified in Section IV in the context of my own education, training, research, and knowledge, as well as my personal and professional experience.

7. I make this Declaration based on my own personal knowledge and, if called upon to testify, would testify competently to the matters contained herein. Specifically, this Declaration is a statement of my opinions that the Challenged Claims are not rendered obvious by the relied-upon references.

II. SUMMARY OF OPINIONS

8. After studying the materials listed in Section IV of this Declaration, I reached the conclusions discussed herein.

9. It is my opinion that the Petition does not demonstrate that *any* of the

Challenged Claims of the '023 patent are rendered obvious as set forth in Grounds 1-6 by the references cited in the Petition.

III. BACKGROUND AND QUALIFICATIONS

10. My background and qualifications are stated more fully in my curriculum vitae. *See* Ex. 2002. Here, I provide a brief summary of my qualifications:

11. I have B.Math (Pure Math and Computer Science), M.Math (Computer Science) and Ph.D. (Computer Science) degrees from the University of Waterloo Faculty of Mathematics, in Waterloo, Ontario, Canada. I also hold an L.L.B. degree from the Dalhousie University Faculty of Law, in Halifax, Nova Scotia, Canada. I have been a member of the Massachusetts Bar since 2010. I currently work full-time as an expert witness and consultant. I have 30 years' experience in Computer Science, with extensive experience in user interface design and implementation.

12. After receiving my Ph.D. from the University of Waterloo in 1990, I spent two years as a Visiting Professor at the University of Delaware, Department of Computer and Information Science, before moving to the Technical University of Nova Scotia, School of Computer Science, which later merged with Dalhousie University, Faculty of Computer Science. I received tenure in 1996, and was promoted to Full Professor in 2004. In 2009 I left the university to work as a

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consultant full time.

13. I have taught a wide range of courses, both at the graduate and undergraduate level. During my 20 years as a university professor, I have taught more than two dozen classes in user interface design and related areas, both at the undergraduate and graduate level. All of these were courses that I introduced and developed. These courses addressed graphical user interfaces (GUIs), gesture-based input, and conversational user interfaces. In addition to these specialty courses, I also taught courses on object oriented programming, applications programming, and operating systems (among others). These courses would have covered topics including database queries and client/server communications architectures. My research and work with graduate students in visual languages and end user programming also included a significant aspect of user interface design.

14. Additionally, from 1994 to the present I have provided consulting services for a number of software development companies providing GUI design and development services. Some of this work included building software applications employing client/server communication architectures, database queries and graphical user interfaces.

15. As I stated above, I have attached my curriculum vitae, which contains a more detailed list of my experience and qualifications, as Exhibit 2002.

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16. I am being compensated through Cahn Litigation, LLC ("Cahn") for my time working on this matter at my standard hourly rate plus expenses. Neither Cahn nor I have any personal or financial stake or interest in the outcome of the present proceeding. My compensation is not dependent on the outcome of this IPR and in no way affects the substance of my statements in this Declaration.

IV. MATERIALS CONSIDERED

17. I have considered information from various sources in forming my opinions. Besides drawing from my 30 years' experience in Computer Science, I also have reviewed the documents and references as cited herein, including those identified in the following table:

Petitioner's Exhibits	
1001	U.S. Patent No. 9,959,023 B2 to Sean Rad, et al. (filed Feb. 5, 2016, issued May 1, 2018) ("023" or "023 patent")
1002	Declaration of Chris Schmandt ("Schmandt")
1003	U.S. Patent No. 9,122,757 B1 to Grant Wernick et. al. (filed May 23, 2012, published Sept. 1, 2015) ("Wernick")
1004	U.S. Patent Application Publication No. 2012/0246231 A1 to Sebastian Norena (filed Jan. 12, 2012, published Sept. 27, 2012) ("Norena")
1005	U.S. Patent Application Publication No. 2011/0072470 A1 to Scott Morris, et al. (filed Sept. 22, 2009, published Mar. 24, 2011) ("Morris")

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Petitioner's Exhibits	
1006	U.S. Patent Application Publication No. 2011/0087974 A1 to Charles Kulas (filed Dec. 17, 2010, published Apr. 14, 2011) ("Kulas")
1007	U.S. Patent Application Publication No. 2012/0143779 A1 to Chia-Ming Chang (filed Apr. 8, 2011, published Jun. 7, 2012) ("Chang")
1008	File History of '023 Patent
1009	Plaintiff Match Group, LLC's Disclosure of Asserted Claims and Infringement Contentions, <i>Match Group LLC. v. Bumble Trading Inc.</i> , Case No. 6:18-cv-00080-ADA (W.D. Tex.) (January 21, 2019) (cover document)
1010	Claim Listing
1011	First Amended Complaint, <i>Match Group LLC. v. Bumble Trading Inc.</i> , Case No. 6:18-cv-00080-ADA (W.D. Tex.)
1012	Third Amended Complaint, <i>Match Group LLC. v. Bumble Trading Inc.</i> , Case No. 6:18-cv-00080-ADA (W.D. Tex.)
1013	U.S. Provisional Patent Application No. 61/498,599 to Grant M. Wernick et al. (filed June 19, 2011)
1014	U.S. Provisional Patent Application No. 61/621,524 to Grant M. Wernick et al. (filed April 8, 2012)
1015	U.S. Provisional Patent Application No. 61/650,868 to Grant M. Wernick et al. (filed May 23, 2012)
1016	U.S. Provisional Patent Application No. 61/466,394 to Sebastian Norena (filed March 22, 2011)
1017	Michael J. Rosenfeld & Reuben J. Thomas, <i>Searching for a Mate The Rise of the Internet as a Social Intermediary</i> , 77(4) AMERICAN SOCIOLOGICAL REVIEW 523 (2012)

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Petitioner's Exhibits	
1018	Charles Newark-French, <i>Mobile Dating Apps: The Second (Lady) Killer App Category</i> , FLURRY (Aug. 2011), https://web.archive.org/web/20110811173903/http://blog.flurry.com/bid/68668/Mobile-Dating-Apps-The-Second-Lady-Killer-App-Category
1019	Julie Spira, <i>The CyberDating Expert Top 10 Mobile Dating Apps</i> , CYBER-DATING EXPERT (Sept. 23, 2010), https://web.archive.org/web/20100926124154/http://cyberdatingexpert.com/the-cyberdating-expert-top-10-mobile-dating-apps
1020	Excerpt of Plaintiff Match Group, LLC's Infringement Contentions -- Claim Chart for the '023 Patent
1021	Match Group's Proposed Claim Constructions
1022	Bumble Trading's Proposed Claim Constructions
1023	Charles Newark-French, <i>Mobile Apps Put the Web in Their Rear-view Mirror</i> , FLURRY (June 20, 2011), https://web.archive.org/web/20110924031931/http://blog.flurry.com/bid/63907/Mobile-Apps-Put-the-Web-in-Their-Read-view-Mirror
1024	Gordon P. Kurtenbach, Abigail J. Sellen & William A.S. Buxton, <i>An Empirical Evaluation of Some Articulatory and Cognitive Aspects of Marking Menus</i> , 8 HUMAN COMPUTER INTERACTION 1 (1993)
1025	U.S. Patent Application Publication No. 2012/0272186 A1 to Joel Kraut (filed Mar. 8, 2012, published Oct. 25, 2012) ("Kraut")
1026	U.S. Patent No. 8,606,297 B1 to Joel Simkhai, et al. (filed Mar. 24, 2011, issued Dec. 10, 2013) ("Simkhai")
1027	U.S. Patent Application Publication No. 2006/0026521 A1 to Steve Hotelling, et al. (filed July 30, 2004, published Feb. 2, 2006) ("Hotelling")

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1028	U.S. Patent No. 8,059,101 B2 to Wayne Westerman, et al. (filed June 22, 2007, published Nov. 15, 2011) ("Westerman")
1029	U.S. Patent No. 7,479,949 B2 to Steven Jobs, et al. (filed Apr. 11, 2008, published Jan. 20, 2009) ("Jobs")
1030	U.S. Patent Application Publication No. 2013/0047115 A1 to Charles Migos, et al. (filed Aug. 17, 2012, published Feb. 21, 2013) ("Migos")
1031	U.S. Patent No. 8,095,879 B2 to Magnus Goertz (filed Dec. 10, 2002, issued Jan. 10, 2012) ("Goertz")
1032	U.S. Patent Application Publication No. 2012/0017180 A1 to Dominic Flik, et al. (filed Jul. 25, 2011, published Jan. 19, 2012) ("Flik")
1033	U.S. Patent Application Publication No. 2010/0146462 A1 to Mayasuki Ishizawa (filed Nov. 9, 2009, published June 10, 2010) ("Ishizawa")
1034	U.S. Patent Application Publication No. 2009/0002335 A1 to Imran Chaudhri (filed June 26, 2008, published Jan. 1, 2009) ("Chaudhri")
1035	U.S. Patent Application Publication No. 2012/0290978 A1 to John Devecko (filed May 14, 2012, published Nov. 15, 2012) ("Devecko")
1036	Julie Spira, <i>Top 10 Best Mobile Dating Apps of 2012</i> , CYBER-DATING EXPERT, https://cyberdatingexpert.com/mobiledating2012/ (last visited Apr. 29, 2019)
1037	File History of U.S. Patent No. 9,733,811 B2
1038	U.S. Patent No. 8,108,414 B2 to David Stackpole (filed Nov. 28, 2007, issued Jan. 31, 2012) ("Stackpole")
1039	U.S. Patent No. 7,203,674 B2 to Morgan Cohen (filed Feb. 15, 2002, issued April 10, 2007) ("Cohen")

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Petitioner's Exhibits	
1040	U.S. Patent No. 7,545,784 B2 to Richard Mgrdechian & Man-Ho Lawrence Lee (filed Feb. 10, 2005, issued June 9, 2009) ("Mgrdechian")
1041	Anne McLaughlin, <i>An Introduction to Cupid; Former Lewiston Radio Personality Launches a Social Network for Single Adults Looking for Friends</i> , LEWISTON MORNING TRIBUNE (April 9, 1995)
1042	Lukas Brozovsky & Vaclav Petricek, <i>Recommender System for Online Dating Service</i> (March 9, 2007), available at https://arxiv.org/pdf/cs/0703042.pdf
1043	Affidavit of C. Butler (Internet Archive)
1044	Declaration of Sylvia D. Hall-Ellis, Ph.D.
Patent Owner's Exhibits	
2001	Declaration of Trevor Smedley, Ph.D
2002	Curriculum Vitae of Trevor Smedley, Ph.D
2003	Scheduling Order, <i>Match Group, LLC v. Bumble Trading, Inc.</i> , Case No. 6:18-cv-00080-ADA (W.D. Tex.)
2004	Defendant Bumble Trading Inc.'s Preliminary Invalidity Contentions, <i>Match Group, LLC v. Bumble Trading, Inc.</i> , Case No. 6:18-cv-00080-ADA (W.D. Tex.)
2005	Reserved
2006	June 7, 2019 Hearing Transcript, <i>Match Group, LLC v. Bumble Trading, Inc.</i> , Case No. 6:18-cv-00080-ADA (W.D. Tex.)

18. I have reviewed Match Group's Preliminary Response in detail and agree with both its analysis and conclusions.

V. LEGAL UNDERSTANDING

19. I have relied on instructions from counsel for Match Group as to the applicable legal standards to use in arriving at my opinions in this Declaration. My opinions are informed by my understanding of the relevant law.

20. I understand that, in this proceeding, claims are to be construed in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

21. I understand that a patentability analysis is conducted on a claim-by-claim basis and that there are several possible reasons that a patent claim may be found to be unpatentable. I understand that earlier publications and patents may act to render a patent claim unpatentable for one of two reasons: (1) anticipation and (2) obviousness.

22. I understand that the Board's rules require that a petition must identify how the construed claim is unpatentable and, in particular, the petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.

A. Anticipation

23. I understand that a single piece of prior art anticipates a claim if that prior art discloses each and every claim element as arranged in the claim. I further

understand that, where a claim element is not explicitly disclosed in a prior art reference, the reference may only anticipate a claim if the missing claim element is necessarily present in the apparatus or is a natural result of the method disclosed, *i.e.*, the missing claim element is “inherent.” I understand that inherency may not be established by probabilities or possibilities and that the mere fact that a certain thing may result from a given set of circumstances is not sufficient.

B. Obviousness

24. I understand that the prior art may render a patent claim obvious. I understand that two or more pieces of prior art that each disclose fewer than all elements of a patent claim may nevertheless be combined to render a patent claim obvious if the combination of the prior art collectively discloses all elements of the claim. I also understand that establishing obviousness requires a showing that one of ordinary skill in the art would have and could have combined the references with a reasonable expectation of success.

25. I understand that the obviousness analysis must focus on the knowledge available to one of ordinary skill in the art at the time the claimed invention was made in order to avoid impermissible hindsight. I have also been informed that the framework for determining obviousness involves considering the following factors: (i) the scope and content of the prior art; (ii) the differences between the prior art

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and the claimed subject matter; (iii) the level of ordinary skill in the art; and (iv) any objective evidence of non-obviousness.

26. I understand that objective evidence of non-obviousness (also referred to as “secondary considerations” of non-obviousness) should be considered when evaluating whether a claimed invention would have been obvious to one of ordinary skill at the time of invention. These secondary considerations may include, for example: (i) a long-felt but unmet need in the prior art that was satisfied by the claimed invention; (ii) commercial success of processes covered by the patent; (iii) unexpected results achieved by the invention; (iv) praise of the invention by others skilled in the art; (v) the taking of licenses under the patent by others; (vi) whether others had tried and failed to make the invention; (vii) whether persons of ordinary skill in the art expressed surprise or disbelief regarding the invention; (viii) whether the inventor proceeded contrary to accepted wisdom; and (ix) deliberate copying of the invention.

27. I understand that there must be a nexus between any such secondary consideration of non-obviousness and the claimed invention.

28. I understand that for prior art references to be combined for purposes of an obviousness analysis, there must be some motivation for a person of ordinary skill in the art to combine the references and a reasonable expectation of success in

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doing so. I understand that there must be some reason why a person of ordinary skill in the art would have thought to combine particular available elements of knowledge, as evidenced by the prior art, to reach the claimed invention. I further understand that a combination is improper when one of ordinary skill in the art, upon reading a reference, would be discouraged from following the path set out in the reference. I understand this standard may be met when a reference criticizes, discredits, or otherwise discourages modifying the reference to arrive at the claimed invention.

29. I understand that obviousness requires a suggestion of all limitations in a claim. I further understand that a party asserting obviousness must prove that all claimed limitations are disclosed or suggested in the prior art.

30. I understand that inherency may supply a missing claim limitation in an obviousness analysis. I further understand that in an obviousness analysis, inherency may not be established by probabilities or possibilities. I understand that the mere fact that a certain thing may result from a given set of circumstances is not sufficient. I understand that a party must meet a high standard in order to rely on inherency to establish the existence of a claim limitation in the prior art in an obviousness analysis—the limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art.

C. Claim Construction

31. I understand that, in an IPR, claims of an unexpired patent are to be interpreted (or “construed”) in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. I further understand that, under this standard, claim terms are given their plain and ordinary meaning in view of the specification, as would be understood by one of ordinary skill in the art at the time of invention. I also understand that it is important not to import claim limitations that are not part of the claim when construing a claim term.

32. I also understand that the claims should be construed consistent with the patent's intrinsic record, which includes the patent itself as well as the patent's prosecution history. I further understand that a patentee can act as his or her own “lexicographer” by explicitly defining claim terms in the body of the patent.

33. Moreover, I understand that extrinsic evidence (including, for example, technical dictionaries and treatises) may shed light on the meaning claim terms would have to one of ordinary skill in the art. I also understand that, where extrinsic evidence conflicts with the intrinsic record, the intrinsic record governs the meaning of claim terms.

VI. LEVEL OF ORDINARY SKILL IN THE ART

34. I have been informed by counsel for Match Group that the claims of a patent are judged from the perspective of a hypothetical construct involving “a person of ordinary skill in the art” at the time the claimed invention of the patent was made. The “art” is the field of technology to which the patent is related. I understand that the purpose of using the view point of a person of ordinary skill in the art is for objectivity.

35. In my opinion, a person of ordinary skill must generally have the capability of understanding the general computer systems principles that are applicable to the pertinent art. I understand that the factors to be considered in determining the level of ordinary skill in the art to be: (1) the educational level of active workers in the field, including the named inventors of the patent; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; and (5) the sophistication of the technology in the art.

36. I understand that the application that resulted in the ‘023 Patent was filed on February 5, 2016. It is a continuation of an application filed October 21, 2013 and claims priority to a provisional application filed on March 15, 2013. I understand that Patent Owner contends that the claims of the ‘023 Patent are entitled

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to a priority date of no later than June 6, 2012. *See* Ex. 1009 at 4. For purposes of my analysis in this Declaration, I have used June 2012 as the “relevant time.”

37. In my opinion, a person of ordinary skill in the art at the time of the invention of the ‘023 Patent would have had a bachelor’s degree in computer engineering or computer science or their equivalents, or at least five years of experience in engineering or software design or equivalent experience. Each of the factors that I outlined above supports this formulation.

38. Based on my education and experience in the field of computer science set forth above and in my curriculum vitae, I meet this definition of one of ordinary skill in the art, and I believe I am qualified to provide opinions about how one of ordinary skill in the art at the relevant time would have interpreted and understood the ‘023 patent and the alleged prior art cited in the Petition. Specifically, I meet this definition because I obtained B.Math (Pure Math and Computer Science), M.Math (Computer Science) and Ph.D. (Computer Science) degrees from the University of Waterloo Faculty of Mathematics, in Waterloo, Ontario, Canada, before June 2012.

39. Additionally, Petitioner’s expert, Mr. Schmandt, opines that a person of ordinary skill in the art pertaining to the ‘023 Patent would have possessed at least a bachelor’s degree in computer science or an equivalent field requiring learning

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computation principles, and two years of experience in building software applications employing client/server communication architecture, database queries and graphical user interfaces. See Ex. 1002 at ¶13. Additionally, Mr. Schmandt opines that a person could also have qualified as a person of ordinary skill in the art with some combination of (1) more formal education (such as a master's of science degree) and less technical experience, or (2) less formal education and more technical or professional experience in the fields listed above. *Id.* I also meet Mr. Schmandt's definition, because I have B.Math (Pure Math and Computer Science), M.Math (Computer Science) and Ph.D. (Computer Science) degrees from the University of Waterloo Faculty of Mathematics, in Waterloo, Ontario, Canada. From 1994 to the present I have provided consulting services for a number of software development companies providing GUI design and development services. Thus, by June 2012, I had a Ph.D. in Computer Science and "two years of experience in building software applications employing client/server communication architecture, database queries and graphical user interfaces."

40. Although my qualifications and experience exceed those of a person of ordinary skill in the art, both in June 2012 and today, I have nevertheless applied the perspective of a person of ordinary skill in the art in rendering my opinions below. Regardless of whether the Board applies my definition of the level of ordinary skill

in the art or Mr. Schmandt's definition, my opinion is that the Challenged Claims are not rendered obvious as described below.

VII. BRIEF OVERVIEW OF THE '023 PATENT

A. Summary of the '023 Patent

41. In my opinion, the '023 Patent describes and claims improvements to computer- and user-interface functionality for dating and other matchmaking apps. *See* Ex. 1001 at 1:15-17. In particular, the '023 Patent describes and claims an improved graphical user interface (GUI) that allows a user to navigate through a set of presented users by browsing through a stack of cards. *See, e.g.*, Ex. 1001 at 22:4-15. Different gestures performed on graphical representations of potential matches are used to convey positive and negative preference indications concerning the potential matches. And once a user performs a gesture on the graphic representation of the potential match, another potential match is presented while the previous is removed.

42. For example, in certain embodiments a user interacts with a matching server through "a touch screen interface operable to detect and receive touch input such as a tap or a swiping gesture." *Id.* at 2:55-56, 19:36-38, Figures 1A, 1B. The matching server presents suggested matches to the user, which may be "displayed as [a] stack of cards" as depicted in Figure 6 below:

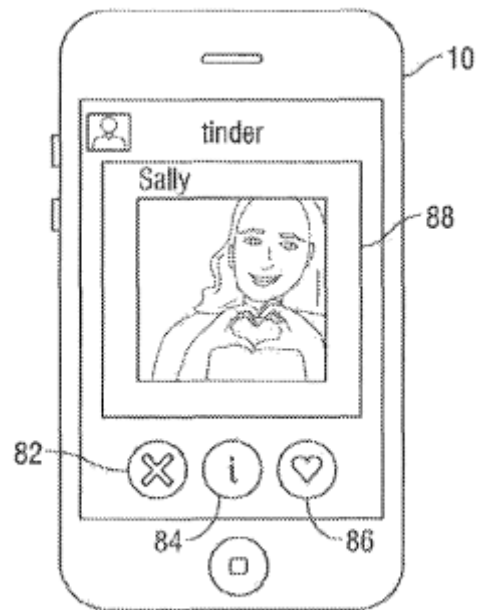
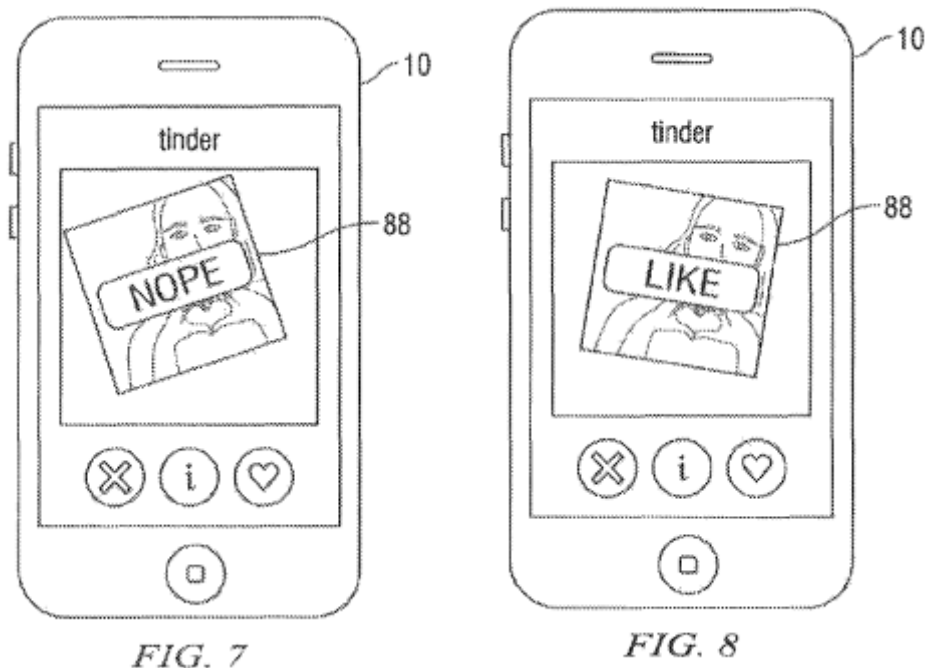


FIG. 6

Id. at 21:1-16, Figure 6. The user navigates through the set of suggested matches by browsing through the stack of cards. *See id.* at 21:61-63. For instance, the user may “express disapproval by performing a left swipe gesture” and “express approval of a presented user by performing a right swipe gesture,” as depicted in Figures 7 and 8, respectively:



Id. at 21:63-66. The user's preference indication may be anonymous in that the matching server may not inform a user whether other users have expressed approval or disapproval for them. *See id.* at 21:36-39.

43. The approaches described and claimed in the '023 Patent revolutionized the online-dating world and solved a number of problems associated with prior approaches. *See, e.g., id.* at 1:39-62. For example, the '023 Patent also improved the navigation of search results containing potential matches. With prior approaches, reviewing potential matches was a time-consuming and frustrating endeavor. *See Ex. 1001* at 1:52-55. As a result, users were deterred from continuing through all of the search results. *See id.* The '023 Patent's improved user interface

allows users to sift through more information, more quickly than previous interfaces addressing similar binary-choice user decisions.

B. Challenged Claims of the '023 Patent

44. Petitioner requested instituting *inter partes* review on Claims 1-6 of the '023 Patent. The Challenged Claims are set forth below.

1. A method of navigating a user interface, comprising:

[a] presenting, on a graphical user interface, a graphical representation of a first item of information of a plurality of items of information, the first item of information comprising a graphical representation of a first online dating profile associated with a first user, wherein presenting the graphical representation of the first item of information of the plurality of items of information comprises presenting the first item of information as a first card of a stack of cards;

[b] detecting a gesture associated with the graphical representation of the first item of information, the gesture corresponding to a positive preference indication associated with the first item of information, the positive preference indication associated with the first item of information comprising an expression of approval

for the first user associated with the first online dating profile, wherein

detecting the gesture associated with the graphical representation of the first item of information comprises detecting a right swiping direction associated with the gesture;

[c] storing the positive preference indication associated with the first item of information in response to detecting the gesture;

[d] automatically presenting, on the graphical user interface, a graphical representation of a second item of information of the plurality of items of information in response to detecting the gesture, the second item of information comprising a graphical representation of a second online dating profile associated with a second user; and

[e] automatically removing the graphical representation of the first item of information from the graphical user interface in response to detecting the gesture.

2. The method of claim 1, wherein presenting the graphical representation of the first item of information of the plurality of items of information comprises presenting user interface controls such that all user interface controls configured to cause another item of information of the plurality of items of information to be displayed are

associated with performing an action on the first item of information.

3. A system, comprising:

[a] an interface operable to: present a graphical representation of a first item of information of a plurality of items of information, the first item of information comprising a graphical representation of a first online dating profile associated with a first user, wherein the interface is further operable to present the graphical representation of the first item of information of the plurality of items of information as a first card of a stack of cards;

[b] a processor coupled to the interface and operable to: detect a gesture associated with the graphical representation of the first item of information, the gesture corresponding to a positive preference indication associated with the first item of information, the positive preference indication associated with the first item of information comprising an expression of approval for the first user associated with the first online dating profile, wherein the processor is further operable to detect a right swiping direction associated with the gesture;

[c] store the positive preference indication associated with the

first item of information in response to detecting the gesture; and

[d] the interface further operable to: automatically present a graphical representation of a second item of information of the plurality of items of information in response to the processor detecting the gesture, the second item of information comprising a graphical representation of a second online dating profile associated with a second user; and

[e] automatically remove the graphical representation of the first item of information in response to detecting the gesture.

4. The system of claim 3, wherein the interface is further operable to present user interface controls such that all user interface controls configured to cause another item of information of the plurality of items of information to be displayed are associated with performing an action on the first item of information.

5. At least one non-transitory computer-readable medium comprising a plurality of instructions that, when executed by at least one processor, are configured to:

[a] present, on a graphical user interface, a graphical representation of a first item of information of a plurality of items of information, the first item of information comprising a graphical representation of a first online dating profile associated with a first user, wherein the plurality of instructions are configured to present the graphical representation of the first item of information of the plurality of items of information as a first card of a stack of cards;

[b] detect a gesture associated with the graphical representation of the first item of information, the gesture corresponding to a positive preference indication associated with the first item of information, the positive preference indication associated with the first item of information comprising an expression of approval for the first user associated with the first online dating profile, wherein the plurality of instructions are further configured to detect a right swiping direction associated with the gesture;

[c] store the positive preference indication associated with the first item of information in response to detecting the gesture;

[d] automatically present, on the graphical user interface, a

graphical representation of a second item of information of the plurality of items of information in response to detecting the gesture, the second item of information comprising a graphical representation of a second online dating profile associated with a second user; and

[e] automatically remove the graphical representation of the first item of information from the graphical user interface in response to detecting the gesture.

6. The at least one non-transitory computer-readable medium of claim 5, wherein the plurality of instructions are further configured to present user interface controls such that all user interface controls configured to cause another item of information of the plurality of items of information to be displayed are associated with performing an action on the first item of information.

VIII. ALLEGED PRIOR ART REFERENCES

45. I understand that Petitioner identified five references that it alleges constitute prior art to the '023 Patent. These references are set forth in the table below.

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Exhibit No.	Alleged Prior Art Reference
1003	U.S. Patent No. 9,122,757 B1 to Grant Wernick et. al. (filed May 23, 2012, published Sept. 1, 2015) (“Wernick”)
1004	U.S. Patent Application Publication No. 2012/0246231 A1 to Sebastian Norena (filed Jan. 12, 2012, published Sept. 27, 2012) (“Norena”)
1005	U.S. Patent Application Publication No. 2011/0072470 A1 to Scott Morris, et al. (filed Sept. 22, 2009, published Mar. 24, 2011) (“Morris”)
1006	U.S. Patent Application Publication No. 2011/0087974 A1 to Charles Kulas (filed Dec. 17, 2010, published Apr. 14, 2011) (“Kulas”)
1007	U.S. Patent Application Publication No. 2012/0143779 A1 to Chia- Ming Chang (filed Apr. 8, 2011, published Jun. 7, 2012) (“Chang”)

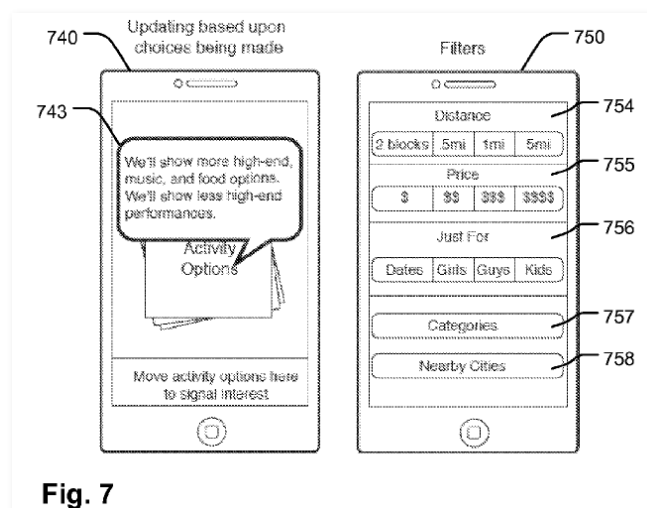
46. In the following sections, I provide a brief summary of each of these alleged prior art references.

A. Wernick

47. U.S. Patent No. 9,122,757 B1 to *Wernick* (“Wernick”) describes a personal concierge plan and itinerary generator. See Ex. 1003 at Title. *Wernick* states that “[t]here are abundant sources of information for purchasing plane tickets, booking tables, and reading reviews” but that these sources are cumbersome and

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require considerable study. *Id.* at 1:28-31. *Wernick* discloses technology for a user to sort through activity options. Ex. 1003 at Abstract. *Wernick* is not simply a sorting tool, but further “presents activity options responsive to user choices, as the user is choosing.” *Id.* at 8:50-51; *see also id.* at 7:44-47 (“Responsive to user, it offers future activities for user selection or rejection that take into account a variety of factors, including the user’s ongoing responses to the activities offered.”). In other words, *Wernick* analyzes a user’s choices and associated characteristics with those choices, to provide additional options in line with a user’s preferences, as shown in Fig. 7 below. In order to provide this tailored feedback and similar options, *Wernick* also utilizes similarity matrices with a variety of factors and characteristics to determine similar options according to a user’s preference, an example of which is shown in Figure 2 below. Ex. 1003, 4:32-45, Fig. 2.



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Category	Food	Food	Food	Food	Performance
City	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco
Classiness	100	95	5	95	100
Kid Friendly	No	No	Yes	No	No
Cost	\$\$\$\$	\$\$\$\$	\$	\$\$\$\$	\$\$\$\$
Trendiness	50	80	10	100	40
Good for Groups	No	Yes	Yes	No	Yes
Overall Rating	4.5	5	3	5	4
Guys Score	70	80	100	75	30
Girls Score	80	100	40	90	100
Similarity to Anchor	100	85	5	95	97.6

Fig. 2 – Similarity matrix

48. *Wernick* also details how it uses several factors to personalize a plan—including location, date, time, user ratings, and “vibe” of the plan—and acquires this information about potential activities from a variety of databases, some of which may be updated by “crawling” the internet to gather as much information as possible. Ex. 1003, 3:33-63. Having these filtering factors, databases, and characteristics of activities allows *Wernick* to provide a dynamic response and tailor additional options to a user’s particular preferences.

B. Norena

49. U.S. Patent Application Publication No. 2012/0246231 A1 by *Norena* (“*Norena*”) relates to a matching system. See Ex. 1004. *Norena* describes that one of the problems with online-dating websites and applications is that they require a person to become a subscriber by completing a detailed profile. See *id.* at ¶0007. *Norena* purports to solve this problem by providing “a system and method that works faster, as the only data required for a user to create a profile is a cellular phone

number, picture, e-mail, and password.” *Id.* at ¶0010.

C. *Chang*

50. U.S. Patent Application Publication No. 2012/0143779 A1 by *Chang* (“*Chang*”) describes an online-matchmaking system and method. *See* Ex. 1007 at Title. *Chang* purports to address problems with then-existing online-dating systems and matchmaking services, such as high cost, subjectivity, and fraud due to lack of screening. *See id.* at ¶¶0007-08. Unlike the ’023 Patent, *Chang*’s online-matchmaking system does not enable a user to navigate through graphical representations of potential matches using gestures. Instead, “names of the candidate members are listed in a table[.]” *Id.* at ¶0033. When a user selects a target member from the list, a matching module “presents the basic data of the target member to the user” and asks whether the user is interested in in the target member. *Id.* at ¶¶0021, 0033-34.

D. *Morris*

51. U.S. Patent Application Publication No. 2011/0072470 A1 by *Morris* (“*Morris*”) relates to “systems and methods for remote web query and image selection exchange to video screen.” Ex. 1005 at Title. For instance, *Morris* describes a system that includes a handheld communications device having a user interface to search for a plurality of media resources and a set-top box to receive a

request to display a desired media resource on a display device coupled to the set-top box. *See id.* at Abstract.

E. *Kulas*

52. U.S. Patent Application Publication No. 2011/0087974 A1 by *Kulas* ("*Kulas*") describes embodiments that purport to provide a method for operating a control in a GUI concurrently or in association with receiving a user indication of the user's state of mind. *See* Ex. 1006 at Abstract.

IX. CLAIM CONSTRUCTION

53. As noted above, it is my understanding that a claim in an IPR proceeding is construed in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. I understand that Petitioner does not propose any constructions for the claims of the '023 Patent. *See* Petition at 10-11. In my opinion, none of the terms of the '023 Patent require express construction for purposes of the institution decision.

**X. PETITIONER FAILED TO DEMONSTRATE A REASONABLE
LIKELIHOOD THAT ANY OF THE CHALLENGED CLAIMS ARE
UNPATENTABLE**

54. For the reasons explained below, it is my opinion that Petitioner has not demonstrated a reasonable likelihood that any of the various proposed combinations

of references set forth in Grounds 1-6 of the Petition render Claims 1-6 of the '023 Patent unpatentable.

A. Ground 1: Petitioner failed to demonstrate a reasonable likelihood that *Wernick* in view of *Norena* renders obvious Claims 1-6 because its obviousness analysis is conclusory and deficient.

55. In Ground 1, Petitioner asserts that *Wernick* in view of *Norena* renders obvious Claims 1-6. *See* Petition at 14-34. I disagree. In my opinion, Petitioner has failed to show how and why a PHOSITA would have been motivated to combine *Wernick* and *Norena*.

1. Petitioner fails to establish that a PHOSITA *could* have modified *Wernick* to incorporate the profiles of *Norena*.

56. In my opinion, Petitioner provides no explanation for how *Wernick*—a scientific concierge planning system using advanced filtering, databases, and user feedback to provide dynamic responses—would be combined with *Norena*—a two-way matching website emphasizing simple and short user profiles. Petitioner concedes that *Wernick* does not teach the claimed “online dating profile” as required by Claim 1, and looks to *Norena* to supply this feature. Petitioner attempts to provide a simple substitution of the “activity” card of *Wernick* with the “online dating profile” of *Norena*, arguing that “[t]he predictable result would have been a card-based graphical user interface where positive preferences are made regarding online dating profiles using a swiping gesture.” Petition at 19. Petitioner points to

Wernick's disclosure of using the interface in contexts such as determining "attitudes towards a candidate," and argues that "by expressing an attitude towards a candidate, a person is indicating whether they are interested; just as someone indicates whether they are interested in a dating match." Petition at 20.

57. However, in my opinion, Petitioner's attempt to simply substitute the "activity" card of *Wernick* with the "online dating profile" of *Norena* ignores the purpose and operation of *Wernick*—dynamically altering proposed activities to a user based on a user's preferences regarding other activities. Petitioner provides no explanation for how *Norena*'s purposefully short user profiles would provide sufficient information and data to enable *Wernick* to provide such a dynamic response.

58. Specifically, *Norena* discloses a purposefully simple profile where "[a]n email, password, cell phone number and picture of the user are the only required fields for a user who wants to create a profile on the system." Ex. 1004, ¶ 21. *Norena*'s profiles not only fail to include the amount of information and data needed for *Wernick*'s dynamic-recommendation features, but *Norena* actually teaches away from using intensive searching and filtering through user profiles for online dating. Indeed, *Norena* indicates that the characteristics in a dating profile are too "subjective" such that searching or filtering for a specific characteristic may

not result in accurate results from the user's perspective. *Id.* at ¶ 7. For example, "someone may put on his/her profile that he/she has an 'athletic type' body, but from the eyes of the person who is doing a search by 'athletic type' body, it may not be an athletic body." *Id.* at ¶ 7. *Norena* also counsels away from using complicated algorithms comparing profiles and characteristics because "this purely scientific approach to matchmaking does not work in practice." *Id.* at ¶ 9. Accordingly, not only do *Norena*'s profiles lack sufficient information for *Wernick* to even operate its dynamic response feature, but it specifically warns against these scientific approaches to online dating. Petitioner glosses over these distinctions and provides no explanation for how a PHOSITA would modify *Wernick* to include *Norena*'s "online dating profiles" and incorporate specific considerations that accompany online dating, as compared to an activity generator of *Wernick*.

59. Even if Petitioner ignores *Wernick*'s dynamic response and filtering feature, and relies only on *Wernick*'s sorting interface, the combined system would still require modification for how it would "store the positive preference indication associated with the first item of information in response to detecting the gesture" of Claim 1, which Petitioner refers to as "step 1[c]." *Wernick* discloses storing a positive preference indication temporarily or for a specific search, while *Norena* discloses storing a positive preference indication more permanently. In my opinion,

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a PHOSITA would not incorporate *Norena*'s permanent storage with *Wernick*'s temporary storage, and Petitioner has failed to explain to combine these aspects into a combined *Wernick-Norena* system.

60. Petitioner points to *Wernick*'s disclosure of a "wish list" that includes "every item a user has expressed a positive preference indication for" as disclosing this limitation. Petition at 26. A PHOSITA would understand that any "positive preference indication" or "wish list" of *Wernick* would be related to a ***particular*** search, rather than any permanent "like" or indication of preference, such as that disclosed in *Norena*. For example, one day a user may indicate a positive preference for the steakhouse for a date night dinner, but another day request a kid-friendly restaurant and "delete" an option for a fancy steakhouse. By disclosing that "[t]he options generator 111 may be invoked several times," a PHOSITA would understand that a user's preferences for one option (e.g., restaurant or activity) would be different depending on the date, time, and people attending the activity. Ex. 1003, 2:67-3:2. In other words, a PHOSITA would understand that any actions that a user takes with an activity (e.g., saving or deleting) would be related to this particular search such that a user could "delete" an option in one search and "save" it in another search.

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61. On the other hand, *Norena* provides that a user's reaction to a user's profile is a one-time and permanent choice. *Norena* discloses that once User1 indicates that he or she wants to meet User2, the system stores this choice and runs an algorithm to determine if there is a decision from User2 wanting to meet User1. Ex. 1004, ¶ 24. A PHOSITA would understand, in my opinion, that a user would not switch his or her opinion on whether he or she wanted to meet another user based on the time of day or other changing factors, but rather would provide a one-time indication of a preference that would be stored until and if the other user indicated an interest as well. In fact, *Norena* is focused on "eliminat[ing] the fear of rejection," such that a PHOSITA would understand that *Norena* would prevent users from changing their minds after indicating interest in another. Ex. 1004, Abstract.

62. Petitioner has failed to explain how a PHOSITA would modify *Wernick's* storing of a positive preference when incorporating *Norena's* online dating profiles. Because *Wernick* provides for temporary storage of user preferences depending on a particular search, it would require modification when incorporating "online user profiles" to provide a permanent storage of a user's preference. Accordingly, it is my opinion that Petitioner fails to explain **how** *Wernick* would have been combined with *Norena*, and thus has failed to show that the combination renders Claim 1 obvious.

2. The Petition fails to show that a PHOSITA *would* have been motivated to combine *Wernick* with *Norena*.

63. Petitioner also cannot show a reasonable likelihood that the *Wernick-Norena* combination renders Claims 1-6 obvious because Petitioner indicates merely general and conclusory reasons that a PHOSITA would have been motivated to combine *Wernick* with *Norena*. Petitioner provides no particular explanation on **why** a PHOSITA would combine them, or any particular motivation.

64. Rather than provide particular explanations and motivations, Petitioner merely repeats three conclusory and unsupported arguments for why a PHOSITA would allegedly be motivated to combine *Wernick* and *Norena*. First, Petitioner argues that because *Wernick* discloses that it can be used to determine “other user attitudes, such as attitudes towards a candidate, political campaign or product advertising campaign,” that a PHOSITA would be motivated to use it in an online dating context. Petition at 19-20 (citing Ex. 1003, 10:65-11:1). However, politics, campaigns, and voting are a drastically different realm and art field than online dating. Petitioner provides no evidence or reasoning to specify why a mere **mention** of using the system to determine “attitudes towards a candidate” in *Wernick* would prompt or motivate a PHOSITA to incorporate online dating. Petitioner uses its expert in an attempt to place both politics and dating under the larger umbrella of

“making judgments regarding individuals,” and in order to circumvent its responsibility to demonstrate a specific rationale for why a PHOSITA would combine the teachings from *Wernick* and *Norena*. Petition at 20. In my opinion, user interface improvements in the dating context pose different considerations than generic “making judgments regarding individuals” in connection with political campaigns.

65. Second, Petitioner argues that a PHOSITA would be motivated to combine *Wernick* with an online dating reference due to the growing popularity of online dating mobile applications. Petition at 21. While this reasoning may provide a motivation to include online dating in mobile applications **generally**, in my opinion it fails to provide a **specific** motivation for incorporating “online dating profiles” into the unique interface of *Wernick*. *Wernick* does not disclose providing a better interface generally, but rather attempts to solve the specific problem of “develop[ing] better interfaces for planning future activities.” Ex. 1003, 1:32-35. Petitioner attempts to classify *Wernick* as a more user-friendly interface **generally** such that any PHOSITA creating a mobile application would want to use this interface. This is incorrect in my opinion. As discussed above, *Wernick* focuses on improving the interface in a specific field of activity generation and concierge planning—not providing a more user-friendly interface generally for any type of

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user interaction. Moreover, *Wernick*'s interface is not unique to mobile applications. Indeed, *Wernick* discloses that "[t]his application could be a web browser" and may be used on "a desktop computer, a laptop, tablet computer, a mobile phone, or any other type of computing device." Ex. 1003, 2:56-64. Again, Petitioner attempts to classify *Wernick* as an improved user interface for all mobile-based use, but Petitioner has provided no evidence or disclosure to support this classification of *Wernick*. Accordingly, the fact that online dating was becoming more popular on mobile applications would not prompt a PHOSITA to incorporate dating profiles into *Wernick*'s interface in my opinion.

66. Finally, Petitioner points to "other similarities" between *Wernick* and *Norena* to provide a motivation to combine, two of which have already been addressed above. The first "similarity" is *Wernick*'s mention of determining an "attitudes towards a candidate," which as discussed above is not sufficiently related or in the same field to provide a specific motivation to incorporate online dating. The second "similarity" is that *Wernick* and *Norena* both "disclose saving profiles or activities a user has expressed interest in on a list that may be viewed later." Petition at 22. Again, *Wernick* and *Norena* each "save" any expressed interest in different manners (*e.g.*, temporarily versus permanently) and for different reasons (*e.g.*, itinerary for specific time, place and vibe versus meeting a potential match)

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such that they are in fact dissimilar in this aspect. The tension between the different ways of “saving” preferences is an aspect of the combination that Petitioner failed to explain. Lastly, regarding *Wernick* and *Norena*'s similarity of “expressing interest,” Petitioner makes the conclusory statement that the “swiping gesture” of *Wernick* is preferable to *Norena*'s “I want to meet this person” button, but provides no rationale or explanation. In an attempt to provide support, Petitioner cites to *Kulas* for the idea that “a swiping gesture was a known substitution for a button.” Petition at 22 (citing Ex. 1006). However, *Kulas* discloses a variety of ways a user can express approval or disapproval, including “touch-screen movements, gestures, spoken words or utterances, or the operation of physical (hardware) controls such as buttons, sliders, knobs, rocker buttons, etc.” Ex. 1006, ¶ 25. Petitioner provides no explanation for why the combination of *Wernick* and *Norena* would opt to use *Wernick*'s dragging feature over *Norena*'s tapping or pressing a button, or any of the other suggestions in *Kulas*.

67. Because Petitioner fails to explain how or why a PHOSITA would be motivated to combine *Wernick* and *Norena*, in my opinion it has failed to demonstrate a reasonable likelihood that the proposed combination renders Claim 1 obvious.

3. The proposed combination does not disclose every element of the dependent claims.

68. Each of Claims 2, 4, and 6 depends from Claims 1, 3, and 5, respectively. As demonstrated above, Petitioner has not shown that the *Wernick-Norena* combination renders obvious independent Claims 1, 3, and 5. For at least this reason, in my opinion Petitioner has also failed to show that the proposed combination renders obvious dependent Claims 2, 4, and 6.

B. Ground 2: Petitioner failed to demonstrate a reasonable likelihood that *Wernick* in view of *Chang* renders obvious Claims 1-6 for the same reasons as Ground 1.

69. In Ground 2, Petitioner asserts that *Wernick* in view of *Chang* renders obvious Claims 1-6 and cites *Chang* for the “online dating profile” limitations of the claims.² See Petition at 34-42. Petitioner admits the similarity to Ground 1, indicating that “[t]he motivation to combine *Wernick* with *Chang* is very similar to the motivation to combine *Wernick* with *Norena*.” Petition at 37. Again, Petitioner

² See Petition at 34 (“Ground 2 cites *Chang* for the “online dating profile” limitations of elements 1[a], 1[b], and 1[d] and the corresponding limitations of claims 3 and 5 and relies on *Wernick* and the mapping from Ground 1 for all other limitations of claims 1-6.”)

has failed to show how and why a PHOSITA would have been motivated to combine *Wernick* and *Chang*, and instead reiterates the same conclusory and unsupported statements regarding motivations from Ground 1 in my opinion. Petitioner cites to nothing unique in *Chang* that provides a different or specific motivation to combine *Wernick* with *Chang*. Accordingly, Patent Owner incorporates by references the deficiencies discussed above in Ground 1 here for Ground 2.

C. Ground 3: Petitioner failed to demonstrate a reasonable likelihood that *Morris* in view of *Norena* renders obvious Claims 1-6.

70. In Ground 3, Petitioner asserts that *Morris* in view of *Norena* renders Claims 1-6 obvious. See Petition at 42-64. In my opinion, Petitioner has not shown that the proposed *Morris-Norena* combination discloses or suggests every element of the challenged claims.

1. The *Morris-Norena* combination fails to disclose, teach, or suggest every element of the independent claims.

71. In my opinion, at a minimum, the *Morris-Norena* combination does not disclose, teach, or suggest “automatically removing the graphical representation of

the first item of information from the graphical user interface in response to detecting the gesture,” as recited in Claim 1.³

72. Petitioner relies on *Morris* as allegedly disclosing this limitation of Claim 1, which Petitioner refers to as “step 1[e].” See Petition at 55-56. In particular, Petitioner relies on disclosure from *Morris* regarding “sliding image 680 to star icon 617” which “saves image 680 to the user’s favorites.” Ex. 1005, ¶ 39; Petition at 55. Petitioner asserts that because the next image becomes visible when image 680 is moved, that results in image 680 being automatically removed from the interface. Petition at 55. However, there is no explicit disclosure that the image is in fact removed from the interface in *Morris*—it is no more than an assumption by Petitioner—and it is in fact contradicted by the disclosure in *Morris* where the top image remains on the screen, rather than being removed.

³ Petitioner’s analysis for the analogous elements of Claims 3 and 5 relies entirely on its analysis for Claim 1. See Petition at 60-64. Patent Owner therefore addresses the independent claims together (noting the distinctions between Claims 1, 3, and 5 where relevant).

a) **Petitioner recognizes that *Morris* fails to disclose “automatically removing the graphical representation” of Claim 1.**

73. Petitioner does not assert that *Morris* explicitly discloses claim element 1[e], but rather asserts that “[b]ased on the disclosure of *Morris*, a PHOSITA would have understood image 680 is removed from the graphical user interface.” Petition at 55. Petitioner uses the alleged knowledge of a PHOSITA that the image would be removed after dragging the image to the star icon to disclose this element of Claim 1. *Id.* However, in my opinion, a PHOSITA would not have understood that an image would be removed from the disclosure in *Morris*, as discussed further below, particularly when *Morris* itself discloses ***maintaining*** the image on the screen rather than removing it.

b) ***Morris* discloses *maintaining* the graphic representation on the graphical user interface, rather than automatically removing it.**

74. Petitioner ignores the explicit disclosure that when the top image is moved and the next image in the stack becomes visible, the previous image remains on the screen. Specifically, *Morris* discloses: “When top image 680 is moved off of the stack 623, the next image is [sic] becomes the top image and can be similarly manipulated. Therefore, stack 623 may be manipulated by the user ***such that the user can see more than one image at a time.***” Ex. 1005 at ¶¶ 40. If an image

disappeared automatically, as Petitioner alleges, a user would be unable to see multiple images at a time as disclosed.

75. As another example, Figure 7A of *Morris* discloses that an image is not “automatically removed,” but rather maintained on the screen. *Morris* explains: “In the embodiment of FIG. 7A, a user first selects an image 780 from a display 712 of a handheld communication device 710. The ***user drags this image to the television icon 713*** on display 712. Using the touchscreen functionality of display 712, the user can drag image 780 by placing their finger or a stylus on image 780, dragging the finger/stylus across the screen 712 to the television icon 713, and taking the finger/stylus off the screen 712. ***Once image 780 is on the television icon 713, the sending process is initiated.***” Ex. 1005, ¶41.

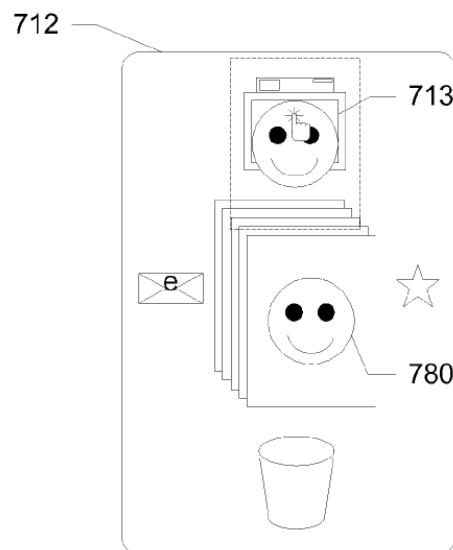


FIG. 7A

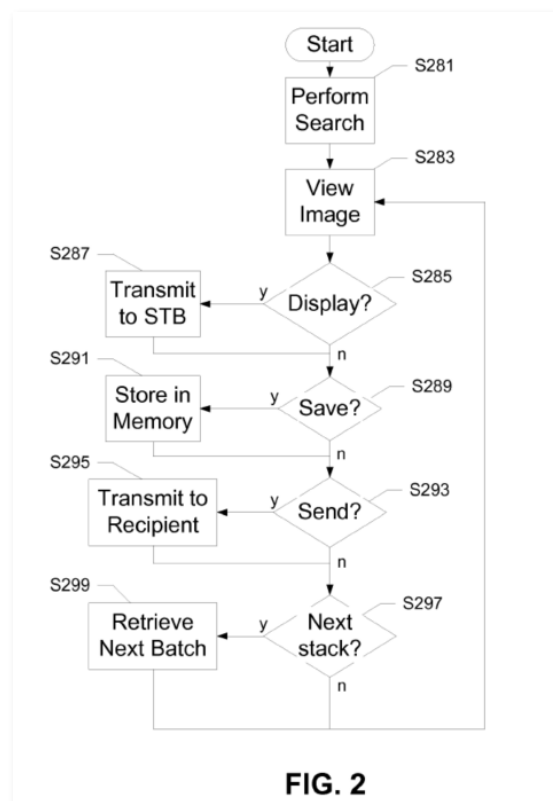
76. As illustrated in Figure 7A, the image from the top of the stack remains visible on the screen even after being dragged to another icon (*i.e.*, “once image 780 is **on** television icon 713”). *Id.*; *see also* Ex. 1005, ¶ 43 (indicating that once a new stack of images appears “images from the first stack, or any previous stack, may be moved around the display and **may remain on the display** in an unfocused state, even after the new stack is retrieved”). These disclosures confirm that images remain on display, which Petitioner has ignored. Petitioner has pointed to no disclosure to support its theory that a PHOSITA would understand that an image is removed from the screen,” as recited in Claim 1 other than unsupported testimony from its expert.

c) A PHOSITA would have understood, based on the disclosure in *Morris*, that an image is maintained on the screen to allow user to perform multiple actions with the same image.

77. *Morris* further discloses particular embodiments where it is necessary to maintain images on the interface, rather than deleting them as Petitioner asserts. Maintaining the images on the screen even after being dragged to one icon allows a user to perform multiple actions with the same image, by dragging the same image to multiple icons. For example, if an image is hard to see, a user may drag image to the IPTV icon in order display the image on the television. Ex. 1005, ¶ 39. Once

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the user sees the image on the larger screen, the user may decide to save it to favorite, and then email that photo to a friend. *Id.* If the image were automatically removed after being dragged to any one of those icons, a user would be unable to perform multiple actions with that image. Indeed, *Morris* discloses that a user may take multiple actions with the same image, as shown in Figure 2, reproduced below. *Morris* explains that a user has “several options” for each media file, explaining that after the user enlarges the image (S287), the user “may **additionally** wish to save a media file (S289)” and the user “may **additionally** wish to send the media file to an email recipient (S293).” Ex. 1005, ¶¶ 34-35; Fig. 2.



78. If the image was automatically removed after being dragged to one icon (like star 617 as Petitioner alleges), a user would be forced to make a single decision per image before it disappeared, which would be confusing and frustrating for the user.

79. Despite these explicit disclosures that an image is **not** automatically removed and **is maintained**, Petitioner argues that it would be obvious to remove it. Petition at 55-56. However, Petitioner's rationale is incorrect and inconsistent with the disclosure in *Morris*. Although Petitioner alleges that the limited size of the interface and the potential to obscure icons if images are maintained on top of them, *Morris* specifically discloses a scenario where multiple images are viewed at once. See Petition at 55-56; Ex. 1002 at ¶ 277; Ex. 1005, Fig. 7A. Accordingly, limited screen size is not a compelling reason for a PHOSITA to understand that an image would be removed. Petitioner also argues that "removal of the card signifies to the user that it was successfully saved in a user's favorites" and that "having an item disappear when it is sent to an icon was a common design tool used on graphic user interfaces prior to June 2012." Petition at 56. Regardless of any "common design tools" that had items routinely disappear, it has never been a common design tool to make items disappear when a user may want to perform further actions with them. Moreover, *Morris* itself includes disclosure that the images are maintained on the

screen when dragged to icons, as discussed above. A PHOSITA would not understand that this common design tool would be used in *Morris* when there is explicit disclosure providing the opposite.

d) Petitioner does not allege that *Norena* makes up for the deficiencies of *Morris*.

80. As noted above, Petitioner relies exclusively on *Morris* as allegedly disclosing “automatically removing the graphical representation of the first item of information from the graphical user interface in response to detecting the gesture,” as recited in Claim 1. See Petition at 55-56. Petitioner does not allege that *Norena* cures the above-described deficiencies of *Morris*. See *id.* As such, in my opinion Petitioner has not shown that the *Morris-Norena* combination discloses or suggests this element of Claim 1 (or the analogous elements of Claims 3 and 5).

2. The proposed combination does not disclose every element of the dependent claims.

81. Each of Claims 2, 4, and 6 depends from Claims 1, 3, and 5, respectively. As demonstrated above, Petitioner has not shown that the *Morris-Norena* combination renders obvious independent Claims 1, 3, and 5. For at least this reason, Petitioner has also failed to show that the proposed combination renders obvious dependent Claims 2, 4, and 6 in my opinion.

D. Grounds 4-6: Petitioner failed to demonstrate a reasonable likelihood that the claims are rendered obvious by the various combinations of references set forth in Grounds 4-6.

82. For each of Grounds 4-6, Petitioner relies solely on the analysis of *Morris* set forth in Ground 3 as allegedly disclosing “automatically removing the graphical representation of the first item of information from the graphical user interface in response to detecting the gesture,” as recited in Claim 1.⁴ As detailed above, however, *Morris* does not disclose or suggest this limitation of Claim 1 (or the analogous limitations of Claims 3 and 5). The Petition does not allege that

⁴ See, e.g., Petition at 64 (“Ground 4 cites *Chang*, for the “online dating profile” limitations of claim elements 1[a], 1[b], and 1[d] and the corresponding limitations of claims 3 and 5 and ***relies on Morris and the mapping from Ground 3 for all other limitations of claims 1-6.***”); 70 (“Ground 5 cites *Kulas*, in combination with *Morris* and *Norena*, for the “detecting a right swiping direction associated with the gesture” limitation of claim element 1[b], 3[b], and 5[b], while ***relying on Morris and Norena and the mapping from Ground 3***, incorporated by reference here, for all other limitations of claims 1-6.”); 73 (“Ground 6 ***relies on Morris and Kulas and the analysis and mapping from Ground 5***, incorporated by reference here, for all other limitations of claims 1-6.”).

Norena, *Kulas*, or *Chang* make up for the deficiencies of *Morris* described above in relation to Ground 3. Therefore, Petitioner has not demonstrated a reasonable likelihood that the challenged claims are rendered obvious by the various combinations of references set forth in Grounds 3-6 of the Petition.

E. Petitioner's analysis does not support a legal conclusion of obviousness.

83. Petitioner's analysis for Grounds 3-6 fails to support a legal conclusion that any of the various combinations of cited references proposed by Petitioner render obvious Claims 1-6 of the '023 Patent. Given the glaring deficiencies in *Morris*, which are fatal to every ground relying on *Morris* set forth in the Petition, I do not address these additional deficiencies in detail, however, I do not acquiesce to these statements.

XI. CONCLUSION

84. For at least the preceding reasons, I believe that none of the Challenged Claims of the '023 Patent are rendered obvious, pursuant to 35 U.S.C. § 103, by the various combinations of cited references as set forth in Grounds 1-6 of the Petition.

85. If asked to do so, I may testify about any of the preceding topics. I may also provide a general tutorial on the relevant subject matters, including client/server communication architecture, database queries, and graphical user interfaces. I may use demonstrative exhibits or refer to publicly-available information, to aid my

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testimony at any proceeding.

86. I reserve the right to respond to any declarations that are submitted by
Petitioner's expert witness(es), to any testimony by Petitioner's fact or expert
witnesses or to any further decisions, including amendments, from the USPTO.

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I declare under penalty of perjury that the foregoing is true and correct. Executed
in Harvard, MA USA on August 9, 2019.

A handwritten signature in black ink, appearing to read "T. Smedley", is written above a horizontal line.

Trevor Smedley, Ph.D.