IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

GHALY DEVICES LLC,	)	
	)	
Plaintiff,	)	
v.	)	**Civil Action No. 1:19-CV-2318-GHW**
	)	
HUMOR RAINBOW, INC.	)	
	)	**JURY TRIAL DEMANDED**
Defendant.	)	
_____	)	

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement under 35 U.S.C. § 271, *et seq*., in which Ghaly Devices LLC ("Ghaly Devices" or "Plaintiff"), makes the following allegations against Humor Rainbow, Inc. ("Humor Rainbow" or "Defendant):

Parties

1.   Plaintiff Ghaly Devices is a Texas Company, with its principal place of business located at 815 Brazos St., Ste. 500 Austin, TX 78701.

2.   Ghaly Devices is the owner of United States Patent No. 6,685,479 (the "479 Patent" or "Patent-in-Suit). Ghaly Devices owns all rights to recover for all past, present, and future infringement, including past damages with respect to the 479 Patent. A true and correct copy of the 479 Patent is attached hereto as **Exhibit A**.

3.   On information and belief, Defendant Humor Rainbow is a New York corporation with its principle place of business at 129 West 29th St. 10th Floor New York, New York, 10001. Humor Rainbow can be served process on the following addresses: C T Corporation System, 28 Liberty St., New York, New York, 10005.

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4.   On information and belief, Humor Rainbow makes, uses, imports into the United States, sells and/or offers for sale in the United States products and services under the brand "OKCupid" in this district and around the United States, including a mobile application, which is subject to the patent infringement herein. A product and/or service under the brand OKCupid includes the OKCupid mobile application, which is configured for installation on mobile devices.

Nature of the Action

5.   This is a civil action for the infringement of the 479 Patent.

Jurisdiction and Venue

6.   This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the patent laws of the United States, including 35 U.S.C. § 271 *et seq.*

7.   Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400(b). Humor Rainbow maintains a regular and established place of business in this District, has transacted business in this District, and committed acts of patent infringement in this District.

8.   Humor Rainbow is subject to this Court's specific and general personal jurisdiction pursuant to due process, due at least to their substantial business in this forum, including (i) certain acts of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in New York and in this District.

The Patent-in-Suit

9.   The 479 Patent lawfully issued on February 3, 2004, and claims priority to U.S. Application No. 09/255,644, filed on February 22, 1999. The 479 Patent is titled "Personal Hand Held Device."

10.   The 479 Patent is valid and enforceable.

11.   Nabil N. Ghaly is the sole inventor of the 479 Patent.

12.   The 479 Patent is directed to methods, and devices that use an interface for obtaining specific user inputs for match-making. The 479 Patent describes determining a degree of compatibility between two people as part of its match-making interface. For example, according to some embodiments, a device may store a user's data and use a personality profile system to process a user's stored data. The device may implement a control program to produce user's personality attributes or behavioral pattern parameters. The device may communicate data to and from another device and calculate a degree of compatibility between the two users, based in part on the number of common items between desired and calculated attributes or parameters.

13.   The claims of the 479 Patent encompass novel and non-obvious technology that was neither well-understood, routine nor conventional to a skilled artisan at the time of the invention. Such novel technology includes, but is not limited to using a device implementing an interface to obtain specific inputs and that communicates with another device to calculate a degree of compatibility between the two users. The calculation is based on at least the number of common items between desired and calculated attributes or parameters.

14.   Solutions to matchmaking prior to the time of invention of the 479 Patent failed to appreciate a type of calculation that results in a degree of compatibility. The inventor of the 479 Patent submitted a declaration during prosecution of the 479 Patent ("Inventor Declaration"). A true and correct copy of the Inventor Declaration is attached hereto as **Exhibit B.** The Inventor Declaration establishes that prior art systems did not compute a "degree of compatibility." **Exhibit B** at 7-8, ¶ 25.

15.   Further establishing that calculating a degree is unconventional, non-routine, and

not well-known, the Inventor Declaration states:

> While, it is a general knowledge in the field of Psychology that the personality traits of
> individuals affect how well they would get along, there is **no** known theory, process or
> structure that provides a hard and fast rule to predict or measure the degree of
> compatibility between two individuals. This is the case because psychologists differ or
> have different, and sometimes contradicting theories, related to how specific type of
> personalities would get along with similar or other types of personalities.

Exhibit B at 8, ¶ 29.

16.   Prior to the time of invention, it was not known, not routine, and not conventional

to implement a device to utilize personality attributes generated by a personality profile system

in a match process to assess or predict the degree of compatibility between two individuals.

17.   The Inventor Declaration states:

> In my invention, I combined a personal profile system with the user preferences
> for the personal traits of a friend or a companion. such a combination has the
> advantages of an objective identification of the behavioral characteristics and
> personality traits of individuals, and at the same time the incorporation of desired
> personality traits identified by a user. The claimed invention is independent of the
> apparent contradictions between the various personality type compatibility
> theories, and provides an accurate and objective way to predict compatibility
> based on established and acceptable practices in the field of Psychology, as well
> as the personal preferences of individuals.

Exhibit B at 10, ¶ 36.

18.   Prior art match making solutions, as characterized in preceding paragraph, failed

to appreciate using "desired" personality traits to predict the compatibility of two people. The

479 Patent accounts for desired attributes or parameters to generate a degree of compatibility not

known in the prior art.

19.   The 479 Patent also is directed to an interface having a unique, novel, and non-

obvious display to indicate the degree of compatibility between the two users. The 479 Patent

may determine a match score such as, for example, a score between 0 through 10, where 10 is

the highest match. **Exhibit A** at 19, 9:43-48. Rather than merely presenting the raw calculation,

the invention is directed to a unique display that indicates this calculation using, for example,

colors.

> Accordingly, the results of the Match will be rounded to the closest integer from 0 to 10, and for each of said integers a color, a Sound effect and/or a melody are stored in ROM 42. Therefore, the display process is a mere selection of a color, a sound effect and/or melody stored in ROM 42.

Exhibit A at 19, 10:15-20

20.   Therefore, the 479 Patent describes an improved interface that is user friendly in a

non-conventional way.

21.   The 479 Patent resolves the match-making problem by providing an interface that

facilitates a choice to the user to indicate his or her preferences of the personality attributes for a

companion while also determining the actual personality attributes of individuals through the use

of a personal profile system. The interface includes an improved display for indicating a

calculation that was not routine or conventional in the field of matchmaking.

22.   The combination of desired personality traits, and personality traits derived by a

personal profile system using the described interface makes a device that practices the 479 Patent

independently different from prior art solutions of matchmaking.

23.   On information and belief, Match Group, Inc. ("Match Group") is the parent

company of Humor Rainbow.

24.   Match Group is the owner of United States Patent Nos. 9,959,023 and 9,733,811

(collectively "the Match Group Patents"). True and correct copies of United States Patent Nos.

9,959,023 and 9,733,811 are attached hereto as **Exhibit C** and **Exhibit D**, respectively.

25.   The claims of the Match Group Patents are directed to user interface technology

for particular use in a matchmaking application.

26.   The Match Group Patents each claim priority to the same provisional patent

application filed on March 15, 2013.

27.   To date, the Match Group Patents are subject to litigation in the matter of *Match*

Group, Inc. v. Bumble Trading Inc., Case No. 6:18-cv-00080-ADA (W.D. Tx) ("Match Group

Litigation").

28.   During the Match Group Litigation, Match Group explained that the interface

technology for particular use in a matchmaking app, as described in the Match Group Patents, is

not routine and conventional as of around 2013. The purported improvement to this interface

technology was a "swiping gesture" that was initiated by a user and detected by the claimed

interface as a way to provide an input into a matchmaking system. A true and correct copy of

Match Group's opposition brief in the Match Group Litigation is attached hereto as **Exhibit E**.

29.   Match Group explained how its swiping gesture interface was not abstract:

> The claims of the '023 Patent recite "an interface" that presents a
> "graphical representation of [a first online dating profile] as a first card in a stack
> of cards," with a processor to "detect a gesture," the gesture "corresponding to a
> positive preference indication," and where the system can detect a "right swiping
> direction" associated with the positive gesture. See, e.g., Claim 3. In response to
> detecting the gesture, the interface automatically both presents a second graphical
> representation of a profile and removes the first. Id.
> These claims are clearly directed to a non-abstract improvement in user
> interface technology for particular use in a matchmaking app. The claimed
> inventions provide an easy-to-navigate system that both allows and encourages
> users to make more efficient binary preference choices in using computer-based
> dating systems. FAC ¶¶ 102-106; 124-128. By use of this specific physical and
> visual interface protocol, it also requires users to make those choices before
> moving on, rather than deferring those choices—a protocol that promotes speed of
> decision making and drives user engagement by facilitating more matches. This is
> not abstract.

Exhibit E at 5-6.

30.   As indicated in the preceding paragraph, during the Match Group Litigation,

Match Group explained that the swiping gesture interface for use in a matchmaking app, as

described in the Match Group Patents, is not an abstract concept because it was an improvement in user interface technology for particular use in a matchmaking app. Moreover, the interface at issue in the Match Group Litigation promotes speed of decision making and drives user engagement by facilitating more matches and it provides an easy-to- navigate system that both allows and encourages users to make more efficient binary preference choices in using computer-based dating systems. *Id.*

31.   The court in the Match Group Litigation agreed that the claims at issue were not directed to abstract subject matter. A true and correct copy of the decision in the Match Group Litigation is attached as **Exhibit F**.

32.   Like the case in the Match Group Litigation, the 479 Patent claims non-abstract subject matter including use of a personality profile system to calculate a degree of compatibility, which is unconventional in the field of matchmaking, and then using an improved interface to display this unconventional result in a manner that was not routine.

33.   The fact that the technology claimed in the 479 Patent is not routine, generic or conventional is illustrated by the fact that years after its February 1999 priority date, other companies in the industry were creating similar technology to that of the 479 Patent, and representing to the U.S. Patent and Trademark Office that their "inventions" were, in fact, patentable (i.e., novel and non-obvious). They certainly would not have spent their time, money and effort attempting to patent technology that was merely conventional, routine or generic at the time.

34.   For example, Sparkstarter, LLC obtained U.S. Patent No. 9,355,358 titled "Systems and Methods for Determining Compatibility" ("the 358 Patent"). A true and correct

copy of the 358 Patent is attached hereto as **Exhibit G**. The 358 Patent claims a priority date of

May 2012, which is more than a decade after the Patent-in-Suit.

35.   The 358 Patent claims "[a] computer-implemented method for determining a

relationship compatibility between a first user and a second user of a plurality of users of an

online matchmaking system." **Exhibit G** at p. 23. The claimed method involves "determining

said relationship compatibility that reflects a matchmaking likelihood between said first user and

said second user using an algorithm that incorporates at least said at least one personal profile

attribute from each of said first and said second user profiles as variables." *Id.*

36.   As another example, Sony Computer Entertaining America LLC obtained U.S.

Patent No. 8,825,802 titled "Systems and Methods for Identifying Compatible Users" ("the 802

Patent"). A true and correct copy of the 802 Patent is attached hereto as **Exhibit H**. The 802

Patent claims a priority date of September 2007. The claims of the 802 involve "comparing the

created profile of a subject user with the created profiles of other users on the network and

calculating a compatibility score for each set of compared profiles, the compatibility score based

at least on a degree of overlap of users' respective play time information and game information."

37.   The U.S. Patent and Trademark Office relied on the 479 Patent as prior art when

examining several patent applications that described alleged innovations in the same field. For

example, U.S. Pat. Nos. 9,866,920 and 9,055,197 along with U.S. Pat. Pub No. US20150256897

share the title "Intelligent peer-to-peer system and method for collaborative suggestions and

propagation of media" and were each prosecuted by TiVo Solutions Inc. During prosecution of

these patents and applications, the U.S. Patent and Trademark Office relied on the 479 Patent as

prior art.

38.   Similarly, U.S. Pat. No 7,457,768 titled "Methods and apparatus for predicting and selectively collecting preferences based on personality diagnosis" was prosecuted by Microsoft Technology Licensing LLC and was also faced with the 479 Patent as prior art.

39.   U.S. Pat. Pub. No. US20060216680 titled "Selection of relationship improvement content for users in a relationship" was prosecuted by eHarmony, Inc. and also faced the 479 Patent as prior art.

Count 1: Direct Infringement of U.S. Patent No. 6,685,479 by Humor Rainbow

40.   Ghaly Devices herein incorporates the contents of the preceding paragraphs as if restated fully herein.

41.   The term "Accused Instrumentality" as used herein refers to a networked device having the OKCupid mobile application installed thereon, whether for device testing, system testing or other purposes.

42.   On information and belief, Humor Rainbow uses or has used the Accused Instrumentality for at least the purpose of developing, designing, testing, evaluating, debugging, qualifying, demonstrating, or preparing educational materials for the OKCupid Application.

43.   On information and belief, Humor Rainbow uses or has used the Accused Instrumentality in the context of a smartphone such as, for example an iPhone or Android-based phone, to install the OKCupid mobile application.

44.   On information and belief, Humor Rainbow installed the OKCupid mobile application on a device for the purpose of developing, designing, testing, evaluating, debugging, qualifying, demonstrating, or preparing educational materials for the OKCupid mobile application.

45.   On information and belief, developed the OKCupid server application to work in conjunction with the OKCupid mobile application.

46.   The functionality, operation, and capabilities of the Accused Instrumentality is described in **Exhibit I, Exhibit J**, **Exhibit K**, **Exhibit L, and Exhibit M**.

47.   **Exhibit I** is true and correct copy of a collection of screen shots taken from a mobile device that is executing the OKCupid mobile application. **Exhibit I** shows examples of interfaces of devices that may be configured to practice the claims of the 479 Patent.

48.   **Exhibit J** is true and correct copy of a screenshot of the website https://www.okcupid.com/ as of February 15, 2019. **Exhibit J** provides general information about installing OKCupid on a device such as an Android or iPhone based smart phone.

49.   **Exhibit K** is true and correct copy of the website http://www.sitepronews.com/2013/01/16/want-a-crazy-blind-date-theres-an-app-for-that/ as of February 1, 2019. **Exhibit K** provides general information about OKCupid's algorithm to determine a degree of compatibility between two individuals.

50.   **Exhibit L** is true and correct copy of the website https://okcupid.desk.com/customer/en/portal/articles/2161212-how-to-re-answer-match-questions as of February 1, 2019. **Exhibit L** provides general information about OKCupid's functionality.

51.   **Exhibit M** is true and correct copy of the website https://www.apple.com/shop/buy-iphone/iphone-8as of February 1, 2019. **Exhibit M** an example of a device that may be configured to practice the claims of the 479 Patent.

52.   Claim 42 of the 479 Patent is presented below with alphanumeric labels added in brackets to identify each claim element:

[42.P] A device for determining a degree of compatibility between a first set of data corresponding to a first person and a second set of data corresponding to a second person comprising:

[42.a] a housing;

[42.b] a plurality of entry control mechanisms to operate the device,

[42.c] computer memory to store user's data,

[42.d] means to communicate data to and from another device,

[42.e] a microprocessor to control the operation of the device,

[42.f] a control program to produce user's personality attributes, or behavioral pattern parameters, using a personality profile system to process stored user's data, and to match stored and processed data with data corresponding to a second user and received from another device, and to calculate a degree of compatibility between the two users, based in part on the number of common items between desired and calculated attributes or parameters; and

[42.g] a liquid crystal display, or light emitting diodes display, to indicate said degree of compatibility between the two users.

53.   The Accused Instrumentality infringed at least Claim 42 of the 479 Patent as follows [with claim language underlined] in the following paragraphs.

54.   To the extent the preamble [42.P] is limiting, the Accused Instrumentality is a device for determining a degree of compatibility between a first set of data corresponding to a first person and a second set of data corresponding to a second person.

55.   The Accused Instrumentality may include, for example a networked smart phone with the OKCupid mobile application installed thereon. As discussed in further detail below, using OKCupid in its normal court of operation involves determining a degree of compatibility between a first set of data corresponding to a first person and a second set of data corresponding to a second person.

56.   The Accused Instrumentality includes [42.a] a housing. According to the OKCupid website, OKCupid is installed on a device using, for example, using Google's Play

store or Apple's App store. **Exhibit J** (stating "GET THE APP"). An example of a device

having a housing is an iPhone as depicted in **Exhibit M** and presented below.

57.   The Accused Instrumentality includes **[42.b]** a plurality of entry control

mechanisms to operate the device.

58.   According to the 479 Patent (*e.g.*, Claim 1, FIG. 1, FIG. 3, FIG. 5 *etc.*), the entry

control mechanisms to operate the device, includes, but are not limited to, push buttons, a

keypad, a keyboard, and equivalents thereof.

59.   With respect to the Accused Instrumentality, a device, such as the one described

in **Exhibit M**, includes controls such as, for example, power button, volume button, touch points

on a touch screen. The OKCupid mobile application is designed to be controlled using at least

the touch points on a touch screen. These touch point controls are, at a minimum, equivalents of

push buttons and a keyboard.

60.   The Accused Instrumentality includes **[42.c]** computer memory to store user's

data.

61.   For example, the OKCupid mobile application executes on a device that includes

computer memory (*e.g.*, the device's built in RAM or ROM) to store user's data (*e.g.*, raw data

such as answers to questions or other information about a user). **Exhibit L** ("We have a 24 hour hold in place to re-answer new match questions so that you can be sure that everyone is answering honestly the first time").

62.   The Accused Instrumentality includes **[42.d]** <u>means to communicate data to and from another device.</u>

63.   According to the 479 Patent (*e.g.,* claim 18, 11:34-43.), the means to communicate data to and from another device, includes, but are not limited to, an infrared transmitter/receiver, a radio frequency transmitter/receiver, magnetic coupling modules, and equivalents thereof.

64.   For example, the OKCupid mobile application is designed to use the device's network capabilities to communicate with another device, such as the server, which executes the OKCupid server application. The OKCupid mobile application is also designed to use the device's network capabilities to communicate with another device, such as another mobile device, via the OKCupid server application. Devices, such as those in **Exhibit M**, include a radio frequency transmitter/receiver such as a Wi-Fi or cellular radio to provide network connectivity to other devices.

65.   The Accused Instrumentality includes **[42.e]** <u>a microprocessor to control the operation of the device.</u>
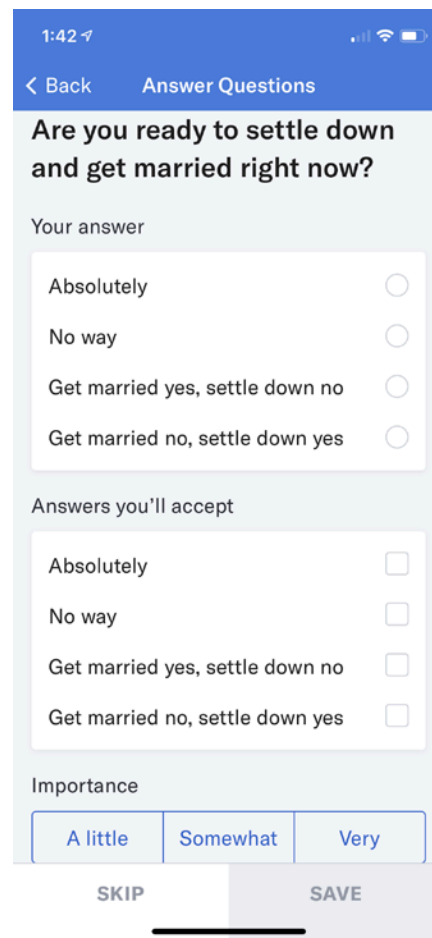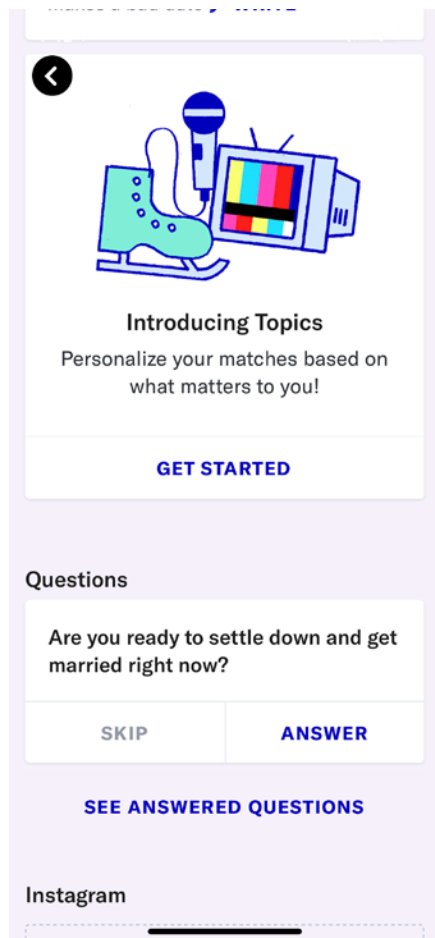
66.   For example, the device in **Exhibit M**, includes a microprocessor (*e.g.*, the A11 chip, CPU, or any other microprocessor) to control the operation of the device by executing the OKCupid mobile application. The OKCupid mobile application can only run if the device has a microprocessor to execute the OKCupid mobile application.

67.   The Accused Instrumentality includes **[42.f]** <u>a control program to produce user's</u>
<u>personality attributes, or behavioral pattern parameters, using a personality profile system to</u>
<u>process stored user's data, and to match stored and processed data with data corresponding to a</u>
<u>second user and received from another device, and to calculate a degree of compatibility between</u>
<u>the two users, based in part on the number of common items between desired and calculated</u>
<u>attributes or parameters.</u>

68.   For example, the OKCupid mobile application executes on a device that includes
a control program (*e.g.*, functionality of the OKCupid mobile application) to produce user's
personality attributes, or behavioral pattern parameters (*e.g.*, calculates, determines, renders,
displays and/or presents at least what the user has indicated that he or she believes is an
acceptable answer to a question), using a personality profile system (*e.g.*, OKCupid server
application and related functionality) to process stored user's data (*e.g.*, process a user's answers
into a weighted score), and to match stored and processed data with data corresponding to a
second user (*e.g.*, the second user's answers that he or she will accept) and received from another
device (*e.g.*, another smart phone, the OKCupid server application), and to calculate a degree of
compatibility between the two users, based in part on the number of common items between
desired and calculated attributes or parameters.

69.   For example, the OkCupid mobile application includes software/program code for
receiving user responses to various questions, an associated "importance" level for such
questions, and to use such information to produce a user's personality attributes and/or
behavioral pattern parameters using, among other information, a point-based system. This
converts raw user input data into calculated attributes (*e.g.*, a weighted score).

70.   Below are screen shots taken from the OkCupid mobile application that demonstrate the relevant functionality discussed above:

71.   **Exhibit K** provides a description of how a personality profile system calculates a

degree of compatibility between the two users, based in part on the number of common items

between desired and calculated attributes or parameters.

*We start wanting to calculate a match percentage for you and someone else. And we want to avoid mistakes at all costs. We collect three values for all users. When you answer a question on our **Improve Matches (http://www.okcupid.com/questions)** page, we learn:*

Your answer,
How you'd like someone else to answer, and
How important the question is to you.

Your match percentage with a given person on OkCupid, let's call him B, is based on the values of (1), (2), and (3) for questions you've both answered.

When we look at how each of your answers satisfied the other's preferences, we'll use these values to give our calculations the correct weight. Your match percentage with B is figured by answering the following two questions:

How much did B's answer make you happy? You indicated that B's answer to the first question was very important to you. And that his answer to the second question was not. So we placed 50 importance points on the first question and 1 point on the second question. Of those 51 possible points, B earned 50 by answering the first question how you wanted. So B's answers were 50/51 equals 98 percent satisfactory.

How much did your answers make B happy? Well, B placed 1 importance point on your answer to the first question and 10 on your answer to the second. Of those 11, you earned 10 points. So your answers were 10/11 equals 91 percent satisfactory.

To get a match percentage for you and B, we just multiply your satisfactions, and then take the square root which in this case would be 94 percent.

This is a mathematical expression of how happy you'd be with each other… if these two questions were the only things that mattered in a relationship!

72.   The OkCupid mobile application uses a personality profile system to process such stored user's data and determine, based on data associated with a second user, a degree of compatibility between such two users. This is depicted below in the following screen shots.
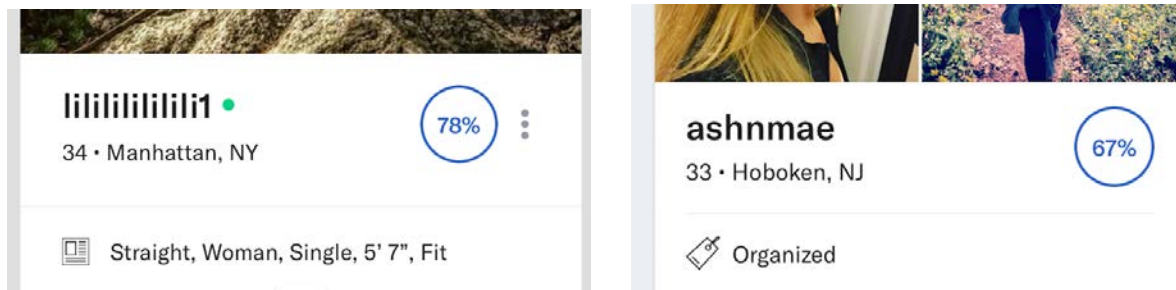
73.   The Accused Instrumentality includes **[42.g]** <u>a liquid crystal display, or light</u>

<u>emitting diodes display, to indicate said degree of compatibility between the two users.</u>

74.   For example, the device executing the OkCupid mobile application includes a

liquid crystal display (LCD) or light emitting diodes display (LEDD) for providing a visual

depiction of data to a user. (See **Exhibit M**). When the OkCupid mobile application is in use,

the LCD or LEDD indicates the degree of compatibility between the two users by encoding the

result in a particular color pattern based on the calculated percentage of compatibility. This is

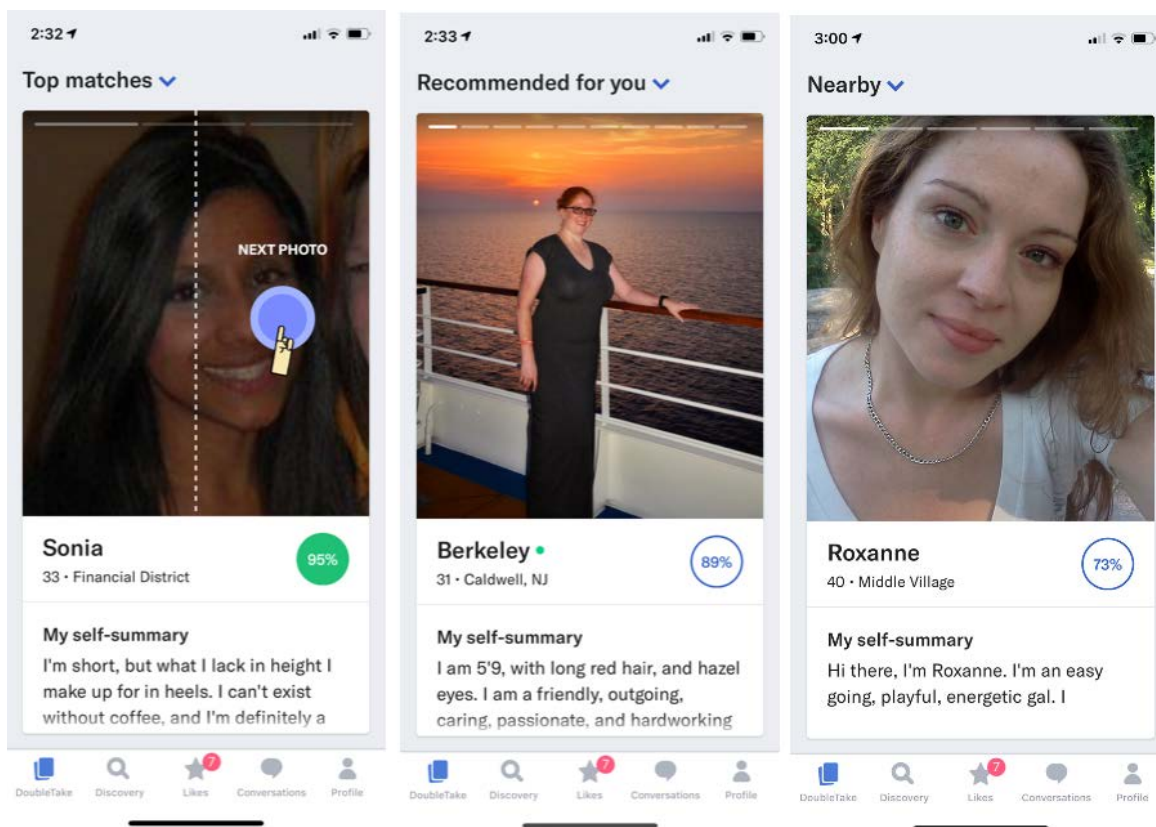depicted below in the following screen shots.

Exhibit I

75.   As shown in the preceding paragraph, the degree of compatibility is expressed

through adjusting the output color of the display. A strong degree of compatibility is presented

in a different color when compared to a weaker degree of compatibility. Moreover, the display

presents the percentage along with a corresponding color to allow the user to easily ascertain the

difference between a high degree of compatibility and a lower degree of compatibility.

76.   To the extent that the foregoing analysis demonstrating infringement of at least

Claim 42 of the 479 Patent on an element-by-element basis does not meet any particular element

of Claim 42 of the 479 Patent literally, the Accused Instrumentality infringed under the Doctrine

of Equivalents, as it performs substantially the same function in substantially the same way to get

substantially the same result as the claimed technology.

77.   Humor Rainbow still infringes under the Doctrine of Equivalents (DOE) because

distributing away functionality to a server to perform the identical functions claimed in

substantially the same way to obtain the identical result falls squarely within an equivalence of

claim 42. For example, the Accused Instrumentality achieves the identical result of the claims,

which is to indicate the degree of compatibility between the two users based on, in part, a

number of common items between desired and calculated attributes or parameters. Moreover,

the Accused Instrumentality performs the identical function of claim 42. Using a distributed

system to perform the same claimed operations is an insubstantial difference compared to

performing all operations within the device in a non-distributed manner. The device of claim 42

is required to include a "means to communicate data to and from another device." Thus, a

distributed architecture is an insubstantial difference than what is already claimed.

78.   As a result of the past infringement of the 479 Patent, Ghaly Devices has suffered

damages, and is entitled, at a minimum, to recover a reasonable royalty from Humor Rainbow to

compensate for the infringement.

79.   On or around October 16, 2017, Match Group received a letter ("First Letter")

from Empire IP LLC discussing the 479 Patent and its relevance to the OKCupid mobile

application. In the First Letter, Match Group was asked to discuss a potential license agreement

to the 479 Patent.

80.   The First Letter provided Match Group with a detailed analysis mapping multiple

claims of the 479 Patent to the Accused Instrumentality to demonstrate an objectively high

likelihood of infringement.

81.   On information and belief, Match Group shared the First Letter with Humor

Rainbow.

82.   On October 25, 2017, Match Group responded to the First Letter indicating that it

was not interested in licensing the 479 Patent.

83.   On or around February 5, 2019, Match Group received a letter ("Second Letter")

from Ghaly Devices discussing the 479 Patent and its relevance to the OKCupid mobile

application. In this letter, Match Group was again asked to discuss a potential license agreement

to the 479 Patent.

84.   The Second Letter provided Match Group with a detailed analysis mapping a

claim of the 479 Patent to the Accused Instrumentality to demonstrate an objectively high

likelihood of infringement.

85.   Match Group shared the Second Letter with Humor Rainbow.

86.   Humor Rainbow responded to the Second Letter in February 2019.

87.   On information and belief, Humor Rainbow was aware of the 479 Patent and the

potential infringement thereof at least as early as October 16, 2017.

88.   Humor Rainbow continued to test, validate, update, and use the Accused

Instrumentality with knowledge of the 479 Patent for the purpose of selling subscriptions to the

OKCupid product/service.

89.   On information and belief, Humor Rainbow continued to test, validate, update,

and use the Accused Instrumentality with knowledge of the infringement analysis provided in at

least the First Letter and Second Letter.

90.   Since having knowledge of the 479 Patent at least as early as October 2017,

Humor Rainbow knew or should have known that, without taking a license to the Patent-in-Suit,

its actions directly infringed one or more claims of the 479 Patent. Therefore, Humor Rainbow's

infringement was willful.

Count 2: Indirect Infringement of U.S. Patent No. 6,685,479 By Humor Rainbow

91.   Ghaly Devices herein incorporates the contents of the preceding paragraphs as if

restated fully herein.

92.   Humor Rainbow's efforts to market and sell subscriptions for using the OKCupid

mobile application, combined with its provision of instruction materials, marketing materials and

customer service related to the features and functions which give rise to infringement of the 479

Patent, demonstrate that Humor Rainbow induced further infringement of the 479 Patent on the

part of the consumers who download, install, and use the OKCupid mobile application. As

noted, these efforts on the part of Humor Rainbow were ongoing, as is the direct infringement of

the 479 Patent by Humor Rainbow's customers.

93.   Humor Rainbow has induced infringement of one or more claims of the 479

Patent under 35 U.S.C. § 271(b). With knowledge of the 479 Patent since at least as early as

October 16, 2017, Humor Rainbow actively, knowingly, and intentionally induced infringement

of the 479 Patent by selling or otherwise supplying the OKCupid mobile application with the

knowledge and intent that third parties, such as its customers, will install it and use it in the

United States for the purpose of infringing the 479 Patent; and with the knowledge and intent to

encourage and facilitate said infringement through the dissemination of the OKCupid mobile

application and/or the creation and dissemination of documentation and technical information

related to the OKCupid mobile application which encourage said infringement.

94.   Humor Rainbow instructed its customers to download the OKCupid mobile

application using the Google Play store or Apple App store, as shown below in a portion of

Exhibit J.

95.   Humor Rainbow's customers download and install the OKCupid mobile

application on their respective smart phone devices such as, for example, android-based cell

phones or iPhones.

96.   Humor Rainbow instructed its customers to use the OKCupid mobile application

on their respective smart phone devices for the purpose of identifying a match score with respect

to at least some other users of the OKCupid mobile. **Exhibit J**.

97.   Humor Rainbow's customers use the OKCupid mobile application on their

respective smart phone devices for the purpose of identifying a match score with respect to at

least some other users of the OKCupid mobile.

98.   Humor Rainbow's customers directly infringed at least Claim 42 of the 479 Patent

for the reasons set forth in Count 1 by using the Accused Instrumentality to identify a degree of

compatibility between the two users.

99.   With knowledge of the 479 Patent since at least as early as October, 2017, Humor Rainbow has also contributed to said infringement by third parties, including Humor Rainbow's customers of one or more claims of the 479 Patent under 35 U.S.C. § 271(c), by selling and/or offering for sale in the United States subscriptions to using the OKCupid mobile application knowing that those products and/or services constitute a material part of the inventions of the 479 Patent, knowing that those products and/or services are especially made or adapted to infringe the 479 Patent, and knowing that those products are not staple articles of commerce suitable for substantial noninfringing use.

100.   Humor Rainbow instructed its customers to download and use the OKCupid mobile application knowing that it would lead to the Accused Instrumentality.

101.   As a result of Humor Rainbow's indirect infringement of the 479 Patent, Ghaly Devices has suffered damages, and is entitled, at a minimum, to recover a reasonable royalty from Humor Rainbow to compensate for the infringement.

102.   On information and belief, Humor Rainbow continued to sell subscriptions to the OKCupid product/service with knowledge of the infringement analysis provided in at least the First Letter and Second Letter.

103.   On information and belief, Humor Rainbow continued to encourage others to download and use the OKCupid mobile application on an iPhone or Android-based device with knowledge of the infringement analysis provided in at least the First Letter and Second Letter.

104.   Since having knowledge of the 479 Patent at least as early as October 16, 2017, Humor Rainbow knew or should have known that, without taking a license to the Patent-in-Suit, its actions continue to indirectly infringe one or more claims of the 479 Patent. Therefore, Humor Rainbow's infringement has and will continue to be willful.

Prayer for Relief

Wherefore, Ghaly Devices respectfully requests that this Court enter judgment against Humor Rainbow as follows:

a)   Humor Rainbow's use of the Accused Instrumentalities has directly infringed the 479 Patent, literally or, alternatively, under the Doctrine of Equivalents;

b)   Humor Rainbow has indirectly infringed the 479 Patent, literally or, alternatively, under the Doctrine of Equivalents by inducing consumers to use the Accused Instrumentalities;

c)   Ghaly Devices is entitled to its damages resulting from these infringements in the amount that is no lower than a reasonable royalty, together with prejudgment and post-judgment interest thereon;

d)   Humor Rainbow's infringement was willful and that such damages be trebled;

e)   The Court declare this case to be exceptional and award Ghaly Devices his reasonable fees, costs and expenses;

f)   The Court grant Ghaly Devices such other and additional relief as the Court determines to be just and proper.

Demand for Jury Trial

Ghaly Devices hereby demands a trial by jury on all claims and issues so triable.

Dated: July 19, 2019

Respectfully submitted,

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