IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of	Michael S. Smith	
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REQUEST FOR *EX PARTE* REEXAMINATION OF U.S. PATENT NO. 10,656,754 UNDER 35 U.S.C. § 302 AND 37 C.F.R. § 1.510

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Appendix W	Chris Harrison *et al.*, *Kineticons: Using Iconographic Motion in Graphical User Interface Design*, Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, pp. 1999 - 2008 (May 7, 2011) ("Harrison")
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I. INTRODUCTION

The undersigned ("Requester") respectfully requests reexamination under 35 U.S.C. § 302 and 37 C.F.R. § 1.510 of claims 2, 83, 85, 86, 101, 108-115, 118-120, 123-127, 130-132, 134, 136, 137, 142-148, 150-186, 188, 193, 195, 196, 198, 205-208, 217-221, 225, 230, and 232 ("the Challenged Claims") of U.S. Patent No. 10,656,754 ("the '754 patent") (Appx-A).

Grounds 1-3 of the Request present prior art, expert testimony, and technological teachings that were not previously cited or considered by the Office during original examination of the '754 patent. As described in detail below (Sections VI-VII), this Request raises substantial new questions of patentability, and each of Grounds 1-3 renders obvious each of the Challenged Claims.

For the reasons set forth herein, Requester respectfully requests grant of the present Request for reexamination and cancellation of all Challenged Claims as unpatentable.

II. REQUIREMENTS FOR *EX PARTE* REEXAMINATION UNDER 37 C.F.R. § 1.510

The present Request satisfies each requirement for *ex parte* reexamination of the '754 patent as set forth below.

A. 37 C.F.R. § l.510(b)(l): Statement Pointing Out Each Substantial New Question of Patentability

A statement pointing out each substantial new question of patentability based on the cited patents and printed publications in accordance with 37 C.F.R. § 1.510 (b)(l) is provided below in §VI.

B. 37 C.F.R. § l.510(b)(2): Identification of Every Claim for which Reexamination is Requested

Reexamination is requested for claims 2, 83, 85, 86, 101, 108-115, 118-120, 123-127, 130-132, 134, 136, 137, 142-148, 150-186, 188, 193, 195, 196, 198, 205-208, 217-221, 225, 230, and 232 of the '754 patent in view of the prior art references discussed below.

C. 37 C.F.R. § l.510(b)(2): Detailed Explanation of the Pertinency and Manner of Applying the Prior Art

A detailed explanation of the pertinency and manner of applying the prior art to every claim for which reexamination is requested in accordance with 37 C.F.R. § 1.510(b)(2) is provided below in §VII.

D. 37 C.F.R. § l.510(b)(3): Copy of Every Patent or Printed Publication Relied Upon or Referred To

Requester has provided a copy of every patent or printed publication relied upon or referred to in this *ex parte* reexamination Request as Appendices A-Z (*see* Exhibit List above). For convenience, the cited patents and printed publications are also listed on a Form PTO-1449, attached herewith.

E. 37 C.F.R. § l.510(b)(4): Copy of the Entire Patent

Requester has provided a full copy of the '754 patent as Appendix A in accordance with 37 C.F.R. § 1.510(b)(4).

F. 37 C.F.R. § l.510(b)(5): Certification of Service

In accordance with 37 C.F.R. § 1.510(b)(5), Requester has provided below (*see* last page of this Request) a certification that a copy of the Request has been served in its entirety on Smith Interface Technologies, LLC at the address as provided for in § 1.33(c). The name and address of the party served has been indicated.

G. 37 C.F.R. § l.510(b)(6): Certification by the Third-Party Requester

In accordance with 37 C.F.R. § 1.510(b)(6), Requester certifies that the statutory estoppel provisions of 35 U.S.C. § 315(e)(1) and 35 U.S.C. § 325(e)(1) do not prohibit Requester from filing this *ex parte* reexamination request.

H. 37 C.F.R. § l.510(a): Fee for Requesting Reexamination

The Patent and Trademark Office is authorized to charge Deposit Account No. 06-1050 for the fee set in 37 C.F.R. § l.510(a) for this Request and further authorizes payment for any additional fees to be charged to this Deposit Account.

I. Identification of Related Matters

Smith Interface Technologies, LLC ("Smith" or "Patent Owner") has asserted the '754 patent in civil actions (collectively "Related Litigations") against

Samsung Electronics Co. Ltd. ("Samsung") and Apple Inc. ("Apple"). The case against Samsung was filed on July 29, 2022, in the U.S. District Court for the Eastern District of Texas (E.D. Tex.), and was assigned case number 2-22-cv-00290. Appx-Y. The case against Samsung was terminated due to settlement on July 17, 2023.

The case against Apple was filed on June 27, 2023, in the U.S. District Court for the Southern District of California (S.D. Ca.), and was assigned case number 3-23-cv-01187. Appx-Z. The case is ongoing and trial has not yet been scheduled. The District Court has issued no rulings concerning the validity of the '754 patent claims as of the filing date of this Request. The District Court has not yet issued a claim construction order regarding the '754 patent.

Apple filed seven petitions for *inter partes review* (IPR) against the '754 Patent, which were each filed on June 28, 2024. These cases were assigned case numbers: IPR2024-01086; IPR2024-01114; IPR2024-01115; IPR2024-01116; IPR2024-01117; IPR2024-01118; and IPR2024-01119.

J. Certification of no Estoppel Under 35 U.S.C. §§ 315, 325

Requester is not estopped by the provisions of 35 U.S.C. §§ 315(e) or 325(e) from pursuing the present request for *ex parte* reexamination. The '754 patent has never been the subject of a final written decision in an *inter partes* review or a

post-grant review before the Office, and the estoppel provisions of §§ 315(e) and 325(e) are inapplicable.

III. CHALLENGE AND RELIEF REQUESTED

Requester requests *ex parte* reexamination and cancellation of the Challenged Claims on the grounds set forth in the table below. A detailed analysis of the grounds of unpatentability follows in the sections below. Additional explanation and support for each ground of unpatentability is set forth in Appendix C, the Expert Declaration of Dr. Andrew Cockburn, referenced throughout this Request.

Ground	'754 Patent Claims	Basis for Unpatentability and Proposed Ground of Rejection (35 U.S.C. § 103)
1	2, 101, 108-115, 118-120, 123-127, 130-132, 134, 136, 137, 142-148, 150-185, 225, 230, and 232	Beaumier in view of Chaudhri
2	83, 85, 86, 186, 188, 193, 195, 196, 198, and 205-207	Beaumier in view of Chaudhri and Wang
3	208 and 217-221	Beaumier in view of Chaudhri, Wang, and Shiplacoff

The '754 patent was filed on June 11, 2019, and claims priority to several U.S. Provisional Applications, the earliest filed of which is 61/515,835 filed on August 5, 2011. Appx-A, Page 2. None of the Challenged Claims are entitled to the benefit of the filing dates of any of its listed priority applications, but

nonetheless treats August 5, 2011 as the Critical Date of the Challenged Claims for purposes of this Request. Even under this Critical Date, each of the references applied in Ground 1 qualifies as a prior art patent or printed publication to the '754 patent on at least the bases shown below:

Reference	Filed	Published	Prior Art Basis (Pre-AIA 35 U.S.C. § 102)
Beaumier	01/26/2011	11/17/2011	§102(e)
Chaudhri	02/27/2009	08/06/2009	§102(b)
Wang	03/24/2011	08/16/2012	§102(e)
Shiplacoff	04/01/2009	04/15/2010	§102(b)

IV. OVERVIEW OF THE '754 PATENT

A. The '754 Patent

The '754 patent "generally relate[s] to touch screens" and describes embodiments where "a user experience [with a touch screen device] may be altered" based on a "touch signal." APPX-A, 1:35-36, 14:31-15:64, Figure 3; APPX-C, ¶29. The claims of the '754 Patent generally relate to a hodge podge of touch screen gestures (*e.g.*, swipe and tap gestures) and various display functions on the user interface associated with those gestures (*e.g.*, blurring or moving displayed objects). *See, e.g.*, APPX-A, 95:35-53 (Claims 2-4). However, as discussed below, the support for these claimed gestures and claimed user interface functions is scattered throughout the specification of the '754 Patent, often without explanation about any relationship between the disparate teachings or their utilization together in a single embodiment. APPX-C, ¶29. Nonetheless, as will be described in Section VII, *infra*, the claimed gestures and user interface functions were well-known well before the '754 Patent. APPX-C, ¶29.

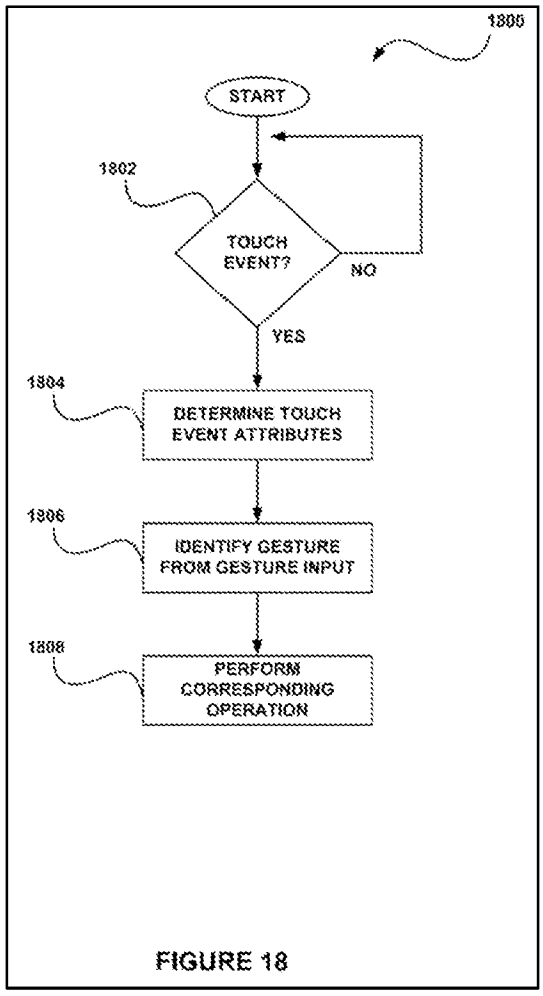


FIGURE 18

In one part of the specification, the '754 Patent describes a method that involves performing operations that correspond to identified gestures. *See* APPX-A, 56:24-57:10. "If it is determined that a touch event has occurred, then the initial touch event attributes are determined," and "the gesture is identified from gesture input." APPX-A, 56:34-38. According to the '754 Patent, "gesture input refers to the collection of inputs, flags, and signals by which a gesture is identified and parameterized," and is thus broadly defined. APPX-A, 56:39-41. "For example, in one embodiment, a two-finger pinch gesture may be identified by two contact points combined with their motion with respect to each other, and parameterized by the extent of the motion." APPX-A, 56:41-45. "Once the gesture has been identified, the corresponding operation is performed." APPX-A, 57:9-10; APPX-C, ¶30.

The '754 Patent describes that "[p]attern-based gestures may be simple to perform and easy for a user to remember." APPX-A, 65:37-39. One such gesture is a "pinch slide gesture." *See* APPX-A, 66:17-27. The pinch slide "gesture may be performed by pinching the device, then sliding the pinch across the interaction surfaces while maintaining contact." APPX-A, 66:21-24. In one embodiment, "a pinch slide gesture may be used to display menus of common operations or applications." APPX-A, 66:64-66. "For example, in one embodiment, a pinch slide gesture which begins near an edge of a display and then moves inward may cause a

menu or window to slide in from that edge of the display." APPX-A, 66:66-67:2; APPX-C, ¶31.

Separately, the '754 Patent describes embodiments that utilize a "3D layered user interface" in which "displayed objects may exist in one of a plurality of layers." APPX-A, 67:66-68:10; APPX-C, ¶32. "[A] 3D layered user interface may be implemented in a device having single layer displays through the use of virtual display layers." APPX-A, 68:37-39. "[A] virtual display layer refers to a collection of display elements which have all been assigned the same apparent depth within the 3D layered user interface." APPX-A, 68:39-42. In some embodiment, "virtual display layers may be given the appearance of depth through the use of 3D depth cues." APPX-A, 68:58-60. "For example, in one embodiment, a 3D depth cue may be a blur operation, such that layers located at successively greater depths may appear blurrier than those closer to the user." APPX-A, 68:63-66.

Notably, the '754 Patent does not explicitly describe the aforementioned edge menus with respect to the virtual display layers, nor the manner in which such menus would operate with respect to the virtual display layers. Rather, the '754 Patent describes its 3D layered user interface more generically with respect to "objects" or "display elements" and collections thereof. *See generally* APPX-A, 67:44-71:39; APPX-C, ¶33. These "objects" are described as including, but not limited to, "digital objects (i.e. images, text boxes, UI control widgets, selections,

etc.), subject matter objects (i.e. people within a photograph, letters and/or words within text, etc.), and/or any other type of identifiable visual object." APPX-A, 68:48-57. While the '754 Patent describes that these general "objects" or "elements" may be "located in a virtual display layer" (*see* APPX-A, 68:55-57), there is sparse detail about how specific "objects" or "elements" are assigned to a particular virtual display layer, and no clear discussion of whether or how "objects" or "elements" may be reassigned or otherwise moved between virtual display layers. *See generally* APPX-A, 67:44-71:39; APPX-C, ¶33. Rather, the '754 Patent focuses on the ability of a user to "move" visually between layers and providing visual cues that provide the appearance of such "movement" ("*i.e.* magnifying and fading display layers as they are passed by, sharpening previously blurry display layers as they grow closer, etc."), which is a distinct concept. APPX-A, 70:64-71:9; APPX-C, ¶33.

B. Prosecution History

On June 11, 2019, the Applicant (P4TENTS1, LLC) filed the '754 patent as U.S. Appl. No. 16/438,455 accompanied by a Request for Prioritized Examination under 37 C.F.R. §1.102(e). APPX-B, 933, 937-940. In the first non-final Office Action dated August 1, 2019, the Examiner rejected the claims under 35 U.S.C. § 101 and for both statutory and non-statutory double patenting. APPX-B, 713-721. No prior art rejections were made.

In a response dated September 6, 2019, the Applicant filed a terminal disclaimer with respect to U.S. Patent No. 10,345,961, made minor amendments to original independent claim 1, cancelled original claims 8-16, and added new claims 17-202. APPX-B, 671-712. Shortly thereafter, the Applicant filed a supplemental amendment and response on September 23, 2019, in which the Applicant filed a more extensive terminal disclaimer, additionally cancelled original claims 2-7, more extensively amended original independent claim 1 to include features related to "blur," and replaced the new claims with a different set of new claims 17-237. APPX-B, 603-660.

After an interview on November 19, 2019 in which the Examiner proposed cancelling then-new claim 237 to "expedite a NOA," the Examiner issued a Notice of Allowance (NOA) with an Examiner's Amendment that made relatively minor amendments to the independent claims. APPX-B, 336-369. In the Notice of Allowance, the Examiner identified the following feature recited in issued independent claims 1 and 2 that was alleged to distinguish the prior art:

> **during** detection of at least a portion of the gesture before a completion thereof is detected, **blur, based on a change in a magnitude of the gesture** being detected on the display, at least a portion of the at least one other object

APPX-B, 365 (emphasis in original).

Of the hundreds of references cited in Information Disclosure Statements (IDSs), neither the Applicant nor the Examiner appears to have identified Beaumier (APPX-D) as a prior art reference relevant to the disclosed invention. Nor did either the Applicant or Examiner explicitly discuss or consider the combination of Beaumier and Chaudhri with respect to the above-identified features. However, as will be described in greater detail below, the combination of Beaumier and Chaudhri explicitly teaches and renders obvious each of these limitations. *See* Section VII, *infra*. Thus, there exists material error in the allowance of the claims that issued as part of the '754 Patent.

C. Level of Ordinary Skill in the Art as of the Critical Date

The range of qualifications for a POSITA would have included a bachelor's degree in computer science, computer engineering, electrical engineering, human-computer interaction, or a related field, and would have had at least two years of relevant work experience in the design and development of graphical user interfaces (GUIs), human-computer interfaces, or equivalents thereof. APPX-C, ¶26. Less work experience may be compensated by a higher level of education and vice versa. *Id.*

V. CLAIM CONSTRUCTION[1]

Claim terms in a reexamination proceeding are given their broadest reasonable interpretation consistent with the specification of the patent at issue. MPEP § 2258. "Because applicant has the opportunity to amend the claims during prosecution, giving a claim its broadest reasonable interpretation will reduce the possibility that the claim, once issued, will be interpreted more broadly than is justified." *Id.*, § 2111; *In re Zletz,* 893 F.2d 319, 321, (Fed. Cir. 1989) ("During

[1] Requester's comments on claim construction are for the sole purpose of analyzing obviousness and applying teachings of the prior art to the Challenged Claims in this reexamination request. Neither by providing comments on claim construction, nor by analyzing the cited prior art combinations, does Requester concede that any claim of the '754 patent meets statutory standards for patent claiming. Requester recognizes that *ex parte* reexamination is not an appropriate vehicle to address issues including subject-matter eligibility of the claims under 35 U.S.C. § 101 or the requirement for the claims to comply with 35 U.S.C. § 112. Requester reserves all rights to assert elsewhere that any of the Challenged Claims is invalid for reasons outside the scope of an *ex parte* reexamination request, including but not limited to the failure to claim patentable subject matter under § 101 and lack of definiteness or written description under § 112.

patent examination the pending claims must be interpreted as broadly as their terms reasonably allow."). However, no claim terms need be construed to resolve issues of controversy raised by this Request, because Grounds 1-3 renders the Challenged Claims obvious under any reasonable construction. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011).

VI. SUBSTANTIAL NEW QUESTIONS OF PATENTABILITY

Grounds 1-3 of this Request present substantial and new questions of patentability regarding the Challenged Claims of the '754 patent. Indeed, the file history contains no indication that the primary prior art references applied in Grounds 1-3 of this Request (*i.e.*, Beaumier and Chaudhri) were previously considered by the Office during original examination of the '754 patent, or in any other proceeding before the Office involving the '754 patent. *See* Appx-B.

Grounds 1-3 of this Request are based on prior art references that present "new, non-cumulative technological teaching[s] that [were] not previously considered and discussed on the record during the prosecution of the application" from which the '754 patent issued. MPEP § 2216.

For example, Beaumier discloses and renders obvious "**during** detection of at least a portion of the gesture before a completion thereof is detected, **blur, based on a change in a magnitude of the gesture** being detected on the display, at least a portion of the at least one other object" based on teachings not addressed

by the prior art applied during original examination of the '754 patent. For context, during original examination, the Examiner identified this feature as not being taught in the prior art, while citing U.S. App. Pub. No. 2007/0189737 (Chaudhri) as teaching "moving user interface elements" and U.S. App. Pub. No. 8,713,458 (Mattila) as teaching "blur in a GUI." Appx-B, 364-365; *supra*, IV.B.

However, Beaumier discloses and renders obvious the feature that the Examiner concluded was missing from the prior art applied during original examination. Appx-B, 365. Beaumier, for example, teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127]. For example, "FIG. 22c shows the enlargement of an album jacket to highlight its selection, and further blurs background UI elements to help bring focus to the selected album, in accordance with certain exemplary embodiments." Appx-D, [0127]. As described in Section VII, *infra*, a POSITA would have understood and found obvious that Beaumier teaches that this blurring would result from a user "press[ing] and hold[ing] a music object such as artist

artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold." Appx-D, [0084]; *infra*, Ground 1 at [2.d]. In other words, Beaumier teaches that, based on a change in a magnitude of a gesture being detected on the display (*e.g.*, a magnitude of duration of a touch on an album artwork being above a predefined threshold) various other albums displayed on a touch screen are blurred. *See id.*

Becaues Beaumier discloses and renders obvious the feature that the Examiner concluded was missing from the prior art applied during original examination, there exist substantial and new questions of patentability regarding the Challenged Claims of the '754 patent.

VII. EXPLANATION OF PERTINENCY AND MANNER OF APPLYING CITED PRIOR ART

A. [GROUND 1] – Obviousness of Claims 2, 101, 108-115, 118-120, 123-127, 130-132, 134, 136, 137, 142-148, 150-185, 225, 230, and 232 Based on Beaumier and Chaudhri

1. Beaumier

Beaumier relates to "improved user interfaces" for "entertainment systems." Appx-D, [0002]. Beaumier's teachings are described with respect to "an improved jukebox system" (*see* Appx-D, [0052]), but are more broadly applicable to "music systems" (*see* Appx-D, [0061]) and "may be adapted for use in an in-home or personal" music system (*see* Appx-D, [0208]). Appx-C, ¶37. In at least one aspect of its improvements, Beaumier describes "the inclusion of innovative user

interface[s] that help immerse the user in an interactive jukebox world where user interface elements help provide for multi-dimensional interaction with collections of instances of media, synchronized external and/or internal lightshow feedback and/or projection, play queue reveal and/or manipulation, blurring/focusing of elements, synchronized lyrics display etc." Appx-D, [0018].[2]

Beaumier describes that "the jukebox devices 16 each may include one or more microprocessors, such as a main CPU and an audio DSP, a memory, such as a hard drive, for storing songs and/or other content, a display of displaying visual items, an audio arrangement 20 for providing audio, a communication system for enabling the jukebox to communicate with the central server 12 through the communications network 14, and operating software, including a multitasking operating system, that controls the operation of the jukebox." Appx-D, [0053]. The display of the jukebox device "may be a touch screen that enables the user to input selections by touching the screen." Appx-D, [0053].

"As indicated above, certain exemplary embodiments include a new three-dimensional user interface for exploring and browsing media content, e.g., using a touch-screen." Appx-D, [0057]. "Given an arbitrary collection of content (e.g., music, video, advertisement, and/or other content), the new user interface may create a multi-dimensional (e.g., two- or three-dimensional) visualization virtual

[2] Emphasis added throughout, unless otherwise noted.

space, which allows the user to freely navigate in this collection." Appx-D, [0057]. In order to accomplish these visualization techniques, Beaumier describes that the jukebox "obtain a location a direction and a speed of a sensed touch" and use this data to navigate through the multidimensional display space (e.g., up for forward, down for backward, and left and right for side-to-side). *See* Appx-D, [0058]; Appx-C, ¶39. "In addition, or in the alternative, by holding a touch for a period of time greater than some threshold (greater than 2 seconds, for example), a choice that [it] represents [] could be presented." Appx-D, [0058].

An example of a multi-dimensional visualization and the movements to navigate through it are illustrated in FIGS. 6 and 7. *See* Appx-D, [0073]-[0079]; Appx-C, ¶40. FIGS. 6 and 7 illustrate exemplary displays for "browsing a music collection." Appx-D, [0074]. "In FIG. 6, for example, a user can drag albums or a screen location to the left or right to 'flip through' different albums." Appx-D, [0075]. And, in "the FIG. 7 exemplary embodiment, artists can be moved up and down to control inward and outward movement, respectively, and albums can be moved left or right to control the card shuffle like arrangement shown in FIG. 7." Appx-D, [0076].

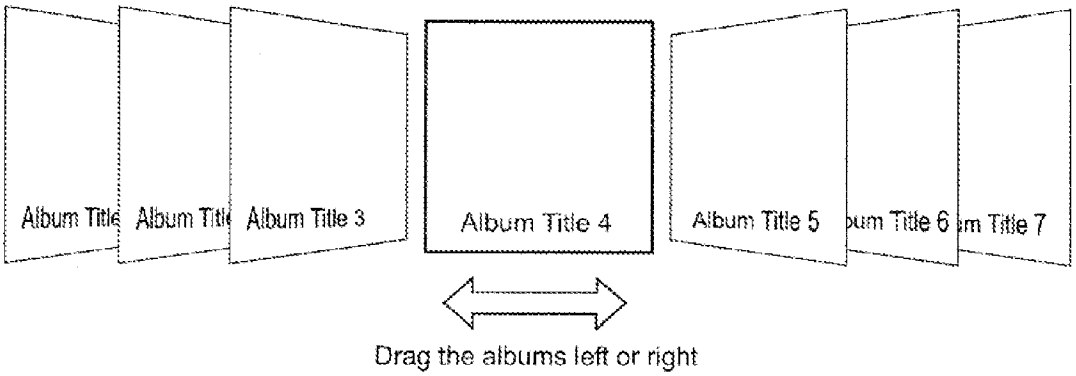


Fig. 6

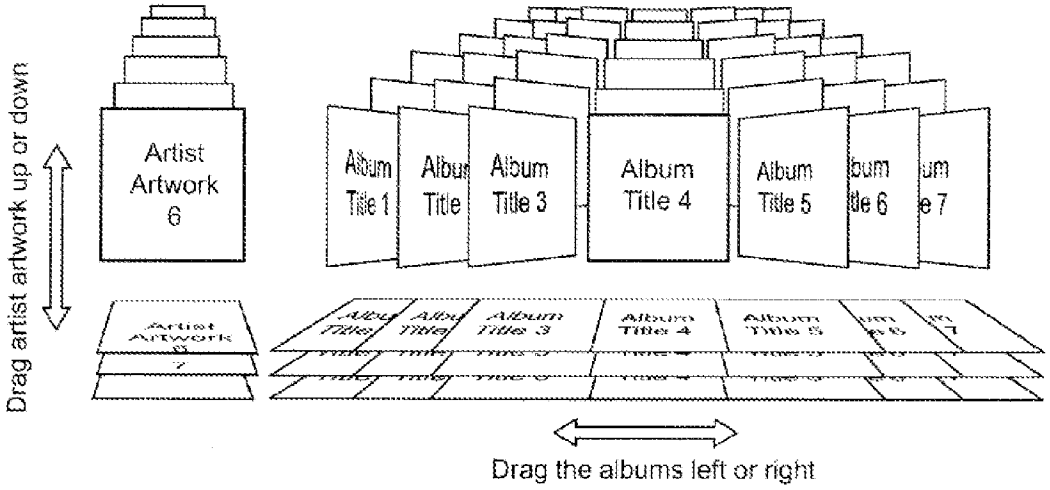


Fig. 7

Appx-D, FIGS 6 and 7

These multi-dimensional displays and methods of navigating them make it "possible to simulate a more three-dimensional look-and-feel, and provide more of a sense of immersion when interacting with the user interface." Appx-D, [0075]. In some embodiments, "one, two, and three-dimensional displays may enable a user to move in different directions, with each axis being mapped to a particular value in a data set of characteristics, and with the displayed items (e.g., album

jackets or other identifiers) being updated as the user interacts with the display." Appx-D, [0077].

Beaumier describes each artist, album and/or song title included in the jukebox with "descriptive words or 'tags' . . . to visually represent music collections in an interesting way." Appx-D, [0084]. "For instance, FIG. 8a illustrates a set of eight (8) example tags associated with 'artist 6' in accordance with an exemplary embodiment." Appx-D, [0084]. "Each time a user presses and holds a music object such as artist artwork (*e.g.*, in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold, a set of floating objects may be displayed, e.g., as shown in FIG. 8a." Appx-D, [0084].

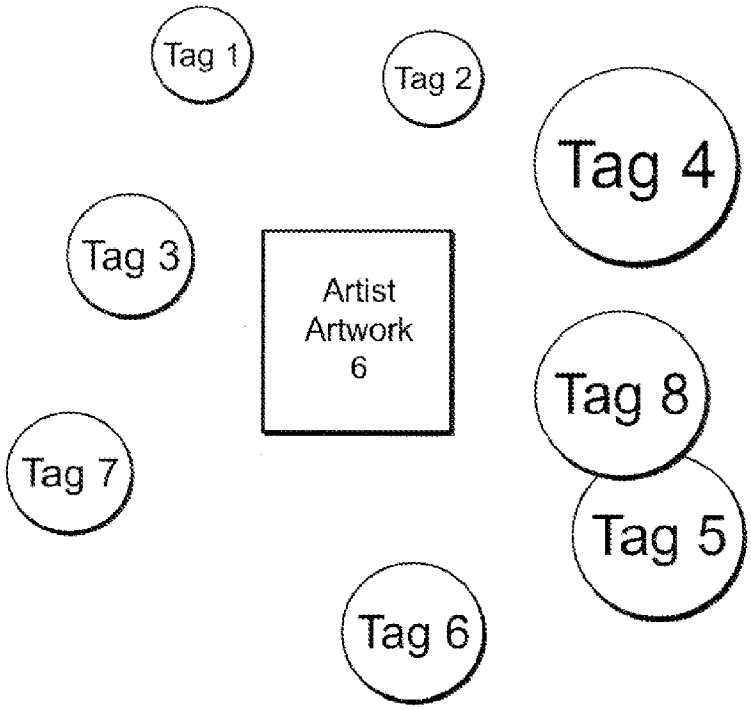


Fig. 8a

Appx-D, FIG. 8a

Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127]. For example, "FIG. 22c shows the enlargement of an album jacket to highlight its selection, and further blurs background UI elements to help bring

focus to the selected album, in accordance with certain exemplary embodiments." Appx-D, [0127]. And these focus/highlighting techniques "may be applied to other aspects of the UI experience." Appx-D, [0127]. Thus, for example, a POSITA would have understood and found obvious that when a user presses and holds an album cover and various tags are displayed as shown and described with respect to FIG. 8a, the other albums being displayed (e.g., in FIG. 6 or 7) may be blurred to help bring focus to the selected album and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶43.

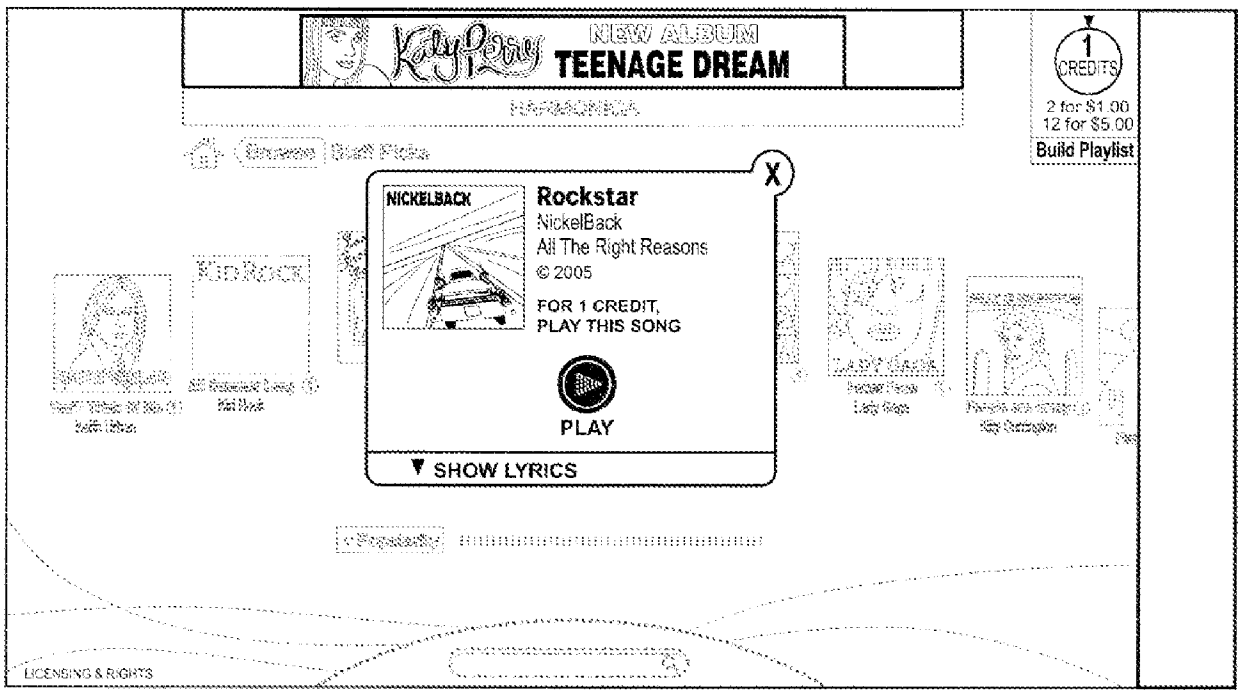


Fig. 22c

Appx-D, FIG. 22c

Overall, Beaumier is a collection of different, discrete functionalities. Appx-C, ¶44. Many of the implementation details are left to the POSITA. Appx-C, ¶44.

A POSITA would have naturally looked to other user interface teachings known in the art, and particularly those related to the selection of media for playback, to provide more specific or alternative implementation details to those described in Beaumier. Appx-C, ¶44. Indeed, Beaumier teaches "it will be appreciated that the screen shots and software arrangements presented herein are only one exemplary method for organizing and displaying the features disclosed herein," and that other "configurations are possible and are therefore contemplated." Appx-D, [0212]-[0213].

2. Chaudhri

Chaudhri is an example of another reference that deals with navigating through "large collections of media, such as music," on "media playback devices, such as media players or music players." Appx-E, [0003], [0265] ("the invention can be used on other electronic devices, which may or may not be portable, such as . . . media players (e.g., music, videos, games, images)"). Like Beaumier, Chaudhri describes a user interface that relies upon "imaged based brows[ing]" that presents a user "album images associated with audio tracks or songs stored on the" electronic device. Appx-E, [0186].

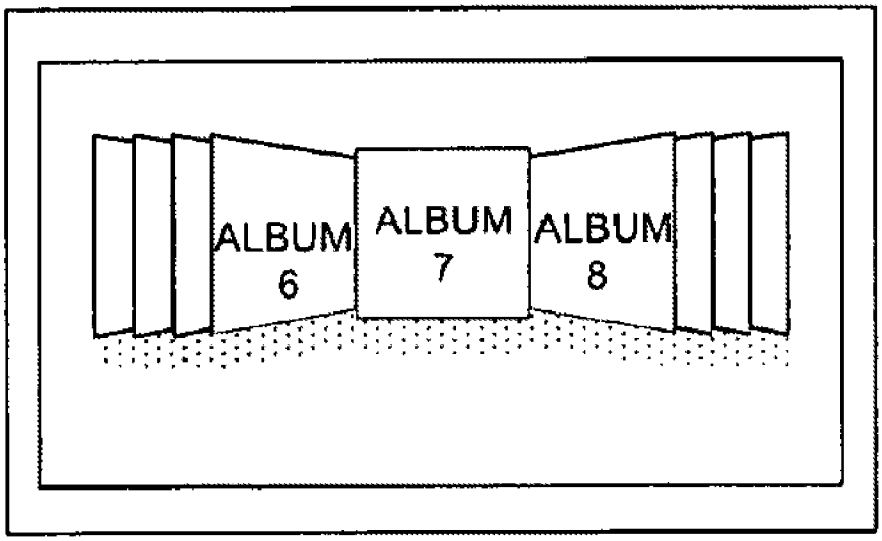


FIG. 23A

Appx-E, FIG. 23A

Chaudhri describes navigation through this interface in the context of electronic devices "having a touch screen display" that are "used for both navigation and selections." Appx-E, [0055], [0072]. Specifically, the touchscreen display is capable of detecting various actions, including "swipes or slides associated with linear user inputs 27 to interact with menus, lists, browsers, etc. being displayed on the touch screen display," and "pressing, tapping or holding actions, which can be associated with selection user inputs." Appx-E, [0086].

With respect to the interface illustrated in FIG. 23A, as the "user swipes their finger over the display region," the "electronic device recognizes the swipe and moves the images accordingly." Appx-E, [0187]-[0188]. For example, "the user [may] swip[e] left which causes the images to move left (this is similar to

flipping through a bin of albums)." Appx-E, [0188]. Once the user finds an album they like, "the user taps or presses their finger over the image at the primary position," and the electronic device "recognizes the tap or press or vertical swipe and presents a list of songs associated with the album at the primary position." Appx-E, [0189]-[0190].

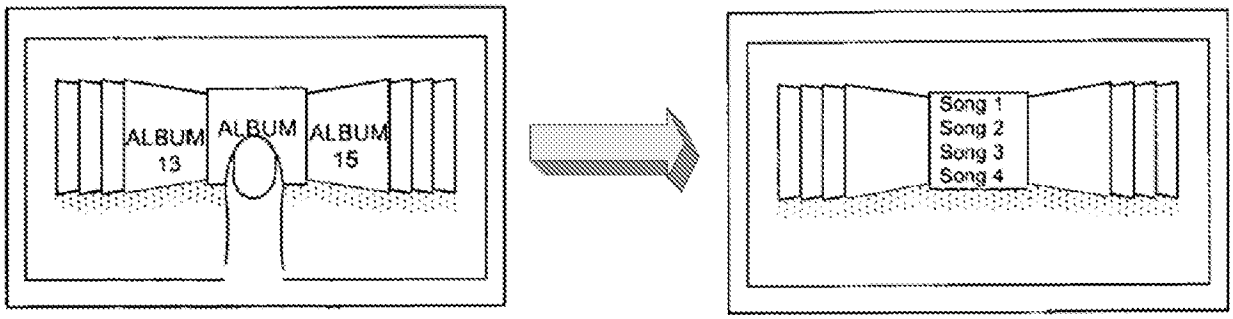


FIG. 23D FIG. 23E

Appx-E, FIGS. 23D and 23E

The user may then "navigate through the list of songs," "perform[] a selection event by pressing or tapping their finger as for example over the desired song," and the "electronic device recognizes the selection event and starts playing the song." Appx-E, [0191]-[0194].

3. The Combination of Beaumier and Chaudhri, Reasons to Combine, & Expectation of Success

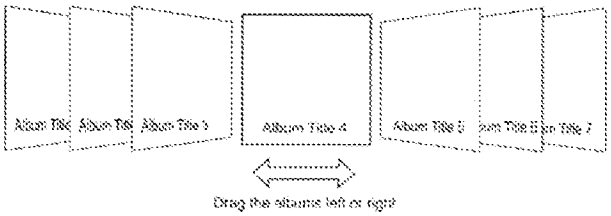
As discussed in Section VII.A.1, *supra*, Beaumier is a collection of different, discrete functionalities. Appx-C, ¶49. Many of the implementation details are left to the POSITA. Appx-C, ¶49. For example, Beaumier describes that "a user could browse by album or artist, make a selection, and then further select a song from a

selected album or artist." Appx-D, [0167]. However, Beaumier does not specifically describe how a user "selects" an album or how the songs are displayed once an album is selected. *See* Appx-D, [0167]; Appx-C, ¶49. On the one hand, Beaumier describes that, "by holding a touch for a period of time greater than some threshold (greater than 2 seconds, for example), a choice that [it] represents [] could be presented." Appx-D, [0058], [0102] ("Pressing and holding or dragging a particular object to a blank area may indicate a selection"). On the other hand, Beaumier describes that "[e]ach time a user presses and holds a music object such as . . . an album artwork . . . for a period of time greater than a predefined threshold, a set of floating objects may be displayed, e.g., as shown in FIG. 8a." Appx-D, [0084]. Thus, Beaumier remains somewhat imprecise as to what constitutes a user's "selection" and the outcomes for a given selection, and leaves theses implementation details to a POSITA. Appx-C, ¶49.

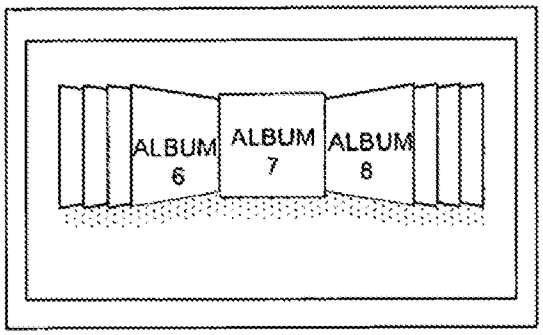
A POSITA would have naturally looked to other user interface teachings known in the art, and particularly those related to the selection of media for playback, to provide more specific or alternative implementation details to those described in Beaumier. Appx-C, ¶50. Indeed, Beaumier teaches "it will be appreciated that the screen shots and software arrangements presented herein are only one exemplary method for organizing and displaying the features disclosed

herein," and that other "configurations are possible and are therefore contemplated." Appx-D, [0212]-[0213].

Chaudhri provides one example of implementation details that are lacking for a feature otherwise disclosed in Beaumier. Appx-C, ¶51. Both Beaumier and Chaudhri utilize nearly the same interface for browsing albums, as shown in FIG. 6 of Beaumier and FIG. 23A of Chaudhri, as shown below. Appx-C, ¶51. Thus, a POSITA would have understood and found obvious that the teachings of Chaudhri would have simply and naturally integrated into Beaumier. Appx-C, ¶51.



Appx-D, FIG. 6



Appx-E, FIG. 23A

Chaudhri provides a method, exemplified by flowcharts in Figs. 9, 18, and 22, for associating different types of user inputs with different functions depending on the context of the display and information displayed thereon. *See* Appx-D, [0120]-[0137], [0148]-[0154], [0175]-[0184]. For example, Chaudhri teaches "[m]any aspects of the object action [*e.g.*, a user's finger on the touch screen] may be utilized to create the navigation input including but not limited to number of objects, location, speed, direction, length of action, etc." Appx-D, [0152]. And

Chaudhri specifically describes the ability to distinguish between different types of selections based on different types of user inputs (*i.e.*, "object actions"). *See, e.g.*, Appx-E, [0086] (describing touch screen being "capable of detecting various actions including . . . swipes or slides associated with linear user inputs 27 . . . [and] detecting pressing, tapping or holding actions, which can be associated with selection user inputs"). A POSITA would thus have been motivated to utilize the teachings of Chaudhri to help implement the different types of "selections" described by Beaumier and bridge the gap between its discrete functionalities, such as better defining the distinction between the "press and hold" of an album described with respect to FIG. 8a of Beaumier (*see* Appx-D, [0084]) and "mak[ing] a selection" of an album to display a list of songs "from a selected album" (*see* Appx-D, [0167]). Appx-C, ¶52.

One example of an obvious implementation of the combined teachings of Beaumier and Chaudhri would have been a combination of Chaudhri's album and song selection techniques in the context of Beaumier's jukebox and the interfaces described with respect to FIGS. 6, 7, 8a, and 22c. Appx-C, ¶53. In this example, as a user browses through the available albums as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an album of interest. Appx-C, ¶53. First, based on the teachings of Chaudhri, if "the user taps or presses their finger" on the album cover, the jukebox would present "a

list of songs associated with the album" from which the user may browse and select a song for addition to the playlist. *See* Appx-E, [0185]-[0203]. Second, based on the teachings of Beaumier, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D, [0084], [0127]. For example, "descriptive words or 'tags' associated" with the album may be displayed, as shown with respect to FIG. 8a, or an "enlargement of an album jacket to highlight its selection" along with additional information and options related to the album could be displayed, as shown with respect to FIG. 22c. Appx-D, [0084]-[0086], [0127]. An example of this process is illustrated below. Appx-C, ¶53.

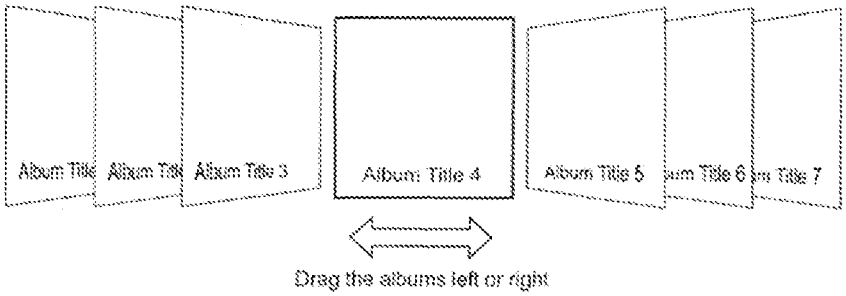


Fig. 6

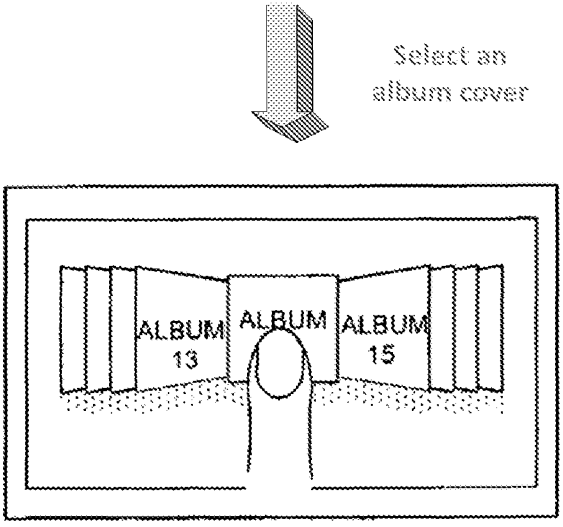


FIG. 23D

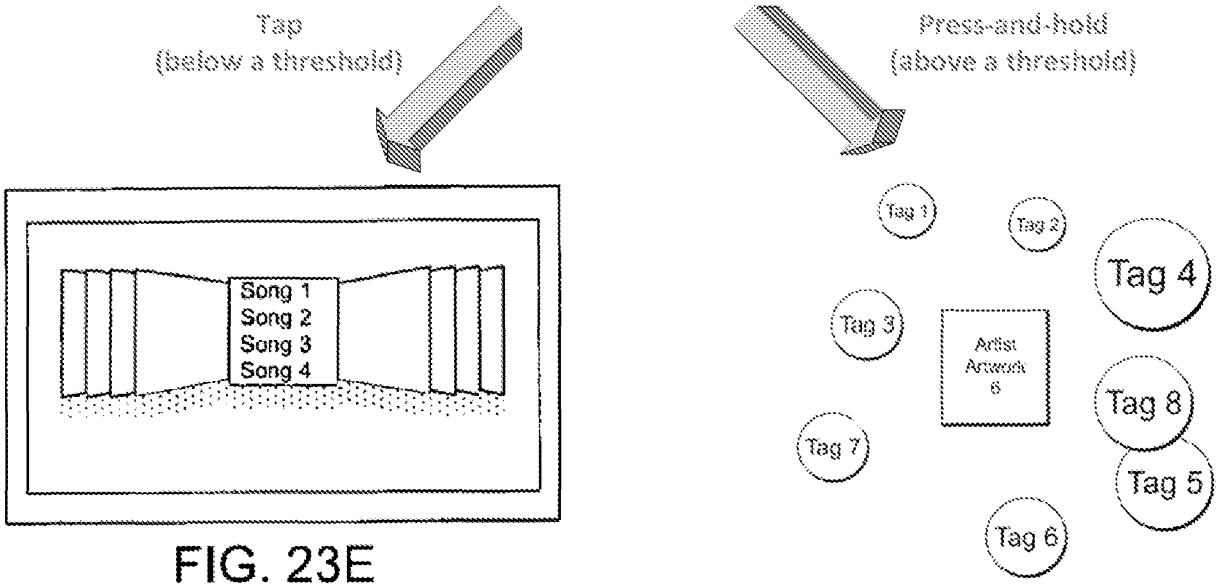


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Like the '754 patent, the disclosures of Beaumier and Chaudhri seek to improve user interfaces and the navigation of content on touch screen devices. Appx-C, ¶54. Accordingly, the Beaumier-Chaudhri combination represents the predictable and expected result of applying in the context of Beaumier's touch screen device the user input processing mechanisms and supplemental display characteristics described by Chaudhri. Appx-C, ¶54. From a POSITA's perspective in 2011, integrating the supplemental teachings of Chaudhri with Beaumier's disclosure would have involved nothing more than applying known solutions to known problems in the field of computer interfaces and applications to achieve predictable outcomes. Appx-C, ¶54. The fundamental aspects of Beaumier's disclosure would remain intact, bolstered by the well-known and beneficial teachings of Chaudhri to successfully arrive at the '754 patent's claimed invention. Appx-C, ¶54. Given the detailed disclosures of Beaumier and Chaudhri, a POSITA would have found the results of the above-described Beaumier-Chaudhri combination predictable. Appx-C, ¶54.

A POSITA would have recognized that all the claimed elements were known in the Beaumier and Chaudhri references and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than

predictable results to one of ordinary skill in the art. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007); Appx-C, ¶55.

4. Claim 2 Analysis

Beaumier and Chaudhri render obvious claim 2 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶56-72.

[2.a] An apparatus, comprising: at least one non-transitory memory; a touch screen; and one or more processors in communication with the at least one non-transitory memory, and the touch screen, wherein the one or more processors execute instructions in the at least one non-transitory memory to cause the apparatus to . . .

The Beaumier-Chaudhri combination renders obvious Element [2.a]. For example, Beaumier describes that "the jukebox devices 16 each may include one or more microprocessors, such as a main CPU and an audio DSP, a memory, such as a hard drive, for storing songs and/or other content, a display of displaying visual items, an audio arrangement 20 for providing audio, a communication system for enabling the jukebox to communicate with the central server 12 through the communications network 14, and operating software, including a multitasking operating system, that controls the operation of the jukebox." Appx-D, [0053]. The display of the jukebox device "may be a touch screen that enables the user to input selections by touching the screen." Appx-D, [0053].

Further, Beaumier describes that the processor is in communication with the memory and the touch screen. Appx-D, [0080], [0120], [0177]; Appx-C, ¶57.

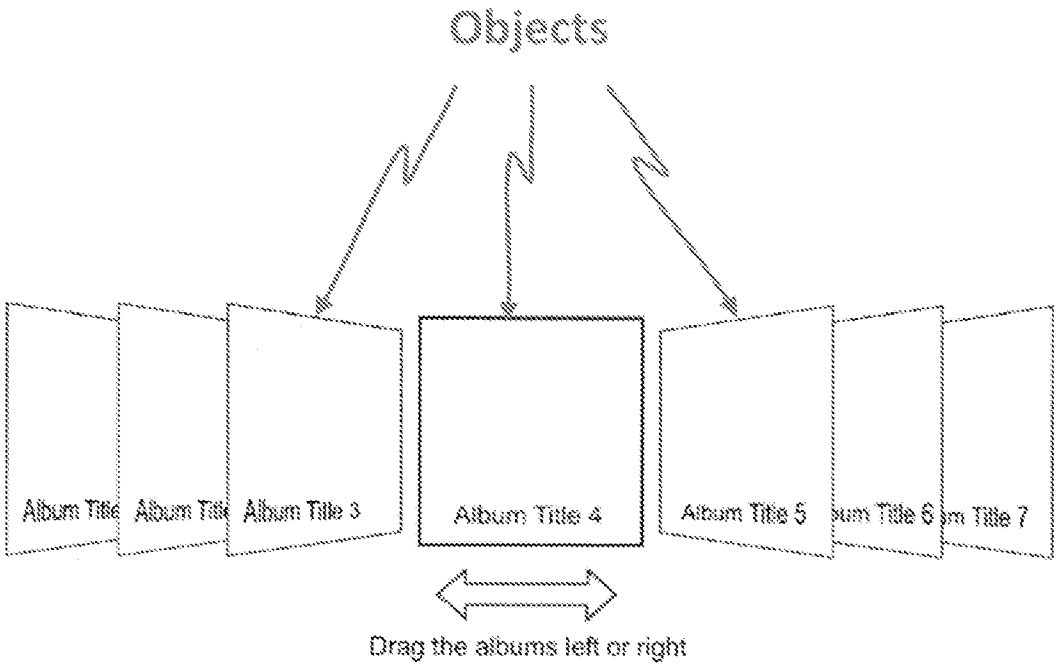
Indeed, Beaumier describes that "the jukebox devices have similar structure and operation described in U.S. Pat. No. 6,308,204" (referred to in this Petition as "Nathan"), the "entire disclosure of which is incorporated [into Beaumier] by reference." Appx-D, [0053]. In Nathan, the jukebox illustrates and describes a microprocessor central unit controls and manages a input control circuit (3) that is connected to a touch screen (33) and a mass storage control circuit (2) that is connected to storage modules (21) using hard disks of the high speed and high capacity SCSI type. Appx-F, 4:63-5:23, 5:44-56.

As discussed in Section VII.A.3, *supra*, a POSITA would have been motivated to utilize the teachings of Chaudhri to help implement the different types of "selections" described by Beaumier and bridge the gap between its discrete functionalities, such as better defining the distinction between the "press and hold" of an album described with respect to FIG. 8a of Beaumier (*see* Appx-D, [0084]) and "mak[ing] a selection" of an album to display a list of songs "from a selected album" (*see* Appx-D, [0167]). Appx-C, ¶58. Chaudhri describes that "internal to the housing 4 of the portable electronic device 2 are various software or electrical components in support of the browser function and other functions of the portable electronic device 2," and that the "invention is preferably implemented by software." Appx-E, [0075]. Thus, integrating the teachings of Chaudhri into Beaumier as discussed in Section VII.A.3, *supra*, and throughout this Request

would have been accomplished by including the software functionality described by Chaudhri as part of the "operating software" stored in the memory of Beaumier's device. Appx-C, ¶58.

[2.b] display an object and at least one other object;

The Beaumier-Chaudhri combination renders obvious Element [2.b]. Beaumier describes a "general presentation area on which all graphic elements are presented," and that various "objects" may be displayed in this space. *See* Appx-D, [0059]. "Objects generally refer to songs, artists, playlists, games, or media sources that are represented in a sequence from a central catalog." Appx-D, [0059].



Appx-D, FIG. 6

In the example shown in FIG. 6, "a user can drag albums or a screen location to the left or right to 'flip through' different albums." Appx-D, [0075]. Each of these albums is described as an "object." Appx-D, [0059], [0075]. Thus, Beaumier describes ***display[ing] an object*** (e.g., an album) ***and at least one other object*** (e.g., another album), as recited in [2.b]. Appx-C, ¶60.

[2.c] detect at least part of a gesture on the touch screen; and

The Beaumier-Chaudhri combination renders obvious Element [2.c].

Beaumier describes that "[t]he screen 18 may be a touch screen that enables the user to input selections by touching the screen." Appx-D, [0053]. "In the browsing state, users browse collections through a variety of different modes with the goal of selecting a media item for action." Appx-D, [0060]. Beaumier describes several different types of "selections" and several different types of actions. Appx-C, ¶61.

For example, with respect to FIG. 8a, Beaumier describes that, "[e]ach time a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold, a set of floating objects may be displayed, e.g., as shown in FIG. 8a." Appx-D, [0084]. Separately, Beaumier describes that "a user could browse by album or artist, make a selection, and then further select a song from a selected album or artist." Appx-D, [0167]. Beaumier does not explicitly explain

the distinction between the selection of an album to view the songs contained in the album, and the press and hold that causes the descriptive words and tags to be displayed. *See* Appx-D, [0084], [0167]; Appx-C, ¶62.

Thus, as discussed in Section VII.A.3, *supra*, a POSITA would have found obvious a combination of Chaudhri's album and song selection techniques in the context of Beaumier's jukebox and the interfaces described with respect to FIGS. 6, 7, 8a, and 22c. Appx-C, ¶63. One example obvious implementation of the combined teachings of Beaumier and Chaudhri would have been a combination of Chaudhri's album and song selection techniques in the context of Beaumier's jukebox and the interfaces described with respect to FIGS. 6, 7, 8a, and 22c. Appx-C, ¶63. In this example, as a user browses through the available albums as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an album of interest. Appx-C, ¶63. First, based on the teachings of Chaudhri, if "the user taps or presses their finger" on the album cover, the jukebox would present "a list of songs associated with the album" from the which the user may browse and select a song for addition to the playlist. *See* Appx-E, [0185]-[0203]. Second, based on the teachings of Beaumier, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D,

[0084], [0127]. For example, "descriptive words or 'tags' associated" with the album may be displayed, as shown with respect to FIG. 8a, or an "enlargement of an album jacket to highlight its selection" along with additional information and options related to the album could be displayed, as shown with respect to FIG. 22c. Appx-D, [0084]-[0086], [0127]. An example of this process is illustrated below. Appx-C, ¶63.

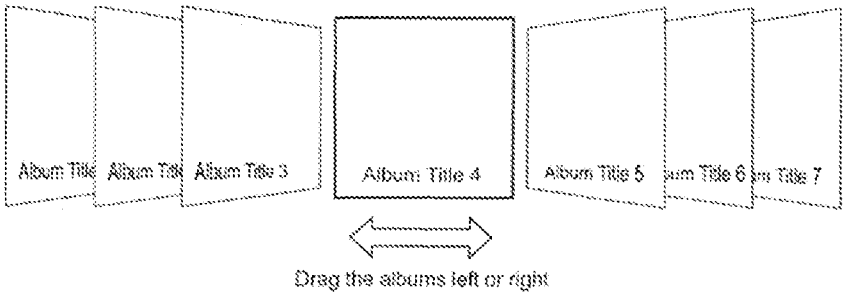


Fig. 6



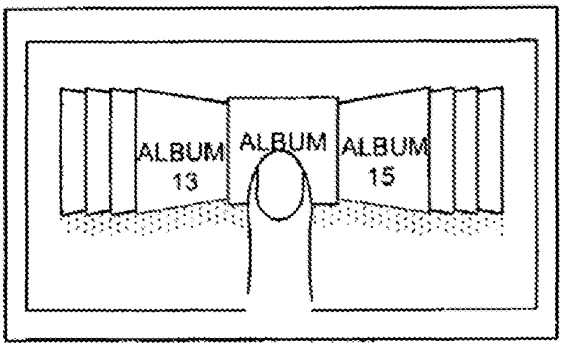


FIG. 23D

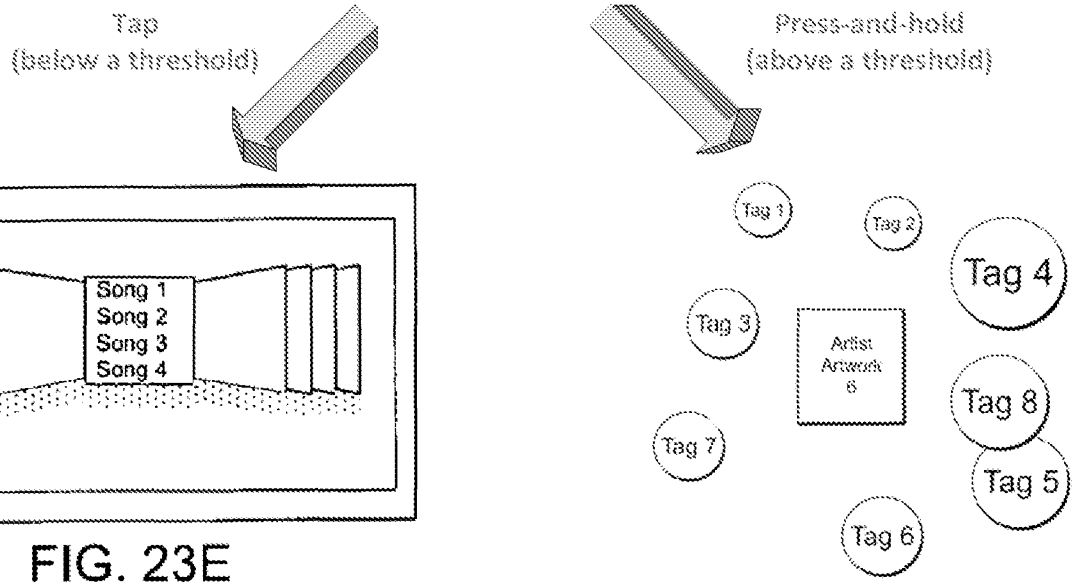


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Chaudhri describes that the touch screen "is capable of detecting various actions including . . . swipes or slides associated with linear user inputs 27 to interact with menus, lists, browsers, etc. being displayed on the touch screen display 23," and also "capable of detecting pressing, tapping or holding actions, which can be associated with selection user inputs." Appx-E, [0086]. Chaudhri describes that these "actions are sometimes referred to as gestures." Appx-E, [0086].

From these teachings, a POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, a user touching his/her finger down on the touch screen on an album, and either lifting the finger off the touch screen under a time threshold (*i.e.*, a tap) or holding it on the screen over a time threshold (*i.e.*, a press-and-hold) are each gestures on the touchscreen. Accordingly, a POSITA would have found obvious in the Beaumier-Chaudhri combination ***detect[ing] at least part of a gesture*** (e.g., tap or a press-and-hold) ***on the touch screen***, as recited in [2.c]. Appx-C, ¶65.

[2.d] during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a magnitude of the gesture being detected on the touch screen, at least a portion of the at least one other object.

The Beaumier-Chaudhri combination renders obvious Element [2.d].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available albums as

described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an album of interest. Appx-C, ¶67. An example of this process is illustrated below. Appx-C, ¶67.

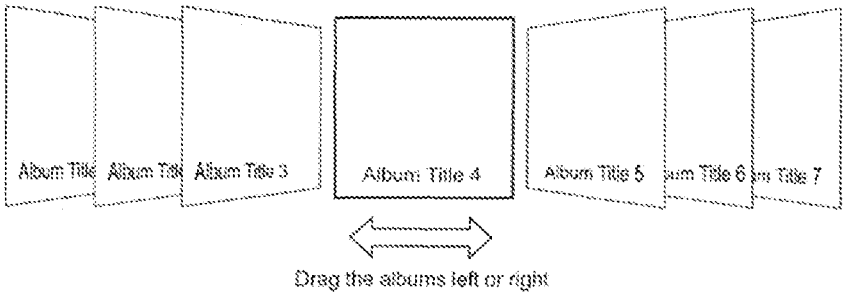


Fig. 6



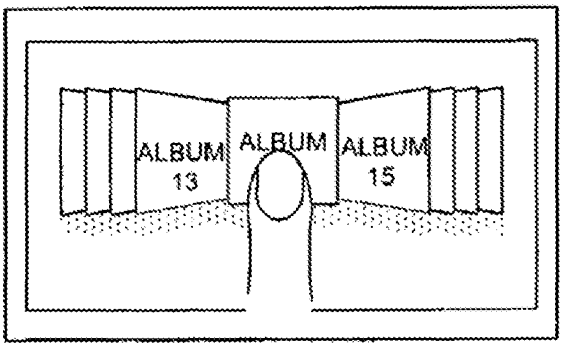


FIG. 23D

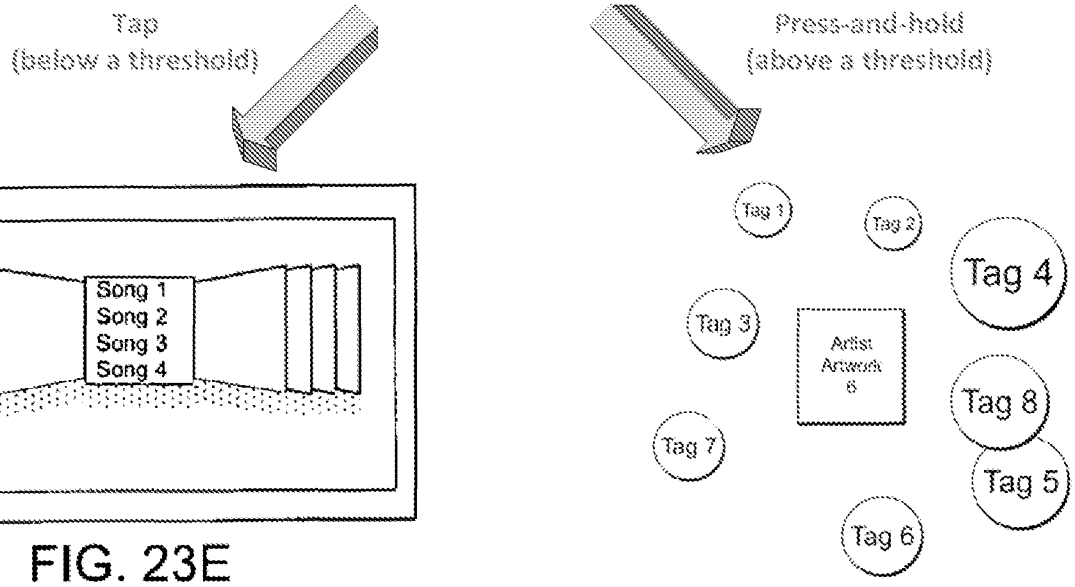


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

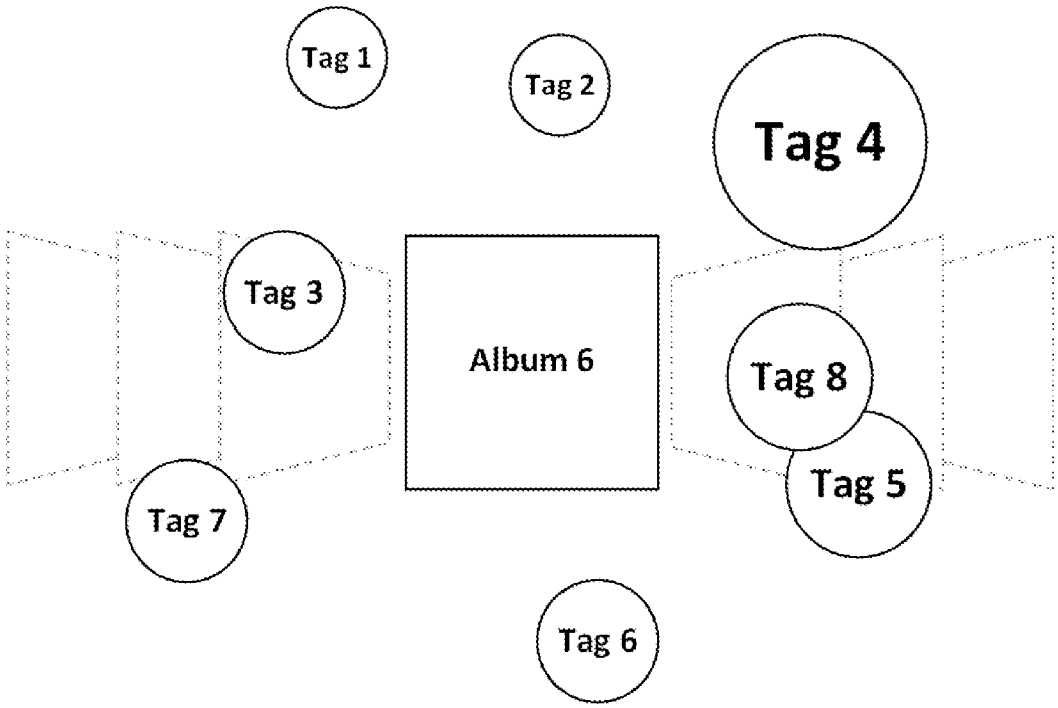
Based on the teachings of Beaumier, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D, [0084], [0127]. For example, "descriptive words or 'tags' associated" with the album may be displayed, as shown with respect to FIG. 8a, or an "enlargement of an album jacket to highlight its selection" along with additional information and options related to the album could be displayed, as shown with respect to FIG. 22c. Appx-D, [0084]-[0086], [0127].

A POSITA would have understood and found obvious that the additional information and options related to the album is displayed and the associated transition in the user interface display would have taken place as soon as the press-and-hold gesture exceeded the predefined threshold, even though the user continues to engage the touch screen. Appx-C, ¶69. A POSITA would have recognized, for example, that providing this visual feedback even while the user's finger remains engaged with the touchscreen (and thus the press-and-hold gesture continues) will provide the user helpful visual feedback to know that their press-and-hold gesture has met the predefined threshold and will not be misconstrued as a "tap" by the jukebox. Appx-C, ¶69. Moreover, transitioning the user interface as soon as the press-and-hold gesture exceeded the predefined threshold would have

been one of a limited number of ways of implementing the transition of the user interface display between that shown in FIG. 6 and that shown in FIG. 8a or 22c. Appx-C, ¶69; *see Uber Technologies, Inc. v. X One, Inc.*, 957 F. 3d 1334, 1339-40 (Fed. Cir. 2020). Either a POSITA could have implemented the transition as soon as the press-and-hold gesture exceeded the predefined threshold or only after the user disengages the touch screen and the gesture is complete. Appx-C, ¶69. Accordingly, a POSITA would have at least found obvious that the transition in user interface display between that shown in FIG. 6 and that shown in FIG. 8a or 22c would have ***during detection of at least a portion of the gesture before a completion thereof is detected*** and ***based on a change in a magnitude of the gesture being detected on the touch screen***, as recited in [2.d].

As part of this the transition in user interface display between that shown in FIG. 6 and that shown in FIG. 8a or 22c, Beaumier describes that other user interface objects are blurred. Appx-C, ¶70. As discussed in Section VII.A.1, *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are

many more features available and those features are more powerful." Appx-D, [0127]. For example, "FIG. 22c shows the enlargement of an album jacket to highlight its selection, and further blurs background UI elements to help bring focus to the selected album, in accordance with certain exemplary embodiments." Appx-D, [0127]. And these focus/highlighting techniques "may be applied to other aspects of the UI experience." Appx-D, [0127]. Thus, for example, a POSITA would have understood and found obvious that when a user presses and holds an album cover and various tags are displayed as shown and described with respect to FIG. 8a, the other albums being displayed (e.g., in FIG. 6 or 7) would have been blurred to help bring focus to the selected album and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶70. An example of this is provided below, where the blurred background albums are shown with dotted lines, consistent with Beaumier's FIG. 22c and its related teachings. *See* Appx-D, [0127]; Appx-C, ¶70.



Alternatively, pressing and holding an album artwork in FIG. 6 or 7 for a period of time greater than a predefined threshold would result in the display shown in FIG. 22c, where an "enlargement of an album jacket to highlight its selection" is displayed along with other information associated with the album (*e.g.*, copyright date and the cost to play a song) and background UI elements (*e.g.*, other album covers) are blurred to help bring focus to the selected album. *See* Appx-D, [0127], Claim 15; Appx-C, ¶71.

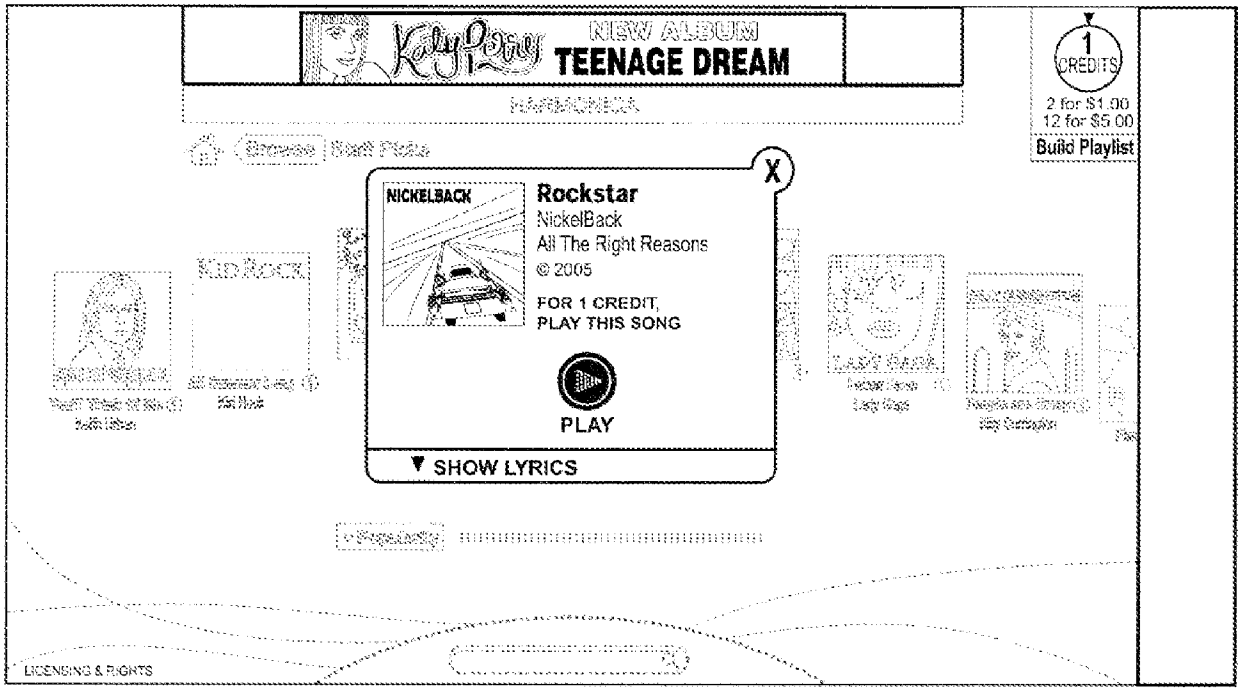


Fig. 22c

Appx-D, FIG. 22c

In either case, a POSITA would at least found obvious that ***during detection of at least a portion of the gesture*** (*e.g.*, a press-and-hold gesture) ***before a completion thereof is detected, blur, based on a change in a magnitude of the gesture being detected on the touch screen*** (*e.g.*, the user pressing and holding the album artwork "for a period of time greater than a predefined threshold"), ***at least a portion of the at least one other object*** (*e.g.*, the other albums that were not selected by the user), as recited in [2.d]. Appx-C, ¶72.

5. Claim 101 Analysis

Beaumier and Chaudhri render obvious claim 101 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶73-78.

[101] The apparatus of claim 2, wherein the apparatus is configured such that, when the magnitude, including a duration magnitude, of the gesture detected on the touch screen is detected to increase above a duration threshold, a menu is displayed with at least one option.

The Beaumier-Chaudhri combination renders obvious Claim [101].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available albums as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an album of interest. Appx-C, ¶74. An example of this process is illustrated below. Appx-C, ¶74.

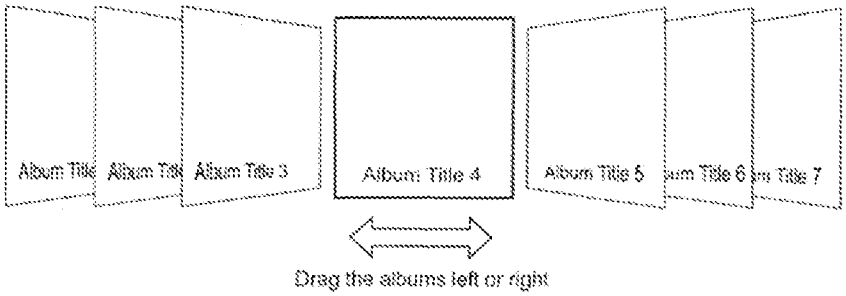


Fig. 6

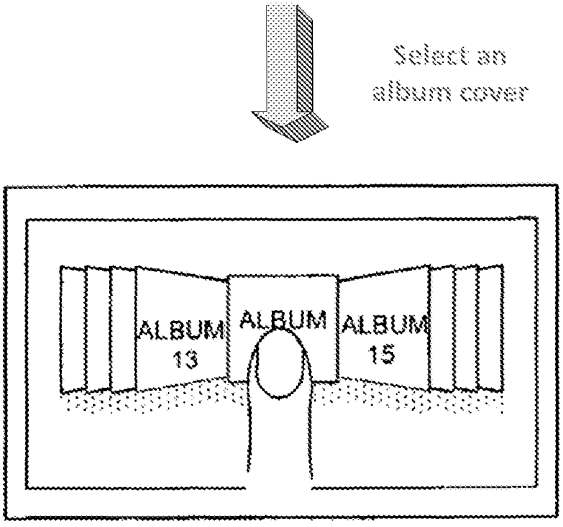


FIG. 23D

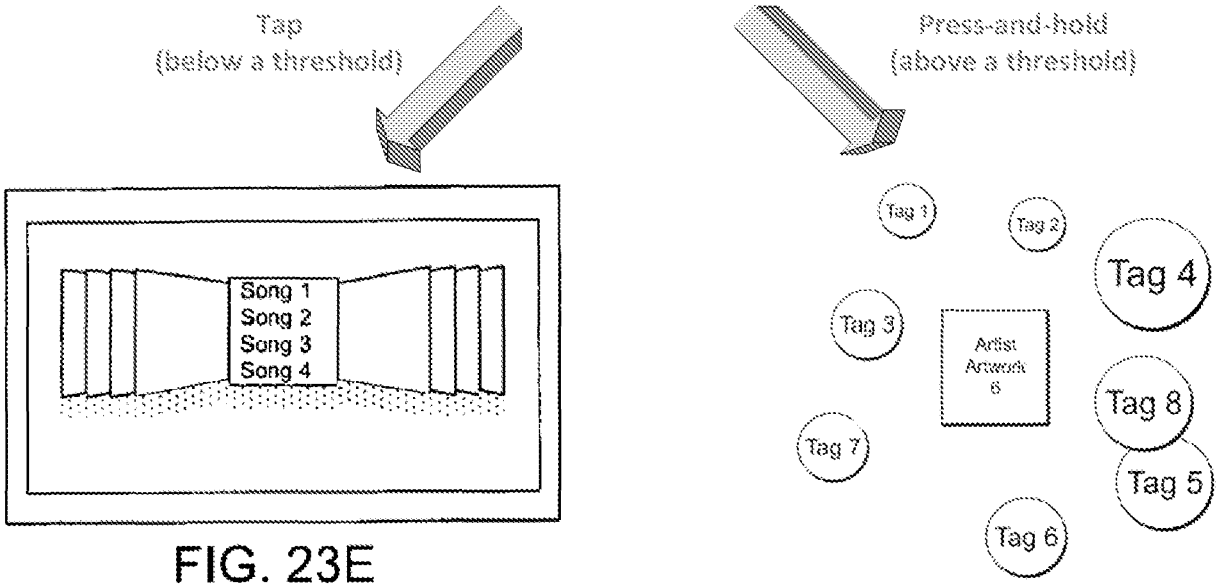


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Based on the teachings of Beaumier, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D, [0084], [0127]. For example, "descriptive words or 'tags' associated" with the album may be displayed, as shown with respect to FIG. 8a, or an "enlargement of an album jacket to highlight its selection" along with additional information and options related to the album could be displayed, as shown with respect to FIG. 22c. Appx-D, [0084]-[0086], [0127].

In the case of FIG. 8a, Beaumier's tags are a form of menu. Appx-C, ¶76. In the context of computers, a menu is "a list of available options, especially on a displayed screen." Appx-M, 3; Appx-C, ¶76. This is consistent with the way in which the term "menu" is used in the context of the '754 Patent. Appx-A, 31:46-49, 33:34-37, 35:20-23, 55:57-61 (describing various menus that are lists of operations from which a user may select); Appx-C, ¶76. Beaumier describes that "[c]licking on one floating object may in certain exemplary embodiments display more music objects sharing the same tag." Appx-D, [0086]. "For example, clicking on tag 3 in FIG. 8a may present a collection of artists filtered by tag 3 using a user interface depicted in FIG. 6." Appx-D, [0086]. Thus, the tags shown in FIG. 8a are a list from which a user can select the operation (*e.g.*, presenting a

collection of artists filtered by the tag) the computer would perform, and are therefore collective a "menu," as that term would have been understood by a POSITA and is used in the '754 Patent. Appx-C, ¶76. Furthermore, while Beaumier illustrates these tags as several discrete circles, a POSITA would have at least found it obvious that these and other options associated with the album could alternatively be displayed in a sequential list of options or any other suitable menu format, as this would have constituted the simple rearrangement of the parts shown in FIG. 8a and an obvious aesthetic design choice. *See, e.g.*, Appx-E, [0103] (describing that list menus of text and image browsing menus may be used interchangeably and alternatively), [0105] (describing that list menus of text and image browsing menus may be used together with one another), [0233] (showing a transition between a vertical text-based list menu and a horizontal image-based browser menu); Appx-K, FIG. 14, [0369] (describing the opening of a menu of options based on a tap gesture), [0581] (describing the opening of a menu of "additional" options based on tapping an icon); Appx-C, ¶76; *see* MPEP §§ 2144.04(I), 2144.04(V)(C).

In the case of FIG. 22c, the pop-up screen is a type of menu. Appx-C, ¶77. Beaumier illustrates that, in addition to an enlargement of the album jacket, the pop-up screen displayed as a result of a user selection includes a "play" option and a "show lyrics" option, as annotated below. *See* Appx-D, FIG. 22c, [0127]; Appx-

C, ¶77. In other words, the pop-up screen illustrated in FIG. 22c includes a list of options from which a user can select the operation the computer is to perform (*e.g.*, play the album or display the lyrics of the album). Appx-C, ¶77. And while Beaumier illustrates these options as buttons in the pop-up screen, a POSITA would have at least found it obvious that these and other options associated with the album could alternatively be displayed in a sequential list of options or any other suitable format, as this would have constituted the simple rearrangement of the parts shown in FIG. 22c. *See, e.g.*, Appx-E, [0103] (describing that list menus of text and image browsing menus may be used interchangeably and alternatively), [0105] (describing that list menus of text and image browsing menus may be used together with one another), [0233] (showing a transition between a vertical text-based list menu and a horizontal image-based browser menu); Appx-K, FIG. 14, [0369] (describing the opening of a menu of options based on a tap gesture), [0581] (describing the opening of a menu of "additional" options based on tapping an icon); Appx-C, ¶77; *see* MPEP § 2144.04(V)(C).

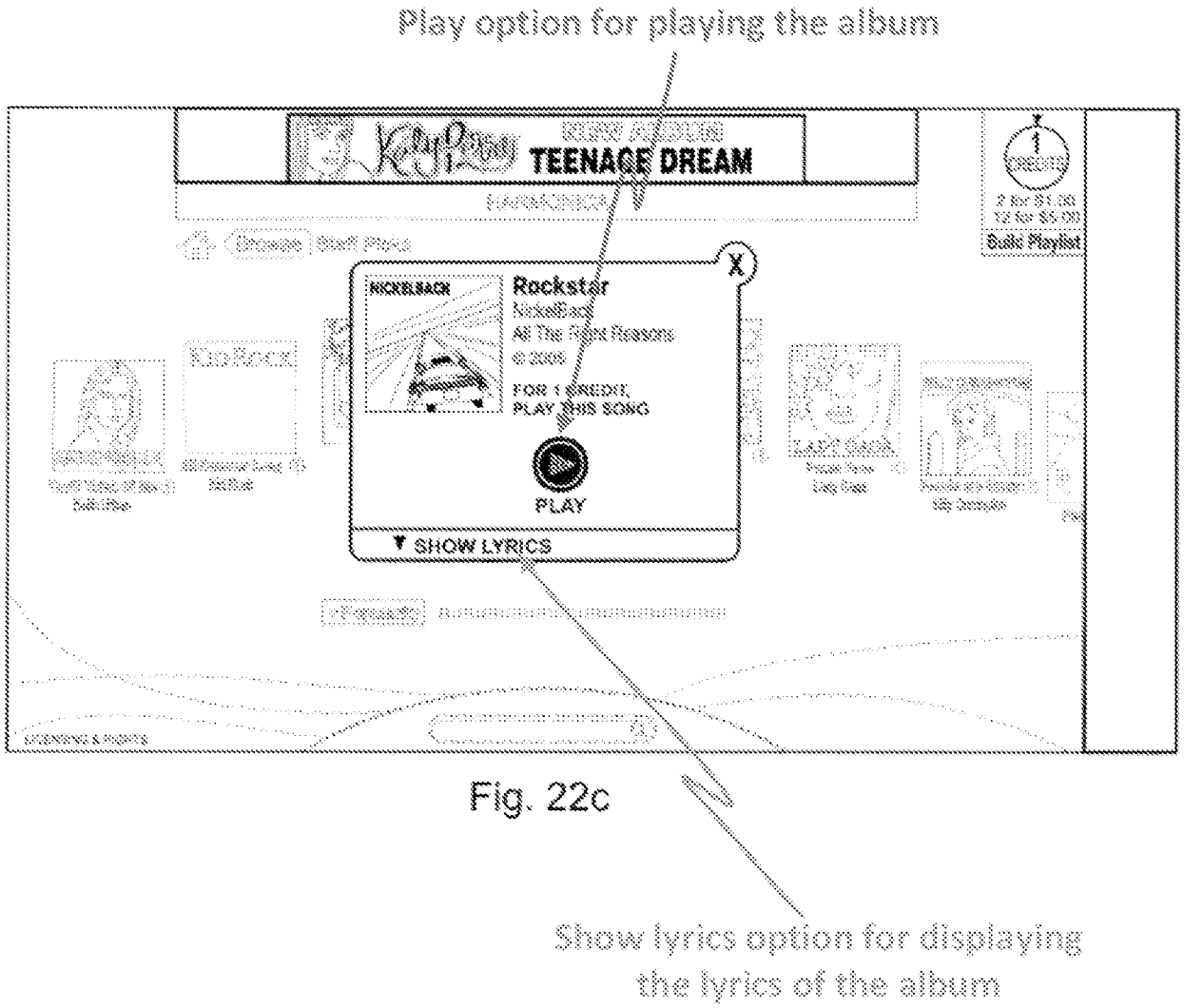


Fig. 22c

Appx-D, FIG. 22c (Annotated)

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, when the magnitude, including a duration magnitude, of the gesture detected on the touch screen is detected to increase above a duration threshold*** (*e.g.*, the user performs a press and hold gesture on an album "for a period of time greater than a predefined threshold"), ***a menu is displayed with at least one option***

(*e.g.*, the tags of FIG. 8a or the options associated with the pop-up screen shown in FIG. 22c), as recited in [101]. Appx-C, ¶78.

6. Claim 108 Analysis

Beaumier and Chaudhri render obvious claim 108 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶79-81.

[108] The apparatus of claim 101, wherein the apparatus is configured such that, in response to a detection of a touch on the at least one option of the menu, the object is opened for accessing information associated with the object.

The Beaumier-Chaudhri combination renders obvious Claim [108].

For example, with respect to the pop-up screen illustrated in FIG. 22c, a POSITA would have understood and found obvious that a touch on the play option would have resulted in the playback of the album (*e.g.*, playing the sequence of songs on the album starting at the first track). *See* Appx-E, [0122] ("selecting an album may initiate a playing sequence starting at the first track of the album"); Appx-C, ¶80. In this regard, the file or files of the album are opened such that information associated with the album (i.e., the songs) are accessed. Appx-C, ¶80.

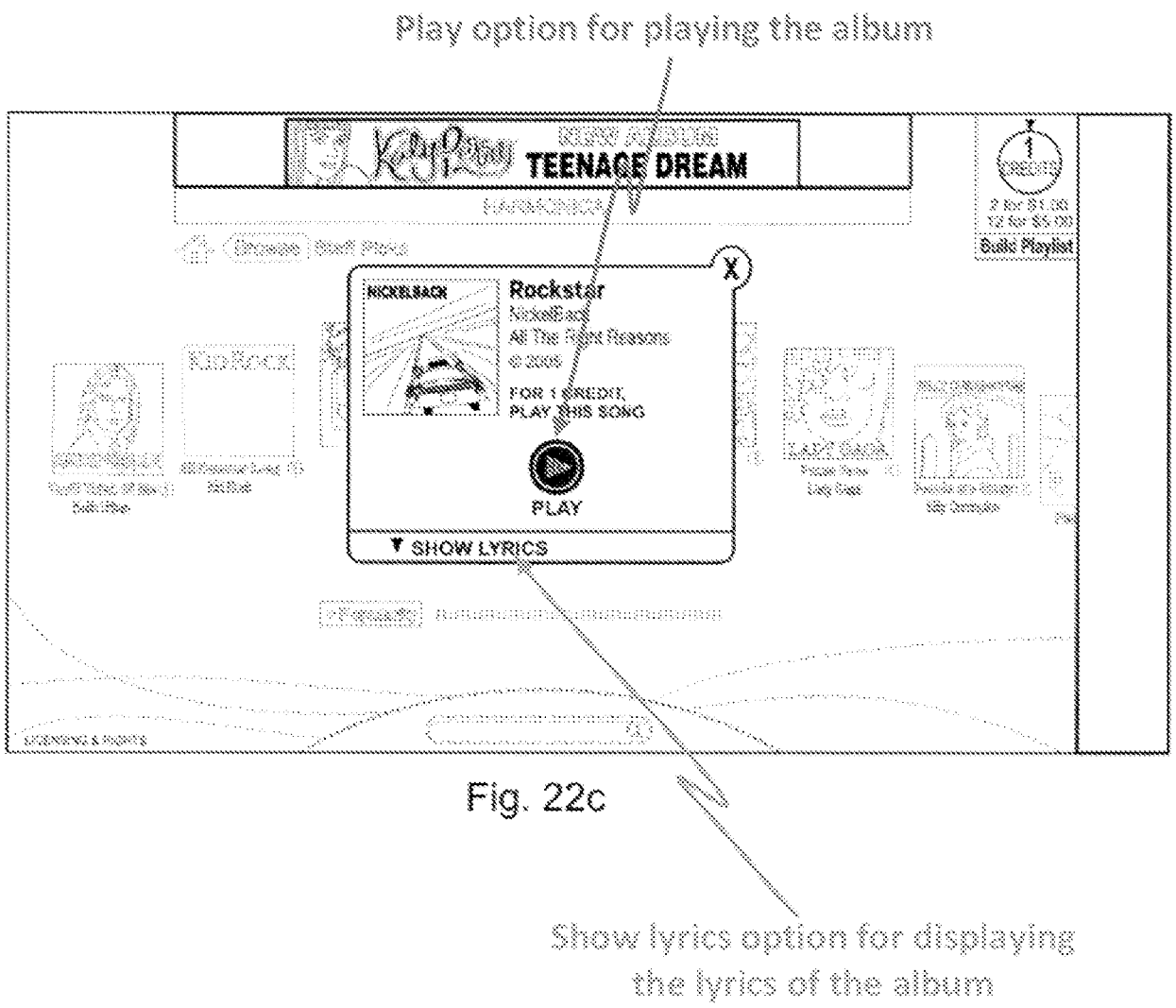


Fig. 22c

Appx-D, FIG. 22c (Annotated)

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, in response to a detection of a touch on the at least one option of the menu, the object is opened for accessing information associated with the object***, as recited in [108]. Appx-C, ¶81.

7. Claim 109 Analysis

Beaumier and Chaudhri render obvious claim 109 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶82-86.

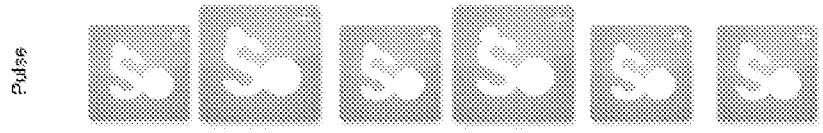
[109] The apparatus of claim 101, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, the object is pulsed before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Claim [109].

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

"Pulsing" objects (*e.g.*, making them larger and smaller) was a well-known method for focusing a user's attention of the relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶84. As discussed above, Beaumier teaches the use of changes in size of an object (*e.g.*, "enlarging") to focus a user's attention. Appx-D, [0127]. And similar references refer to "pulsing" user interface objects to

help guide a user's attention. Appx-C, ¶84. For example, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri) describes visual cues being utilized to "provide hints or reminders of" gestures to activate functions, and that these cues include the objects being "animated," such as "appear[ing] and disappear[ing] in a pulse-like manner." Appx-H, [0054], [0071]-[0072], [0079]-[0088]; Appx-C, ¶84. Similarly, Harrison describes that "visual properties can also be modified along other dimensions to convey extra information" and describes that one of the possible animations for conveying this information is a "pulse" in which the size of the image grows and shrinks continuously. *See* Appx-W, 1, 6.



Appx-W, FIG. 5

A POSITA would have recognized and found obvious that animating the visual cues in the manner described by Chaudhri '842 would have helped provide visual feedback to the user to indicate satisfaction of gesture to complete a particular type of user input. *See* Appx-H, [0071]-[0072], [0079]-[0084]; Appx-C, ¶85. In other words, the visual cues are used as an "indication of progress of the gesture" to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS.

6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶85.

Accordingly, a POSITA would have at found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, the object is pulsed before the menu is displayed***, as recited in [109]. Appx-C, ¶86.

8. Claim 110 Analysis

Beaumier and Chaudhri render obvious claim 110 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶87-91.

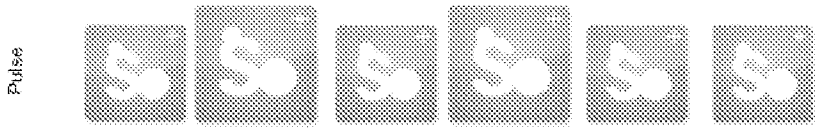
[110] The apparatus of claim 101, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is pulsed before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Claim [110].

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are

many more features available and those features are more powerful." Appx-D, [0127].

"Pulsing" objects (*e.g.*, making them larger and smaller) was a well-known method for focusing a user's attention of the relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶89. As discussed above, Beaumier teaches the use of changes in size of an object (*e.g.*, "enlarging") to focus a user's attention. Appx-D, [0127]. And similar references refer to "pulsing" user interface objects to help guide a user's attention. Appx-C, ¶89. For example, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri) describes visual cues being utilized to "provide hints or reminders of" gestures to activate functions, and that these cues include the objects being "animated," such as "appear[ing] and disappear[ing] in a pulse-like manner." Appx-H, [0054], [0071]-[0072], [0079]-[0088]; Appx-C, ¶89. Similarly, Harrison describes that "visual properties can also be modified along other dimensions to convey extra information" and describes that one of the possible animations for conveying this information is a "pulse" in which the size of the image grows and shrinks continuously. *See* Appx-W, 1, 6.



Appx-W, FIG. 5

A POSITA would have recognized and found obvious that animating the visual cues in the manner described by Chaudhri '842 would have helped provide visual feedback to the user to indicate satisfaction of gesture to complete a particular type of user input. *See* Appx-H, [0071]-[0072], [0079]-[0084]; Appx-C, ¶90. In other words, the visual cues are used as an "indication of progress of the gesture" to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶90. Based on these teachings, a POSITA would have at least found it obvious to pulse the size of the object to draw a user's attention to the object and to provide the user sensory feedback that their gesture is transitioning a user interface between different states. Appx-C, ¶90.

Accordingly, a POSITA would have at found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is pulsed before the menu is displayed***, as recited in [110]. Appx-C, ¶91.

9. Claim 111 Analysis

Beaumier and Chaudhri render obvious claim 111 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶92-96.

[111] The apparatus of claim 101, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a border is displayed around the object before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Claim [111].

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

Displaying a border around the object (*e.g.*, the album being selected by the user) was a well-known method for focusing a user's attention on relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶94. "For instance, FIG. 22 a uses a colorized 'blob' to highlight the center selection, whereas other non-patron selectable elements may be blurred, in accordance with certain exemplary embodiments." Appx-D, [0127]. A POSITA would have understood and found obvious that a "colorized blob" around the user's selection is a type of "border." Appx-C, ¶94. Indeed, it was well known to use bold or highlighted borders to

indicate the selection of a user interface element. *See, e.g.*, Appx-I, [0300] (describing that "a bold or otherwise visually highlighted border" is used to identify that a user interface element "is presently selected"); Appx-C, ¶94. An example of the "colorized blob" described by Beaumier is depicted below. Appx-C, ¶94.

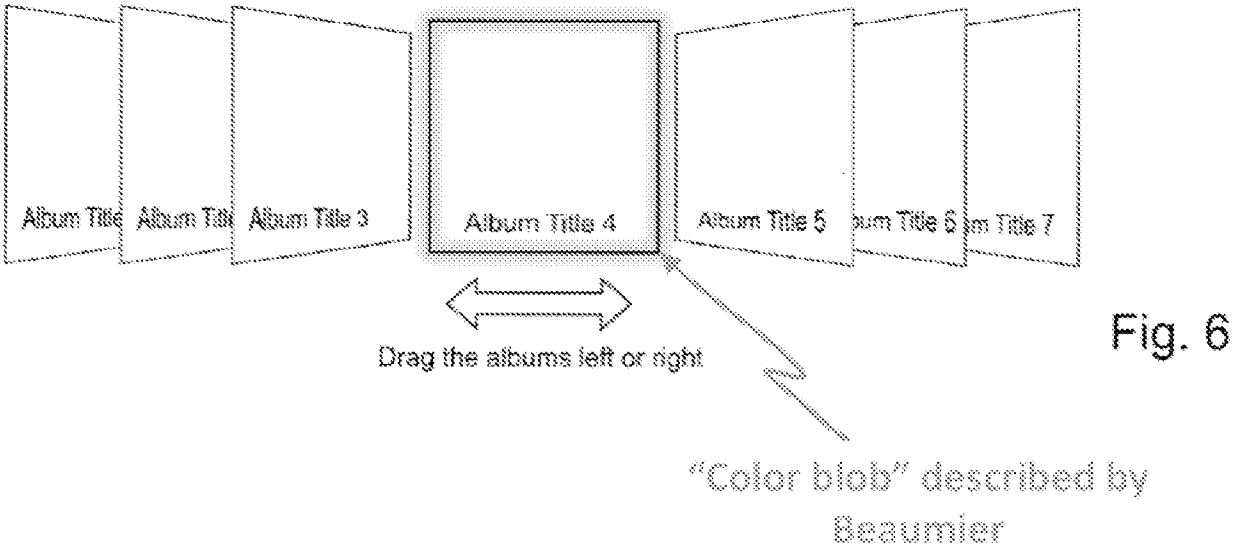


Fig. 6

Appx-D, FIG. 6 (Modified and Annotated)

Further, a POSITA would have at least found obvious that displaying the colorized blob (*i.e.*, border) would have been ***based on the change in the magnitude of the gesture being detected on the touch screen*** and ***before the menu is displayed***, as this is one of a limited number of ways to display the colorized blob in response to the user's selection. Appx-C, ¶95; *see Uber Technologies, Inc. v. X One, Inc.*, 957 F. 3d 1334, 1339-40 (Fed. Cir. 2020). Indeed, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri)

describes using visual cues, such as color, to indicate progress to a user to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶95.

Accordingly, a POSITA would have at least found it obvious and been specifically motivated to configure the apparatus of the Beaumier-Chaudhri combination ***such that, based on the change in the magnitude of the gesture being detected on the touch screen, a border is displayed around the object before the menu is displayed***, as recited in [111]. Appx-C, ¶96.

10. Claim 112 Analysis

Beaumier and Chaudhri render obvious claim 112 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶97-101.

[112] The apparatus of claim 101, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, at least one aspect of a border of the object is altered before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Claim [112].

As discussed with respect to Claim [111], *supra*, displaying a border around the object (*e.g.*, the album being selected by the user) was a well-known method for focusing a user's attention on relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶98. "For instance, FIG. 22 a uses a colorized 'blob' to highlight the center selection, whereas other non-patron selectable elements may

be blurred, in accordance with certain exemplary embodiments." Appx-D, [0127]. A POSITA would have understood and found obvious that a "colorized blob" around the user's selection is a type of "border." Appx-C, ¶98. However, as shown in FIGS. 6 and 7, the album objects described by Beaumier already have a boarder, as illustrated below. Appx-C, ¶98.

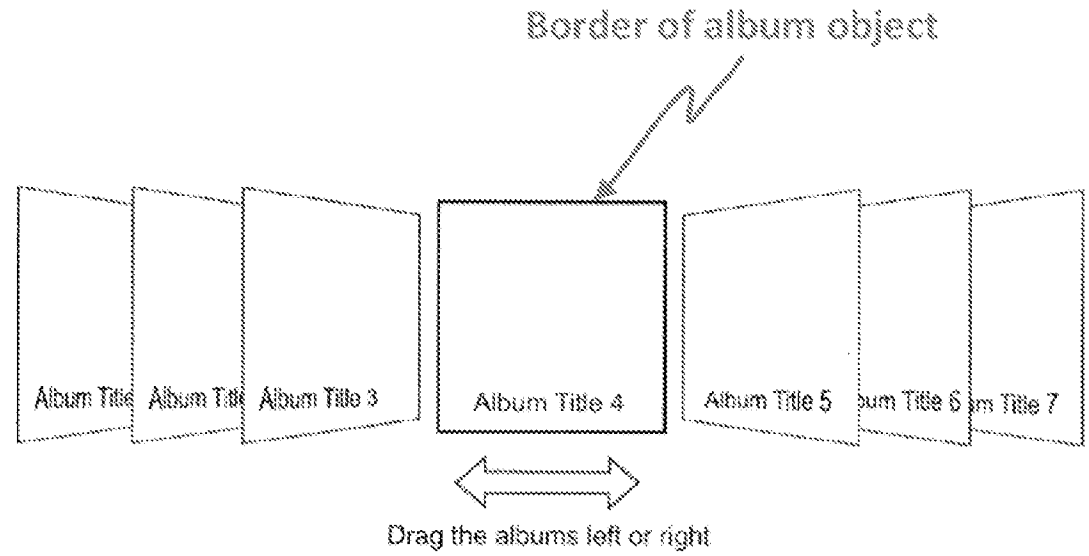


Fig. 6

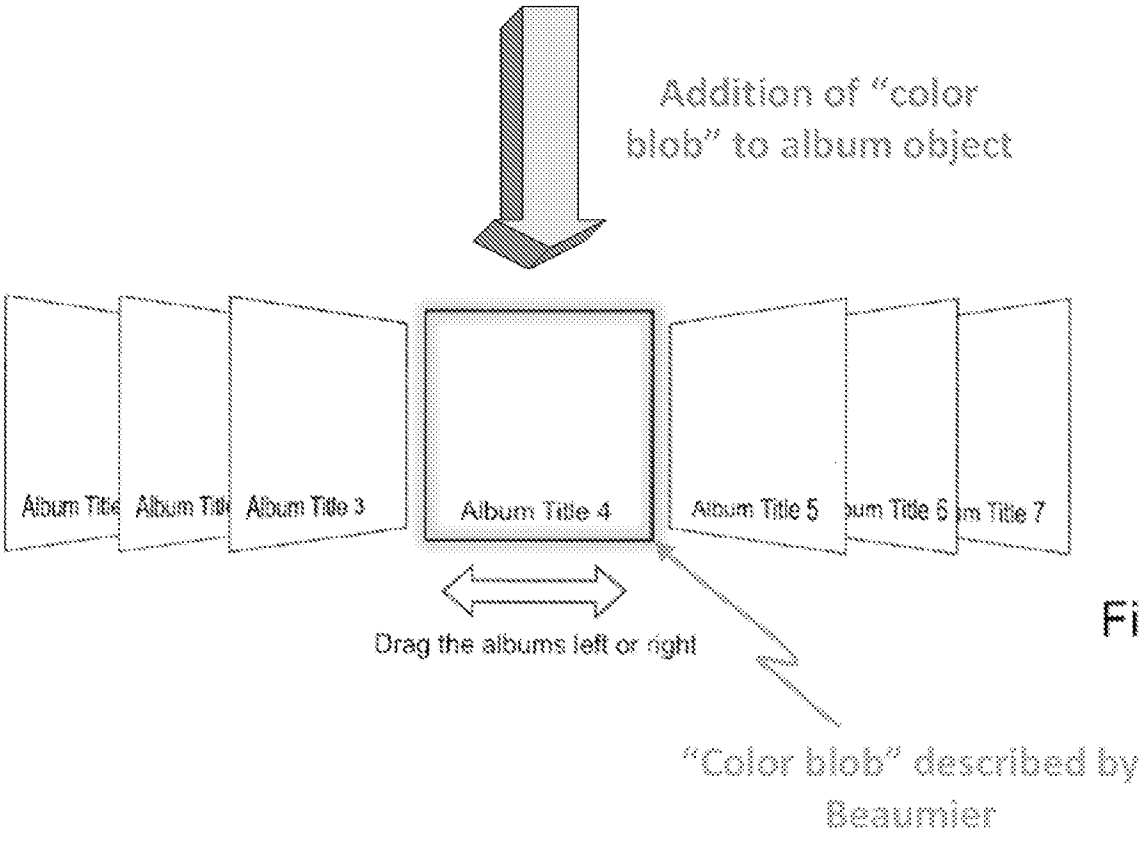


Fig. 6

Appx-D, FIG. 6 (Modified and Annotated)

Indeed, it was well known to bolden or highlight borders to indicate the selection of a user interface element. *See, e.g.*, Appx-I, [0300] (describing that "a

bold or otherwise visually highlighted border" is used to identify that a user interface element "is presently selected"); Appx-C, ¶99. Thus, based on the teachings of a Beaumier, a POSITA would have understood and found obvious that the colorized blob described by Beaumier and produced as part of the selection gesture would have been an alteration to the existing border of the album object. Appx-C, ¶99.

Further, as discussed with respect to Claim [111], *supra*, a POSITA would have at least found obvious that displaying the colorized blob (*i.e.*, border) would have been ***based on the change in the magnitude of the gesture being detected on the touch screen*** and ***before the menu is displayed***, as this is one of a limited number of ways to display the colorized blob in response to the user's selection. Appx-C, ¶100; *see Uber Technologies, Inc. v. X One, Inc.*, 957 F. 3d 1334, 1339-40 (Fed. Cir. 2020). Indeed, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri) describes using visual cues, such as color, to indicate progress to a user to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶100.

Accordingly, a POSITA would have at least found it obvious and been specifically motivated to configure the apparatus of the Beaumier-Chaudhri

combination ***such that, based on the change in the magnitude of the gesture being detected on the touch screen, at least one aspect of a border of the object is altered before the menu is displayed***, as recited in [112]. Appx-C, ¶101.

11. Claim 113 Analysis

Beaumier and Chaudhri render obvious claim 113 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶102-104.

[113] The apparatus of claim 101, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is increased before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Element [113].

As discussed with respect to Claim [110], *supra*, a POSITA would have found it obvious that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is pulsed before the menu is displayed. Appx-C, ¶103. Part of pulsing the size of the object includes increasing a size of the object. *See* Appx-W, FIG. 5 (showing the size of an icon increasing and decreasing); Appx-C, ¶103. In fact, Beaumier teaches the use of changes in size of an object (*e.g.*, "enlarging") to focus a user's attention. Appx-D, [0127].

Accordingly, for reasons similar to those discussed with respect to Claim [110], *supra*, a POSITA would have at found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a***

size of the object is increased before the menu is displayed, as recited in [113]. Appx-C, ¶104.

12. Claim 114 Analysis

Beaumier and Chaudhri render obvious claim 114 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶105-107.

[114] The apparatus of claim 101, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is decreased before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Element [114].

As discussed with respect to Claim [110], *supra*, a POSITA would have found it obvious that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is pulsed before the menu is displayed. Appx-C, ¶106. Part of pulsing the size of the object includes decreasing a size of the object. *See* Appx-W, FIG. 5 (showing the size of an icon increasing and decreasing); Appx-C, ¶106. In fact, Beaumier teaches the use of changes in size of an object (*e.g.*, "enlarging") to focus a user's attention. Appx-D, [0127].

Accordingly, for reasons similar to those discussed with respect to Claim [110], *supra*, a POSITA would have at found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a***

size of the object is decreased before the menu is displayed, as recited in [114]. Appx-C, ¶107.

13. Claim 115 Analysis

Beaumier and Chaudhri render obvious claim 115 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶108-.

[115] The apparatus of claim 101, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is increased and decreased before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Element [115].

As discussed with respect to Claim [110], *supra*, a POSITA would have found it obvious that, based on the change in the magnitude of the gesture being detected on the touch screen, a size of the object is pulsed before the menu is displayed. Appx-C, ¶109. Part of pulsing the size of the object includes both increasing and descreasing a size of the object. Appx-C, ¶109. In fact, Beaumier teaches the use of changes in size of an object (*e.g.*, "enlarging") to focus a user's attention. Appx-D, [0127].

Accordingly, for reasons similar to those discussed with respect to Claim [110], *supra*, a POSITA would have at found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a***

size of the object is increased and decreased before the menu is displayed, as recited in [115]. Appx-C, ¶110.

14. Claim 118 Analysis

Beaumier and Chaudhri render obvious claim 118 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶111-113.

[118] The apparatus of claim 101, wherein the apparatus is configured such that the menu is accompanied by a window including information associated with the object.

The Beaumier-Chaudhri combination renders obvious Element [118].

As discussed with respect to Claim [101], *supra*, in the case of FIG. 22c, the pop-up screen is a type of menu. Appx-C, ¶112. In addition to the selection menu options discussed with respect to Claim [101] (*i.e.*, playing the album and viewing the lyrics), the pop-up screen illustrated in FIG. 22c also includes other information associated with the object. *See* Appx-D, FIG. 22c; Appx-C, ¶112. For example, as annotated below, the pop-up screen includes an enlargement of an album jacket and the copyright date associated with the album. *See* Appx-D, FIG. 22c, [0127]; Appx-C, ¶112.

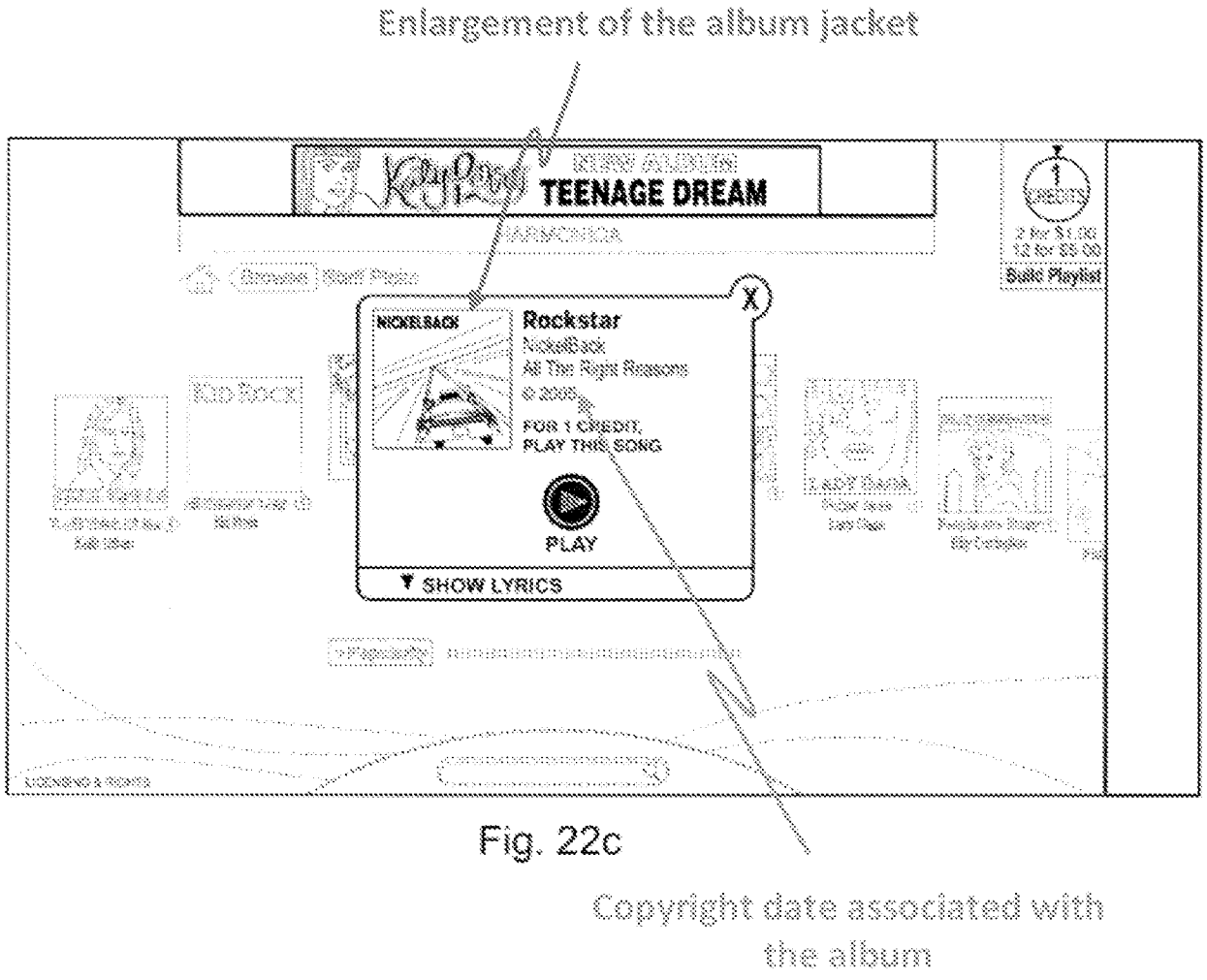


Fig. 22c

Appx-D, FIG. 22c (Annotated)

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the menu is accompanied by a window including information associated with the object***, as recited in [118]. Appx-C, ¶113.

15. Claim 119 Analysis

Beaumier and Chaudhri render obvious claim 119 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶114-118.

[119] The apparatus of claim 118, wherein the apparatus is configured such that the window is sharpened and magnified when displayed.

The Beaumier-Chaudhri combination renders obvious Claim [119].

The '754 Patent does not use the word "sharp" or "sharpened" outside of the claims. Appx-C, ¶115. However, a POSITA would have understood the word "sharp" in a graphical context to be a subjective perception that is related to edge contrast. Appx-J, 1; Appx-C, ¶115.

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

Beaumier describes that these browsing displays are designed "to simulate a more three-dimensional look-and-feel, and provide more of a sense of immersion when interacting with the user interface." Appx-D, [0075]. This interactive and immersive experience is facilitated by "the displayed items (e.g., album jackets or other identifiers) being updated as the user interacts with the display," and may

additionally include the application of "size, color, blurriness, and/or other effects." Appx-D, [0077]. Based on these teachings, a POSITA would have understood and found obvious that these various effects would have been applied dynamically to better create the "immersive" experience sought by Beaumier. Appx-C, ¶117. Indeed, as discussed with respect to Claims [109]-[112], *supra*, it was well known to dynamically apply the visual effects described by Beaumier to user interface objects to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088] (describing the transition of the "optical intensity" of user interface objects, such as the "color, hue, color saturation, brightness, contrast, transparency, and any combination thereof" to provide an "indication of progress of the gesture" to help provide the user sensory feedback that their ongoing gesture is transitioning a user interface between different states); Appx-C, ¶117. Thus, a POSITA would have at least found it obvious to utilize the "fading" and "enlarging" described by Beaumier dynamically as the jukebox user interface transitions between states (*e.g.*, between the state shown in Beaumier's FIGS. 6 and 7 and the states shown in Beaumier's FIGS. 8a or 22c). *See* Appx-H, [0079]-[0088]; Appx-C, ¶117.

Based on these teachings, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the window*** (*e.g.*, the pop-up screen and its contents, including the menu of options, displayed as a result of a press and hold of an album cover, as discussed with respect to Claim [101], *supra*) ***is sharpened and magnified when displayed*** (*e.g.*, the pop-up screen and its contents, including the menu of options, are "faded in" (and thus sharpened) and "enlarged" (and thus magnified) as part of the press and hold gesture in order to provide a more "immersive" experience and help provide the user visual cues as to the completion of their gesture to transition between the user interface states), as recited in [119]. Appx-C, ¶118.

16. Claim 120 Analysis

Beaumier and Chaudhri render obvious claim 120 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶119-122.

[120] The apparatus of claim 101, wherein the apparatus is configured such that the menu is sharpened and magnified when displayed.

The Beaumier-Chaudhri combination renders obvious Element [120].

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements,

e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

Beaumier describes that these browsing displays are designed "to simulate a more three-dimensional look-and-feel, and provide more of a sense of immersion when interacting with the user interface." Appx-D, [0075]. This interactive and immersive experience is facilitated by "the displayed items (e.g., album jackets or other identifiers) being updated as the user interacts with the display," and may additionally include the application of "size, color, blurriness, and/or other effects." Appx-D, [0077]. Based on these teachings, a POSITA would have understood and found obvious that these various effects would have been applied dynamically to better create the "immersive" experience sought by Beaumier. Appx-C, ¶121. Indeed, as discussed with respect to Claims [109]-[112], *supra*, it was well known to dynamically apply the visual effects described by Beaumier to user interface objects to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088] (describing the transition of the "optical intensity" of user

interface objects, such as the "color, hue, color saturation, brightness, contrast, transparency, and any combination thereof" to provide an "indication of progress of the gesture" to help provide the user sensory feedback that their ongoing gesture is transitioning a user interface between different states); Appx-C, ¶121. Thus, a POSITA would have at least found it obvious to utilize the "fading" and "enlarging" described by Beaumier dynamically as the jukebox user interface transitions between states (*e.g.*, between the state shown in Beaumier's FIGS. 6 and 7 and the states shown in Beaumier's FIGS. 8a or 22c). *See* Appx-H, [0079]-[0088]; Appx-C, ¶121.

Based on these teachings, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the menu*** (*e.g.*, the pop-up screen and its contents, including the menu of options, displayed as a result of a press and hold of an album cover, as discussed with respect to Claim [101], *supra*) ***is sharpened and magnified when displayed*** (*e.g.*, the pop-up screen and its contents, including the menu of options, are "faded in" (and thus sharpened) and "enlarged" (and thus magnified) as part of the press and hold gesture in order to provide a more "immersive" experience and help provide the user visual cues as to the completion of their gesture to transition between the user interface states), as recited in [120]. Appx-C, ¶122.

17. Claim 123 Analysis

Beaumier and Chaudhri render obvious claim 123 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶123-135.

[123.a] The apparatus of claim 2, wherein the apparatus is configured such that: the gesture includes a press or tap gesture;

The Beaumier-Chaudhri combination renders obvious Element [123.a].

As discussed with respect to Elements [2.c] and [2.d], *supra*, a POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, a user touching his/her finger down on the touch screen on an album, and either lifting the finger off the touch screen under a time threshold (*i.e.*, a tap) or holding it on the screen over a time threshold (*i.e.*, a press-and-hold) are each gestures on the touchscreen. For the reasons described with respect to Elements [2.c] and [2.d], *supra*, a POSITA would have understood that each of these ***includes a press or tap gesture***, as recited in [123.a]. Appx-C, ¶124.

[123.b] the at least one other object is displayed via an interface associated with a particular application;

The Beaumier-Chaudhri combination renders obvious Element [123.b].

Beaumier describes numerous different "content sources" that may be displayed in the object browser illustrated, for example, in FIG. 6. Appx-C, ¶126. For example, Beaumier describes that "[o]bjects generally refer to songs, artists, playlists, games, or media sources," but goes on to explain that "playlists, favorite games, interrupted games, chat sessions, records of media consumption, high

scores, etc., may become available as new possible collections to be presented as objects in the object viewer." Appx-D, [0059]. Beaumier also describes that an object may be "a link to the artist's homepage, Facebook or other social networking or other site also may be provided." *See* Appx-D, [0114]. A POSITA would have understood and found obvious that these various functionalities would have been associated with a plurality of applications. Appx-C, ¶126. As discussed in Element [2.a], *supra*, Beaumier describes that "the jukebox devices have similar structure and operation described in U.S. Pat. No. 6,308,204" (i.e., Nathan). Appx-D, [0053]. Nathan describes that the jukebox includes a "multitask operating system comprises the essential component for allowing simultaneous execution of multiple code fragments and for managing priorities between the various tasks." Appx-F, 8:22-25. The operating system includes a number of modules that communicate with a number of application programming interfaces. Appx-F, 6:17-38; 8:26-32. "There are as many programming interfaces as there are applications." Appx-F, 8:32-33. In other words, like most computer systems, different tasks and functions are performed by different applications, which are managed by the multitasking operating system. Appx-C, ¶126. However, Beaumier leaves the implementation details of the applications that perform the various described tasks and functions to a POSITA. Appx-C, ¶126. Thus, a POSITA would have naturally turned to other references related to similar tasks

and interfaces to provide examples of implementation details, including, for example, Chaudhri. Appx-C, ¶126.

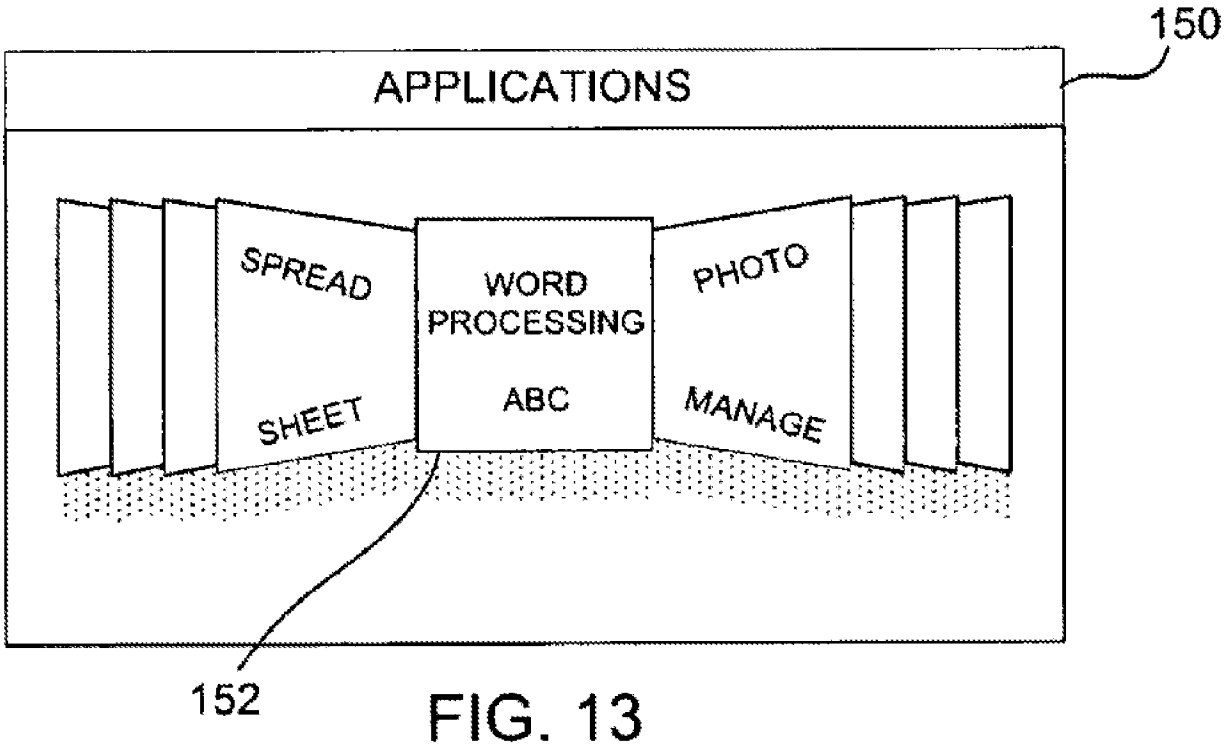


FIG. 13

Appx-E, FIG. 13

Chaudhri describes various applications for carrying out the tasks and functions described by Beaumier, as well as other typical tasks and functions associated with touchscreen electronic devices. Appx-C, ¶127. FIG. 13 of Chaudhri illustrates an image-based browser 150 (nearly identical in form and function to the browsers illustrated in FIGS. 6 of Beaumier) that is "associated with applications." Appx-E, [0143]. Chaudhri describes that "the images 152 are icons that represent applications that can be launched on the electronic device." Appx-E, [0143]. "By way of example, the application may be a photo

management program, a music management program, a video management program, word processing program, spreadsheet program, drawing program, and the like." Appx-E, [0143]. Because Chaudhri describes the image-based browser 150 shown in FIG. 13 as able to launch applications, a POSITA would have at least found it obvious that the image-based browser 150 is an interface for "an application launcher software application, sometimes called a springboard," which was a common application on electronic devices for launching applications. *See, e.g.* Appx-AA, 38:52-58 ("In some embodiments, home screen 708 is displayed by an application launcher software application, sometimes called a springboard"); 42:15-23 ("the application launcher displays a plurality of application icons 5002 that correspond to a plurality of applications," "receives a user-selection of an application icon 5002 (e.g., based on a finger gesture on touchscreen 156), and in response to receiving the user-selection, launches an application corresponding to the selected application icon 5002"); Appx-C, ¶127. A POSITA would have understood that an application launcher application, such as the one shown in Chaudhri's FIG. 13, is an interface that itself includes interfaces (e.g., icons) associated with each of the applications that it is configured to launch. Appx-C, ¶127. In this regard, a POSITA would have understood and found obvious that each of the applications icons is both an interface of the application launcher application, as well as being associated with the application that it represents, not

least because selection of the icon results in the application being launched. Appx-C, ¶127. Accordingly, a POSITA would have understood and found obvious that ***the at least one other object*** (*e.g.*, an unselected application icon object displayed in the image browser illustrated in Chaudhri's FIG. 13) ***is displayed via an interface associated with a particular application*** (*e.g.*, the icon is an interface within the application launcher application and also an interface of the application that the icon itself represents), as recited in [123.b]. Appx-C, ¶127.

[123.c] the at least part of the gesture on the touch screen is detected on the object; and

The Beaumier-Chaudhri combination renders obvious Element [123.c].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available objects/icons displayed within the browser (e.g., albums) as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an object/icon of interest. Appx-C, ¶129. An example of this process is illustrated below. Appx-C, ¶129.

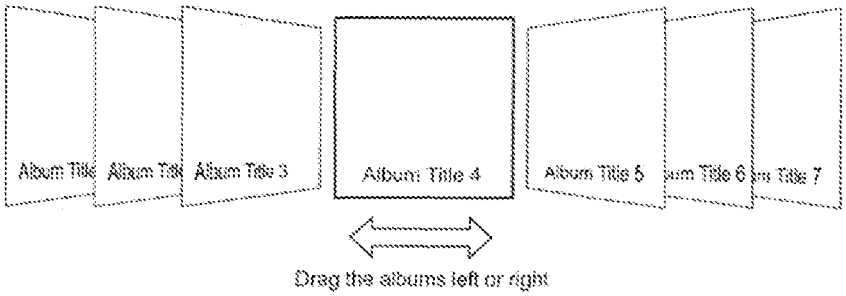


Fig. 6

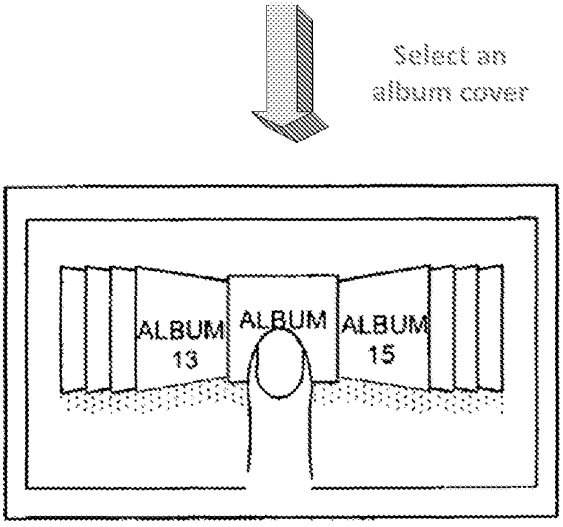


FIG. 23D

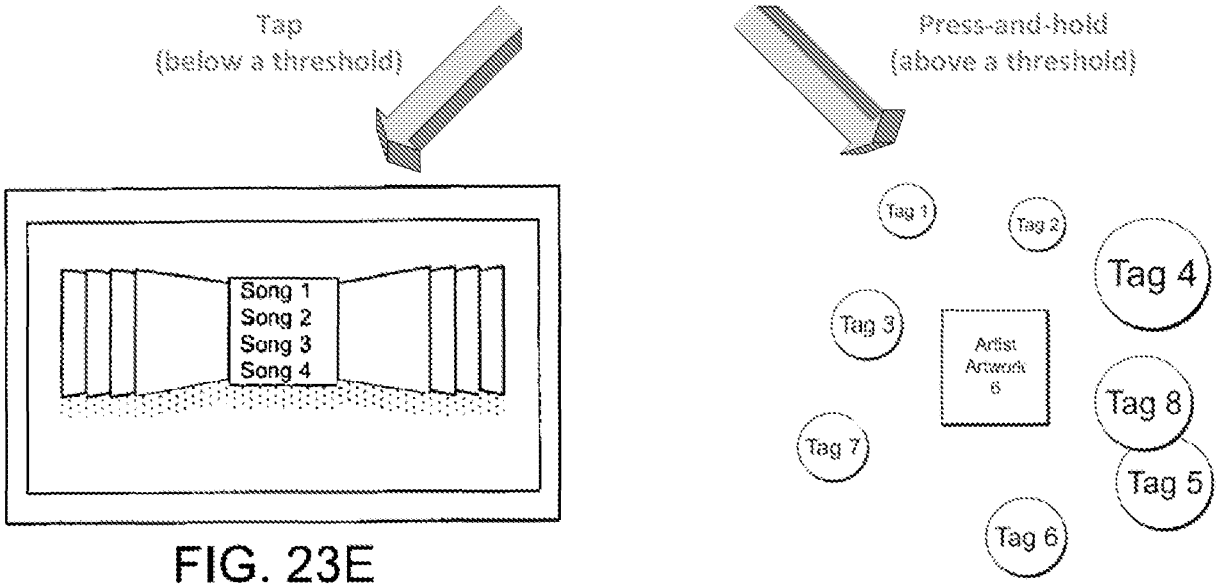


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

A POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, a user touching his/her finger down on the touch screen on an object/icon (e.g., an album), and either lifting the finger off the touch screen under a time threshold (*i.e.*, a tap) or holding it on the screen over a time threshold (*i.e.*, a press-and-hold), are each gestures on the touchscreen. Appx-C, ¶130. Accordingly, a POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, ***the at least part of the gesture on the touch screen is detected on the object*** (*e.g.*, on the album being selected by the user), as recited in [123.c]. Appx-C, ¶130.

[123.d] in response to the completion of the gesture being detected while the magnitude, including a duration magnitude, of the gesture detected on the touch screen is detected to remain below a duration threshold, information associated with the object is opened utilizing another interface associated with the particular application.

The Beaumier-Chaudhri combination renders obvious Element [123.d].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available objects/icons displayed within the browser (e.g., albums) as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an object/icon of interest. Appx-C, ¶132. An example of this process is illustrated below. Appx-C, ¶132.

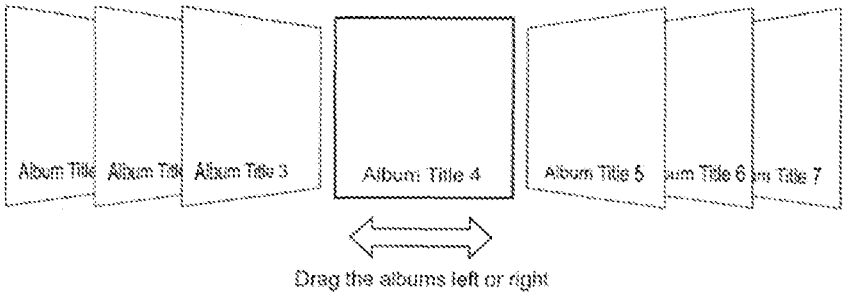


Fig. 6

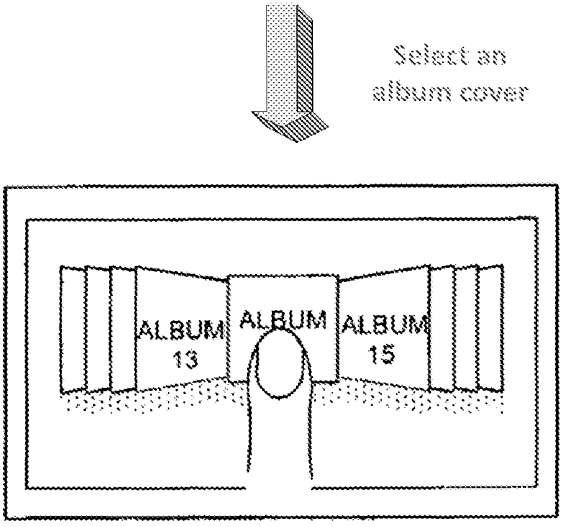


FIG. 23D

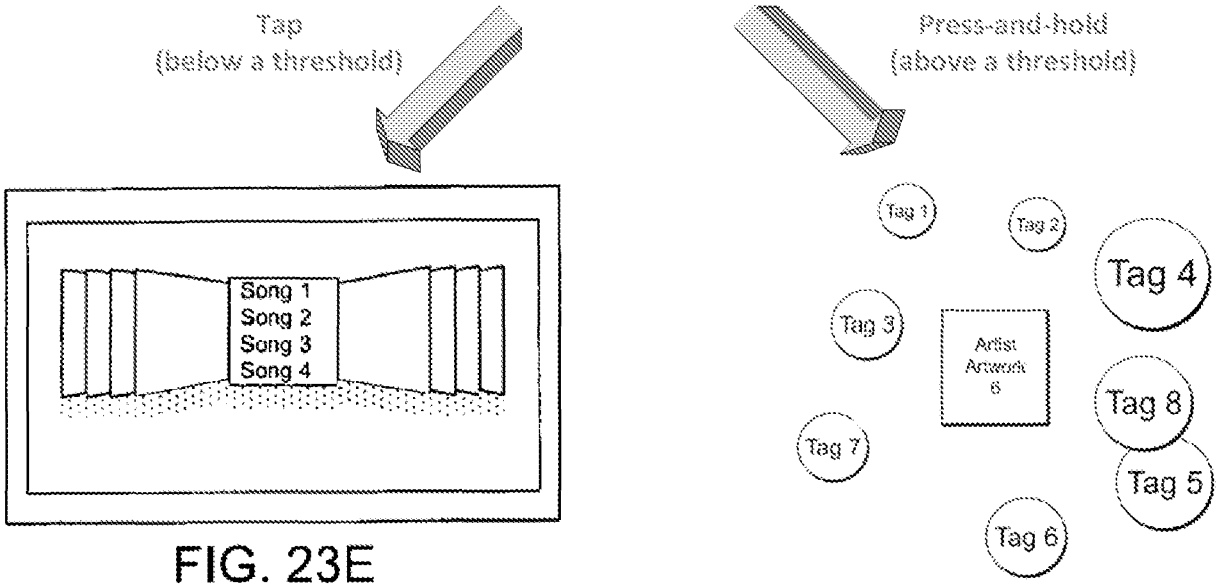


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Based on the teachings of Chaudhri, if "the user taps or presses their finger" on the album cover, the apparatus of the Beaumier-Chaudhri combination would present "a list of songs associated with the album" from the which the user may browse and select a song for addition to the playlist. *See* Appx-E, [0185]-[0203]. As shown in FIG. 23E, the list of songs associated with the album is displayed in place of the album's cover art. *See* Appx-E, FIG. 23E, [0190]; Appx-C, ¶133. Because this is a new display of information within the particular application responsible for the various user interface displays in the Beaumier-Chaudhri combination, the list of songs shown in FIG. 23E is "another interface associated with the particular application," particularly as compared to the previous interface that displayed the album's cover artwork at the same location. *Compare* Appx-E, FIG. 23A *to* FIG. 23E; Appx-C, ¶133. Accordingly, a POSITA would have understood that displaying "a list of songs associated with the album," as described by Chaudhri and illustrated in FIG. 23E, ***is information associated with the object*** (*e.g.*, songs associated with the album that was displayed prior to the user's tap gesture) ***[being] opened utilizing another interface associated with the particular application***, as recited in [123.d]. Appx-C, ¶133.

Further, a POSITA would have understood and found obvious to configure the apparatus of the Beaumier-Chaudhri combination to differentiate between a "tap" gesture described by Chaudhri and a "press-and-hold" gesture described by

Beaumier based on whether the length of time that a user's finger is engaged with the touchscreen is either less than the "predefined threshold" described by Beaumier or greater than the "predefined threshold." *See* Appx-D, [0084]; Appx-E, [0086] (recognizing the difference between a "tap" and a "hold" gesture), [0189]-[0190] (describing a "tap" on an album object); Appx-C, ¶134.

Accordingly, in the Beaumier-Chaudhri combination, it would have at least been obvious that, ***in response to the completion of the gesture being detected while the magnitude, including a duration magnitude, of the gesture detected on the touch screen is detected to remain below a duration threshold*** (*e.g.*, detecting a "tap" on an album cover by determining that the amount of time a user's finger remains engaged with the touch screen is below a "predefined threshold"), ***information associated with the object is opened utilizing another interface associated with the particular application***, as recited in [123.d]. Appx-C, ¶135.

18. Claim 124 Analysis

Beaumier and Chaudhri render obvious claim 124 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶136-146.

[124.a] The apparatus of claim 123, wherein the apparatus is configured such that, when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, a view of the information associated with the object is displayed,

The Beaumier-Chaudhri combination renders obvious Element [124.a].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available albums as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an album of interest. Appx-C, ¶137. An example of this process is illustrated below. Appx-C, ¶137.

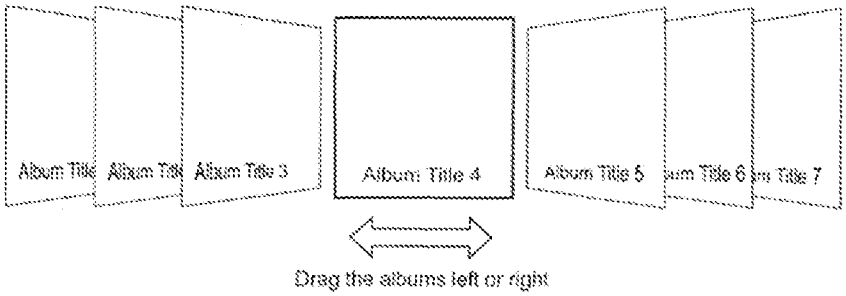


Fig. 6

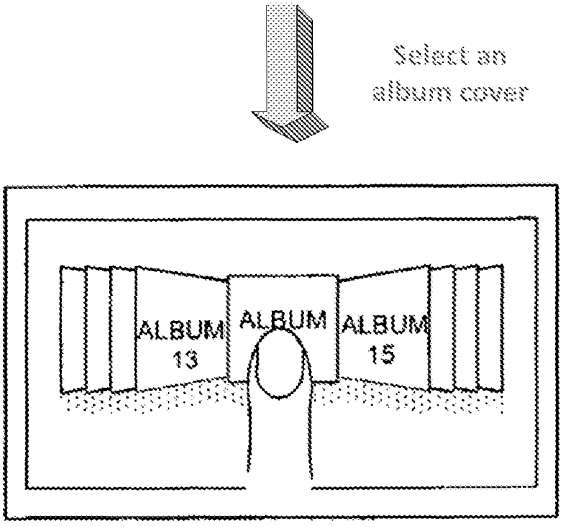


FIG. 23D

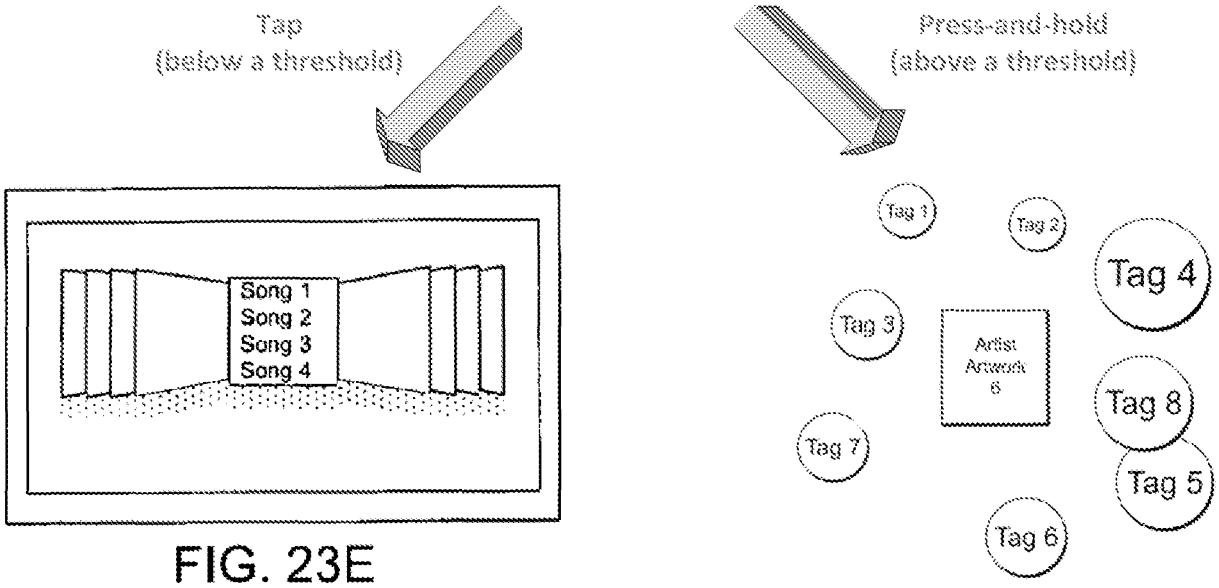


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Based on the teachings of Beaumier, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to is displayed. *See* Appx-D, [0084], [0127]. For example, "descriptive words or 'tags' associated" with the album may be displayed, as shown with respect to FIG. 8a, or an "enlargement of an album jacket to highlight its selection" along with additional information and options related to the album could be displayed, as shown with respect to FIG. 22c. Appx-D, [0084]-[0086], [0127]. Thus, Beaumier describes that, ***when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, a view of [] information associated with the object*** (*e.g.*, tags associated with the album that the user has pressed and held) ***is displayed***, as recited in [124.a]. Appx-C, ¶138.

In certain circumstances, at least some of the tags may include the same information as is displayed when a user taps the album cover (*e.g.*, includes one or more song titles/names). Appx-C, ¶139. According to Beaumier, "[f]or music, metadata and/or tags may be representative of information including, for example, artist name, album name, song name, genre/style (which may be hierarchical in some instances), Billboard position (when applicable), release year, popularity based on network plays information, lyrics, tempo, beats per minute (BPM), mood,

instrumental characteristics (e.g., strident electric guitars, booming drums, twangy guitar, etc.), vocal characteristics (e.g., aggressive, prominent vocal harmonies, screaming, etc.), intensity characteristics (e.g., high energy, moderate, laid back, etc.) timbre (e.g., bright, dark, rich, etc.), and/or the like." Appx-D, [0203]. Thus, in at least some situations, one or more of the tags displayed when a user presses and holds the album cover may also be song names included on the album. *See* Appx-D, [0203]; Appx-C, ¶139.

This may be the case, for example, where a song is a cover that has been performed by multiple artists, such that tapping on the song name would result in a filtered list artists who have also performed versions of the same song. Appx-C, ¶140. Beaumier describes that "[c]licking on one floating object may in certain exemplary embodiments display more music objects sharing the same tag." Appx-D, [0086]. "For example, clicking on tag 3 in FIG. 8a may present a collection of artists filtered by tag 3 using a user interface depicted in FIG. 6." Appx-D, [0086]. Thus, a POSITA would have understood and found obvious that clicking on a tag that includes a "song name" associated with the album would have resulted in "may present a collection of artists filtered by" that song name. Appx-C, ¶140.

Accordingly, in at least certain circumstances, a POSITA would have understood and found obvious that the apparatus the Beaumier-Chaudhri combination ***is configured such that, when the duration magnitude of the gesture***

detected on the touch screen is detected to increase above the duration threshold (*e.g.*, the press and hold gesture on an album cover is detected for "for a period of time greater than a predefined threshold," as described by Beaumier)***, a view of the information associated with the object is displayed*** (*e.g.*, at least one of the song titles/names that would have been displayed as part of the song list for the album that would have been displayed with a tap, as described by Chaudhri would have also been displayed as a tag), as recited in [124.a]. Appx-C, ¶141.

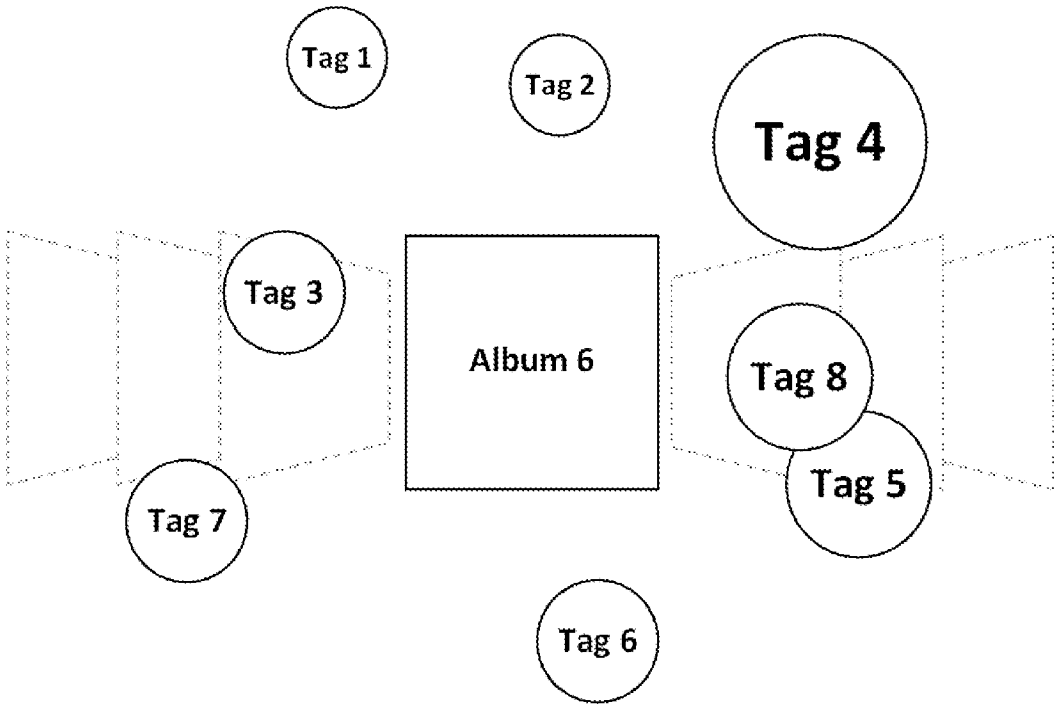
[124.b] where the view is displayed in a first virtual display layer that appears above a second virtual display layer, including the at least portion of the at least one other object, that is blurred.

The Beaumier-Chaudhri combination renders obvious Element [124.b].

The '754 Patent describes that "virtual display layer refers to a collection of display elements which have all been assigned the same apparent depth within the 3D layered user interface." Appx-A, 68:39-42. "For example, in one embodiment, a 3D layered user interface may have a virtual foreground display layer and a virtual background display layer." Appx-A, 68:44-47. In some embodiments, "virtual display layers may be given the appearance of depth through the use of 3D depth cues." Appx-A, 68:58-60. However, the '754 Patent does not teach specific software and or hardware implementation details for achieving these "apparent" visual effects, and instead acknowledges that they "may be implemented in any desired environment." Appx-A, 67:66-68:17. In light of these teachings, a

POSITA would have understood a "virtual display layer" to be present whenever one or more display elements appear at "the same apparent depth" of display, regardless of the software and/or hardware mechanisms used to achieve this visual appearance. Appx-C, ¶143.

As described with respect to Element [2.d], a POSITA would have understood and found obvious that when a user presses and holds an album cover and various tags are displayed as shown and described with respect to FIG. 8a of Beaumier, the other albums being displayed (*e.g.*, in FIG. 6 or 7) would have been blurred to help bring focus to the selected album and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶144. An example of this is provided below, where the blurred background albums are shown with dotted lines, consistent with Beaumier's FIG. 22c and its related teachings. *See* Appx-D, [0127]; Appx-C, ¶144.



In this example implementation, the tags are being shown to be "above" or "on top of" the albums below that have been blurred. Appx-C, ¶145. Thus, a POSITA would have understood and found obvious that the tags are being displayed in one or more virtual layers "above" the one or more virtual layers in which the other albums that were not selected are displayed in. Appx-C, ¶145. Indeed, it was known that, "[w]hen several 2D layers of information are put on top of each other, it is possible to provide the user with an intuitive way of choosing how much and which information to display crisply." Appx-G, 3-4. For example, there were user interface systems going back as early as 1991 where "up to 26 layers of information can be displayed at the same time" and where "[e]ach layer

has an interest level associated with it that the user can change," and "[t]he interest level is [visualized as] a combination of blur and transparency." Appx-G, 2, 8.

Accordingly, a POSITA would have at least found obvious that, in the apparatus of the Beaumier-Chaudhri combination, ***the view*** (*e.g.*, the tags associated with the album that was pressed and held by the user) ***is displayed in a first virtual display layer that appears above a second virtual display layer, including the at least portion of the at least one other object*** (*e.g.*, one of the albums that was not selected by the user)***, that is blurred***, as recited in [124.b]. Appx-C, ¶146.

19. Claim 125 Analysis

Beaumier and Chaudhri render obvious claim 125 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶147-156.

[125.a] The apparatus of claim 123, wherein the apparatus is configured such that, when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, a view of the information associated with the object is displayed simultaneously with a menu including at least one option for performing at least one action,

The Beaumier-Chaudhri combination renders obvious Element [125.a].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available albums as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two

selection options when they found an album of interest. Appx-C, ¶148. An example of this process is illustrated below. Appx-C, ¶148.

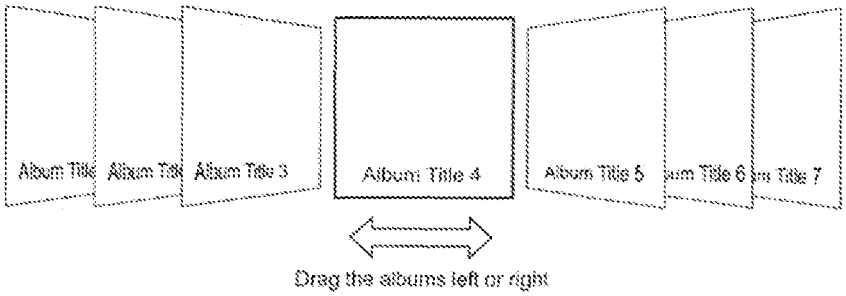


Fig. 6



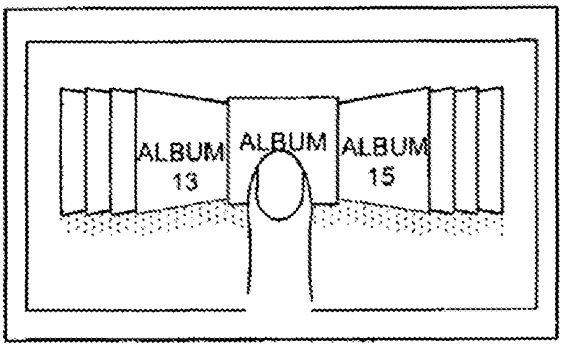


FIG. 23D

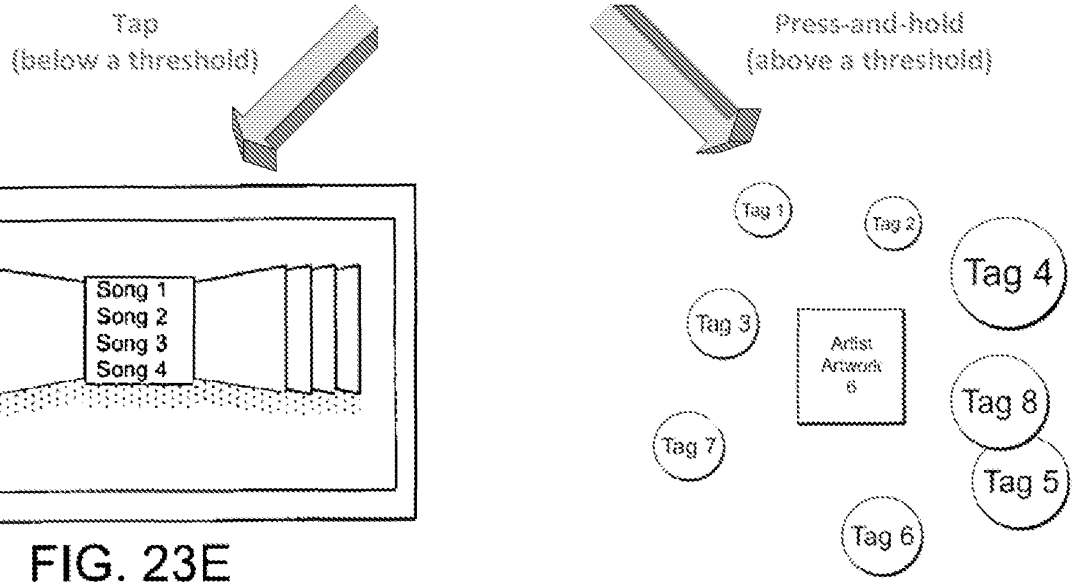


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Based on the teachings of Beaumier, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D, [0084], [0127]. For example, "descriptive words or 'tags' associated" with the album may be displayed, as shown with respect to FIG. 8a, or an "enlargement of an album jacket to highlight its selection" along with additional information and options related to the album could be displayed, as shown with respect to FIG. 22c. Appx-D, [0084]-[0086], [0127].

As discussed with respect to Element [124.a], *supra*, in at least some situations, one or more of the tags displayed when a user presses and holds the album cover may also be song names included on the album (*i.e.*, at least a portion of the same information displayed when the user taps the album cover, as shown above at lower left). *See* Appx-D, [0203]; Appx-C, ¶150. Accordingly, in at least certain circumstances, a POSITA would have understood and found obvious that the apparatus the Beaumier-Chaudhri combination ***is configured such that, when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold*** (*e.g.*, the press and hold gesture on an album cover is detected for "for a period of time greater than a predefined threshold," as described by Beaumier)***, a view of the information associated with***

the object is displayed displayed (*e.g.*, at least one of the song titles/names that would have been displayed as part of the song list for the album that would have been displayed with a tap, as described by Chaudhri would have also been displayed as a tag), as recited in [125.a]. Appx-C, ¶150.

Beaumier's tags are a form of menu. Appx-C, ¶151. In the context of computers, a menu is "a list of available options, especially on a displayed screen." Appx-M, 3; Appx-C, ¶151. This is consistent with the way in which the term "menu" is used in the context of the '754 Patent. Appx-A, 31:46-49, 33:34-37, 35:20-23, 55:57-61 (describing various menus that are lists of operations from which a user may select); Appx-C, ¶151. Beaumier describes that "[c]licking on one floating object may in certain exemplary embodiments display more music objects sharing the same tag." Appx-D, [0086]. "For example, clicking on tag 3 in FIG. 8a may present a collection of artists filtered by tag 3 using a user interface depicted in FIG. 6." Appx-D, [0086]. Thus, the tags shown in FIG. 8a are a list from which a user can select the operation (*e.g.*, presenting a collection of artists filtered by the tag) the computer would perform, and are therefore collective a "menu," as that term would have been understood by a POSITA and is used in the '754 Patent. Appx-C, ¶151. Furthermore, while Beaumier illustrates these tags as several discrete circles, a POSITA would have at least found it obvious that these and other options associated with the album could alternatively be displayed in a

sequential list of options or any other suitable menu format, as this would have constituted the simple rearrangement of the parts shown in FIG. 8a and an obvious aesthetic design choice. *See, e.g.*, Appx-E, [0103] (describing that list menus of text and image browsing menus may be used interchangeably and alternatively), [0105] (describing that list menus of text and image browsing menus may be used together with one another), [0233] (showing a transition between a vertical text-based list menu and a horizontal image-based browser menu); Appx-K, FIG. 14, [0369] (describing the opening of a menu of options based on a tap gesture), [0581] (describing the opening of a menu of "additional" options based on tapping an icon); Appx-C, ¶151; *see* MPEP §§ 2144.04(I), 2144.04(V)(C). Accordingly, a POSITA would have understood and found obvious that the tags presented to the user as shown in Beaumier's FIG. 8a are ***a menu including at least one option for performing at least one action***, as recited in [125.a], and that these tags are displayed ***simultaneously*** with the information display in the tags and associated with the select album (*i.e.*, the "object"). Appx-C, ¶151.

[125.b] where the view and the menu are displayed in a first virtual display layer that appears above a second virtual display layer, including the at least portion of the at least one other object, that is blurred

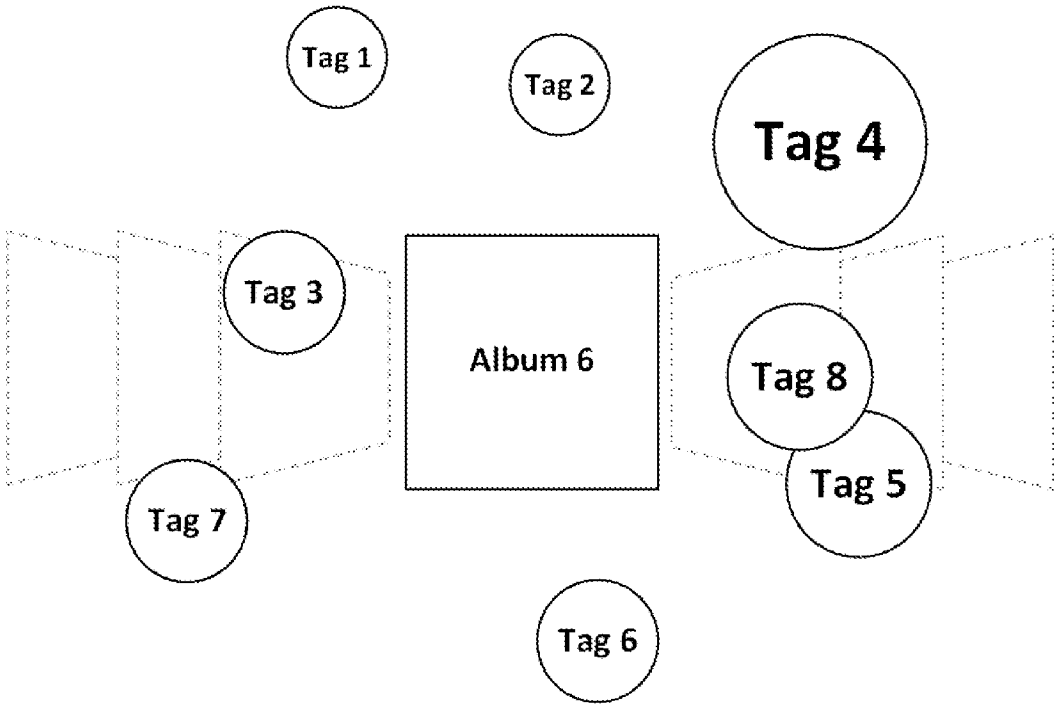
The Beaumier-Chaudhri combination renders obvious Element [125.b].

As discussed with respect to Element [124.b], the '754 Patent describes that "virtual display layer refers to a collection of display elements which have all been

assigned the same apparent depth within the 3D layered user interface." Appx-A, 68:39-42. "For example, in one embodiment, a 3D layered user interface may have a virtual foreground display layer and a virtual background display layer." Appx-A, 68:44-47. In some embodiments, "virtual display layers may be given the appearance of depth through the use of 3D depth cues." Appx-A, 68:58-60. However, the '754 Patent does not teach specific software and or hardware implementation details for achieving these "apparent" visual effects, and instead acknowledges that they "may be implemented in any desired environment." Appx-A, 67:66-68:17. In light of these teachings, a POSITA would have understood a "virtual display layer" to be present whenever one or more display elements appear at "the same apparent depth" of display, regardless of the software and/or hardware mechanisms used to achieve this visual appearance. Appx-C, ¶153.

As described with respect to Elements [2.d] and [124.b], a POSITA would have understood and found obvious that when a user presses and holds an album cover and various tags are displayed as shown and described with respect to FIG. 8a of Beaumier, the other albums being displayed (*e.g.*, in FIG. 6 or 7) would have been blurred to help bring focus to the selected album and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶154. An example of this is provided below, where the blurred background albums are shown with dotted lines, consistent with

Beaumier's FIG. 22c and its related teachings. *See* Appx-D, [0127]; Appx-C, ¶154.



In this example implementation, the tags are being shown to be "above" or "on top of" the albums below that have been blurred. Appx-C, ¶155. Thus, a POSITA would have understood and found obvious that the tags are being displayed in one or more "virtual layers" "above" the one or more "virtual layers" in which the other albums that were not selected are displayed in. Appx-C, ¶155. Indeed, it was known that, "[w]hen several 2D layers of information are put on top of each other, it is possible to provide the user with an intuitive way of choosing how much and which information to display crisply." Appx-G, 3-4. For example, there were user interface systems going back as early as 1991 where "up to 26

layers of information can be displayed at the same time" and where "[e]ach layer has an interest level associated with it that the user can change," and "[t]he interest level is [visualized as] a combination of blur and transparency." Appx-G, 2, 8.

Accordingly, a POSITA would have at least found obvious that, in the apparatus of the Beaumier-Chaudhri combination, ***the view and the menu*** (*e.g.*, the tags associated with the album that was pressed and held by the user) ***are displayed in a first virtual display layer that appears above a second virtual display layer, including the at least portion of the at least one other object*** (*e.g.*, one of the albums that was not selected by the user)***, that is blurred***, as recited in [124.b]. Appx-C, ¶156.

20. Claim 126 Analysis

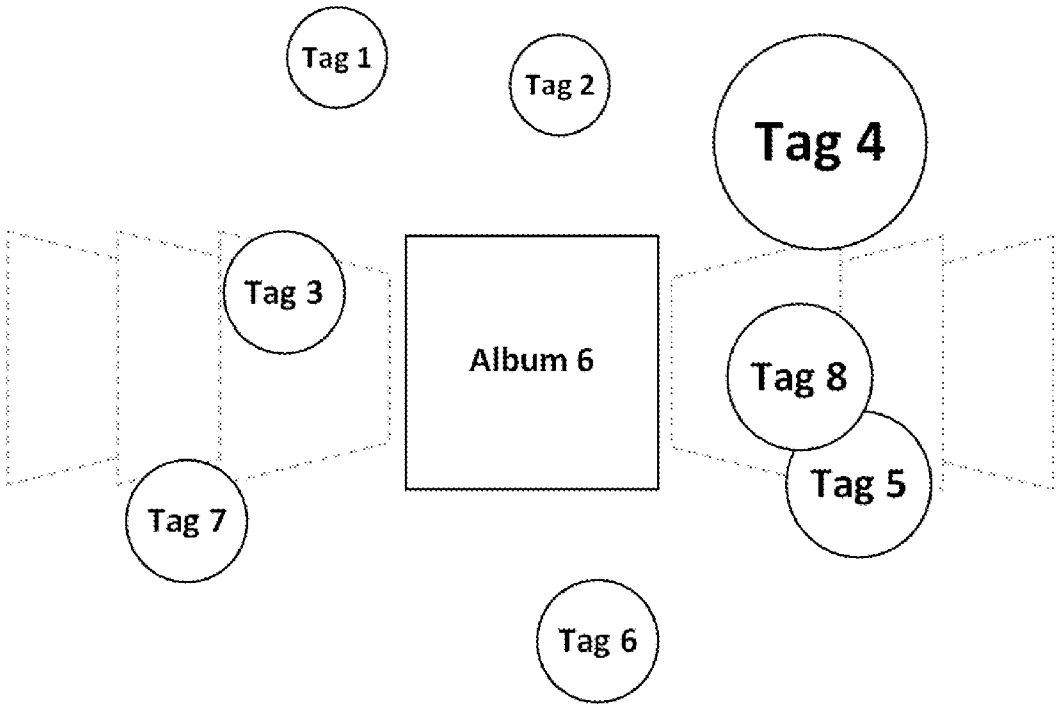
Beaumier and Chaudhri render obvious claim 126 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶157-160.

[126] The apparatus of claim 125, wherein the apparatus is configured such that the at least one other object remains blurred after detection of the completion of the gesture when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold.

The Beaumier-Chaudhri combination renders obvious Claim [126].

As discussed with respect to Element [2.d], *supra*, as part of this the transition in user interface display between that shown in FIG. 6 and that shown in FIG. 8a or 22c, Beaumier describes that other user interface objects are blurred. Appx-C, ¶158. "Blurring, fading, enlarging, and/or other techniques may be used

to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127]. For example, "FIG. 22c shows the enlargement of an album jacket to highlight its selection, and further blurs background UI elements to help bring focus to the selected album, in accordance with certain exemplary embodiments." Appx-D, [0127]. And these focus/highlighting techniques "may be applied to other aspects of the UI experience." Appx-D, [0127]. Thus, for example, a POSITA would have understood and found obvious that when a user presses and holds an album cover and various tags are displayed as shown and described with respect to FIG. 8a, the other albums being displayed (e.g., in FIG. 6 or 7) would have been blurred to help bring focus to the selected album and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶158. An example of this is provided below, where the blurred background albums are shown with dotted lines, consistent with Beaumier's FIG. 22c and its related teachings. *See* Appx-D, [0127]; Appx-C, ¶158.



A POSITA would have understood and found obvious that the blurring of the other, non-selected albums would continue as long as the tags are displayed, so as to ensure that the user's attention continues to be focused on the most relevant user interface elements, consistent with the teachings of Beaumier. *See* Appx-D, [0084], [0127]; Appx-C, ¶159. And Beaumier further teaches that after the tags are displayed, a user may "click" on a tag to "display more music objects sharing the same tag." Appx-D, [0086]. A POSITA would have understood and found obvious that at least one known and obvious implementation of this "clicking" gesture on a tag would be as a separate gesture performed after the press-and-hold gesture that causes the tags to be displayed. Appx-C, 159. Indeed, Beaumier relies upon similar distinct and successive selection gestures in similar contexts. *See,*

e.g., Appx-D, [0167] ("a user could browse by album or artist, make a selection, and then further select a song from a selected album or artist."); Appx-C, ¶159.

Accordingly, it would have at least been obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one other object*** (*e.g.*, one of the non-selected albums shown in dotted lines above) ***remains blurred after detection of the completion of the gesture when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold*** (*e.g.*, after completion of the press-and-hold gesture that is "for a period of time greater than a predefined threshold" and causes the tags to be displayed), as recited in [126]. Appx-C, ¶160.

21. Claim 127 Analysis

Beaumier and Chaudhri render obvious claim 127 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶161-169.

[127.a] The apparatus of claim 125, wherein the apparatus is configured such that the view includes a preview, and

The Beaumier-Chaudhri combination renders obvious Element [127.a].

The '754 Patent does not use the term "preview" outside of the claims. *See generally* Appx-A 1:1-95:7; Appx-C, ¶162. In the context of the '754 Patent and related art, a POSITA would have understood the term "preview" to at least encompass "an introductory or preliminary message, sample, or overview; a foretaste." Appx-M, 4; Appx-C, ¶162.

A POSITA would have understood and found obvious that the set of tags presented to the user as a result of a press-and-hold gesture on an album cover is a "preview" as that term would have been understood by POSITAs in the context of the '754 Patent. Appx-C, ¶163. As discussed with respect to Element [124.a], *supra*, "[f]or music, metadata and/or tags may be representative of information including, for example, artist name, album name, song name, genre/style (which may be hierarchical in some instances), Billboard position (when applicable), release year, popularity based on network plays information, lyrics, tempo, beats per minute (BPM), mood, instrumental characteristics (e.g., strident electric guitars, booming drums, twangy guitar, etc.), vocal characteristics (e.g., aggressive, prominent vocal harmonies, screaming, etc.), intensity characteristics (e.g., high energy, moderate, laid back, etc.) timbre (e.g., bright, dark, rich, etc.), and/or the like." Appx-D, [0203]. This is a long list of possible tags for each musical object. Appx-C, ¶163.

As a result, Beaumier describes that "[t]he tags may be based on how many people have tagged an item a certain way, how a trusted metadata source has tagged it, etc." Appx-D, [0085]. A POSITA would have understood and found obvious that one aspect of this determination would be to only display a subset of the most relevant, popular, or trusted tags to the user. Appx-C, ¶164. Indeed, in similar contexts, Beaumier teaches only displaying "a partial subset of the items."

See Appx-D, [0172]. And FIG. 8a only shows eight tags from the above list of many possible tags. *See* Appx-D, [0084], [0203]; Appx-C, ¶164. Therefore, a POSITA would have understood and found obvious that the tags displayed to the user as a result of a press-and-hold gesture are a "preview," because they would have been a "sample or survey" of the full set of possible tags selected by the jukebox "based on how many people have tagged an item a certain way, how a trusted metadata source has tagged it, etc." *See* Appx-D, [0085]; Appx-C, ¶164.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the view*** (*e.g.*, the display of the tags associated with the selected album) ***includes a preview*** (*e.g.*, a subset of all tags associated with the selected album, where the subset is determined "based on how many people have tagged an item a certain way, how a trusted metadata source has tagged it, etc."), as recited in [127.a]. Appx-C, ¶165.

[127.b] the blurring is not performed in response to the completion of the gesture being detected while the magnitude, including the duration magnitude, of the gesture detected on the touch screen is detected to remain below the duration threshold.

The Beaumier-Chaudhri combination renders obvious Element [127.b].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available albums as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two

selection options when they found an album of interest. Appx-C, ¶167. An example of this process is illustrated below. Appx-C, ¶167.

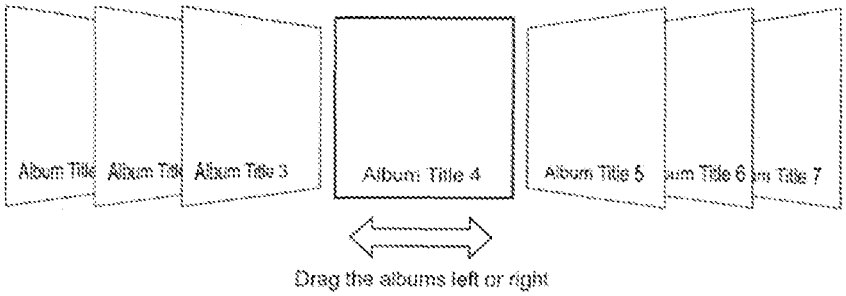


Fig. 6

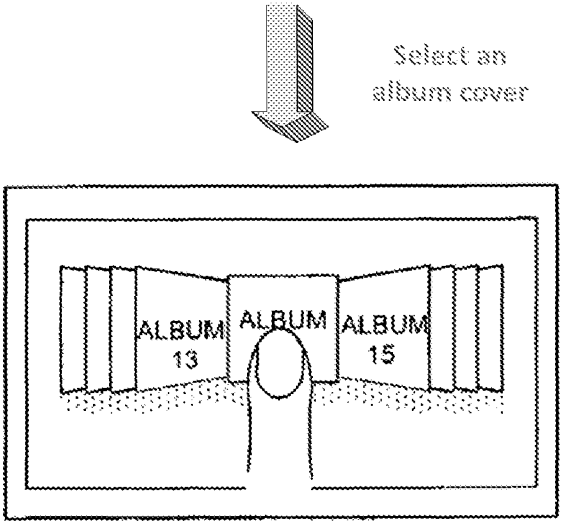


FIG. 23D

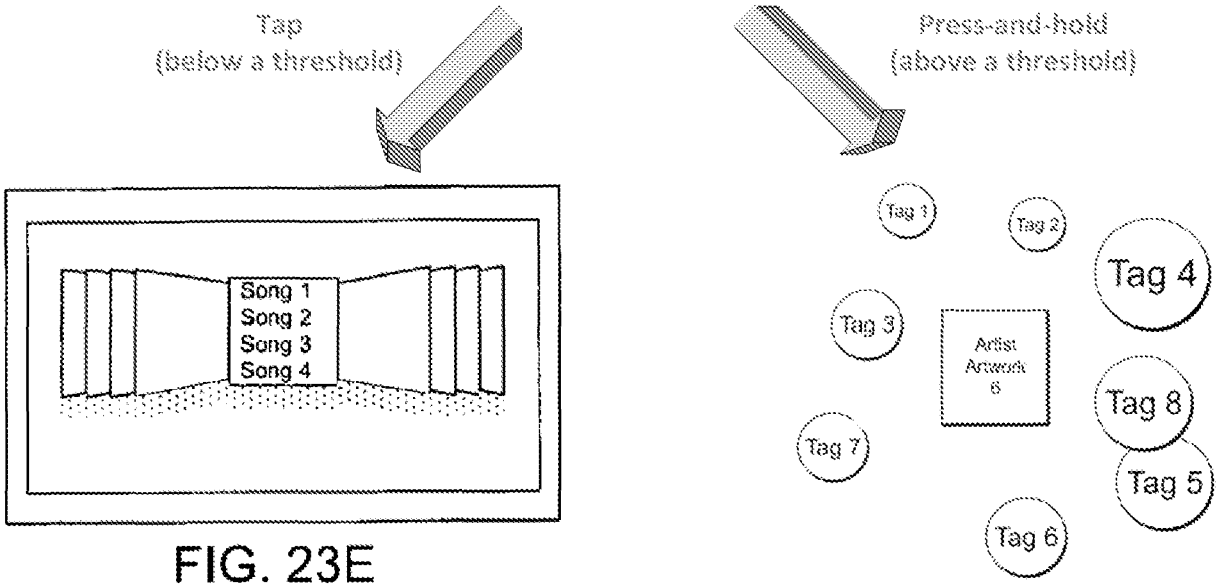


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Based on the teachings of Chaudhri, if "the user taps or presses their finger" on the album cover, the apparatus of the Beaumier-Chaudhri combination would present "a list of songs associated with the album" from the which the user may browse and select a song for addition to the playlist. *See* Appx-E, [0185]-[0203]. In other words, ***when the magnitude, including the duration magnitude, of the gesture detected on the touch screen is detected to remain below the duration threshold*** (e.g., a "tap"), the display would have resulted in the display of a list of songs associated with the album. *See* Appx-E, [0185]-[0203]; Appx-C, ¶168. As shown in FIG. 23E, the list of songs associated with the album is displayed in place of the album's cover art. *See* Appx-E, FIG. 23E, [0190]; Appx-C, ¶168. Chaudhri does not describe the other albums as being blurred when the songs for the selected album are displayed. *See* Appx-E, [0185]-[0203]; Appx-C, ¶168. And Beaumier describes that the blurring technique is only used in "in accordance with certain exemplary embodiments," and not in every case. *See* Appx-D, [0127]; Appx-C, ¶168. Indeed, the display of songs in FIG. 23E of Chaudhri is distinct from the display of tags in FIG. 8a of Beaumier and the display of the pop-up in FIG. 22c of Beaumier, because the tags and pop-up in Beaumier's FIGS. 8a and 22c, respectively, would have overlapped the other display elements and therefore benefited from the blurring to help avoid visual confusion, whereas the display of

songs in Chaudhri FIG. 23E does not overlap the other albums and therefore does not necessarily require blurring to avoid the same visual confusion. Appx-C, ¶168.

Accordingly, a POSITA would have understood and found obvious that, in at least some implementations of the apparatus of the Beaumier-Chaudhri combination, ***the blurring is not performed in response to the completion of the gesture being detected while the magnitude, including the duration magnitude, of the gesture detected on the touch screen is detected to remain below the duration threshold***, as recited in [127.b]. Appx-C, ¶169.

22. Claim 130 Analysis

Beaumier and Chaudhri render obvious claim 130 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶170-175.

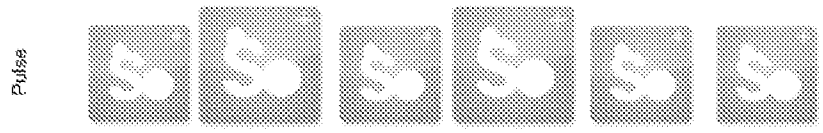
[130] The apparatus of claim 125, wherein the apparatus is configured such that, during detection of at least another part of the gesture before the completion thereof is detected, the object is pulsed before the view and the menu are displayed.

The Beaumier-Chaudhri combination renders obvious Claim [130].

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different

embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

"Pulsing" objects (*e.g.*, making them larger and smaller) was a well-known method for focusing a user's attention of the relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶172. As discussed above, Beaumier teaches the use of changes in size of an object (*e.g.*, "enlarging") to focus a user's attention. Appx-D, [0127]. And similar references refer to "pulsing" user interface objects to help guide a user's attention. Appx-C, ¶172. For example, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri) describes visual cues being utilized to "provide hints or reminders of" gestures to activate functions, and that these cues include the objects being "animated," such as "appear[ing] and disappear[ing] in a pulse-like manner." Appx-H, [0054], [0071]-[0072], [0079]-[0088]; Appx-C, ¶172. Similarly, Harrison describes that "visual properties can also be modified along other dimensions to convey extra information" and describes that one of the possible animations for conveying this information is a "pulse" in which the size of the image grows and shrinks continuously. *See* Appx-W, 1, 6.



Appx-W, FIG. 5

A POSITA would have recognized and found obvious that animating the visual cues in the manner described by Chaudhri '842 would have helped provide visual feedback to the user to indicate satisfaction of gesture to complete a particular type of user input. *See* Appx-H, [0071]-[0072], [0079]-[0084]; Appx-C, ¶173. In other words, the visual cues are used as an "indication of progress of the gesture" to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶173. Based on these teachings, a POSITA would have at least found it obvious to pulse the size of the object to draw a user's attention to the object and to provide the user sensory feedback that their gesture is transitioning a user interface between different states. Appx-C, ¶173.

When during the gesture the pulsing is provided as compared to other visual cues is a matter of design choice and variations to this timing would have been obvious. Appx-C, ¶174. Indeed, Chaudhri '842 describes different functions by why the visual cues are implemented for showing progress toward completion of the gesture. *See* Appx-H, FIGS. 8A-8C, [0086]-[0087]; Appx-C, ¶174. And Chaudhri '842 describes that combinations of different visual cues may be used together. *See* Appx-H, [0085] (describing that the varied "optical intensity may be

the visual differentiation between the user-interface object and the background, based on color, hue, color saturation, brightness, contrast, transparency, and any combination thereof"); Appx-C, ¶174.

Accordingly, a POSITA would have at found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, during detection of at least another part of the gesture before the completion thereof is detected, the object is pulsed before the view and the menu are displayed***, as recited in Claim [130]. Appx-C, ¶175.

23. Claim 131 Analysis

Beaumier and Chaudhri render obvious claim 131 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶176-180.

[131] The apparatus of claim 125, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a border is displayed around the object before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Claim [131].

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different

embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

Displaying a border around the object (*e.g.*, the album being selected by the user) was a well-known method for focusing a user's attention on relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶178. "For instance, FIG. 22 a uses a colorized 'blob' to highlight the center selection, whereas other non-patron selectable elements may be blurred, in accordance with certain exemplary embodiments." Appx-D, [0127]. A POSITA would have understood and found obvious that a "colorized blob" around the user's selection is a type of "border." Appx-C, ¶178. Indeed, it was well known to use bold or highlighted borders to indicate the selection of a user interface element. *See, e.g.*, Appx-I, [0300] (describing that "a bold or otherwise visually highlighted border" is used to identify that a user interface element "is presently selected"); Appx-C, ¶178. An example of the "colorized blob" described by Beaumier is depicted below. Appx-C, ¶178.

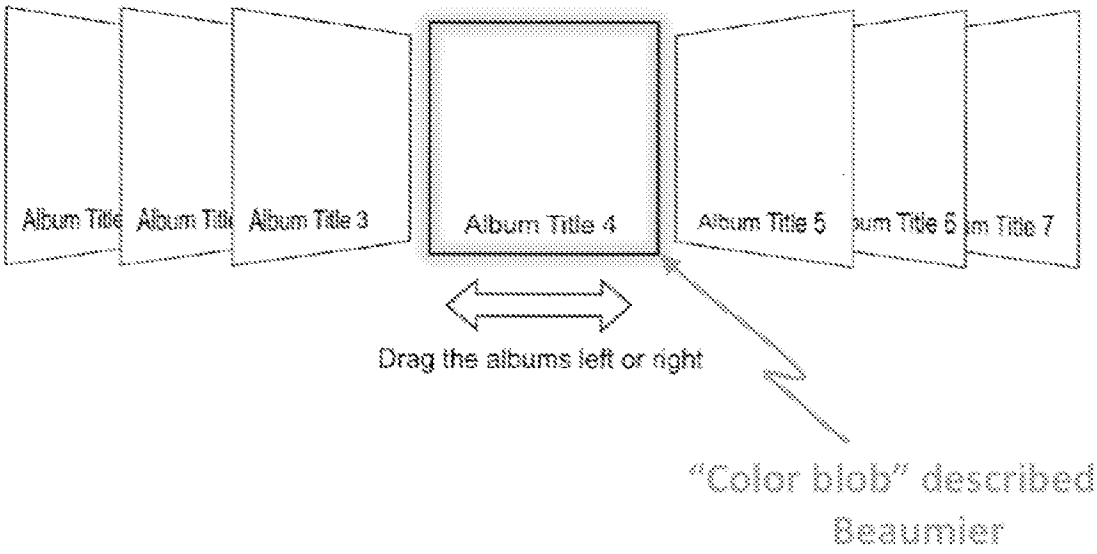


Fig. 6

Appx-D, FIG. 6 (Modified and Annotated)

Further, a POSITA would have at least found obvious that displaying the colorized blob (*i.e.*, border) would have been ***based on the change in the magnitude of the gesture being detected on the touch screen*** and ***before the menu is displayed***, as this is one of a limited number of ways to display the colorized blob in response to the user's selection. Appx-C, ¶179; *see Uber Technologies, Inc. v. X One, Inc.*, 957 F. 3d 1334, 1339-40 (Fed. Cir. 2020). Indeed, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri) describes using visual cues, such as color, to indicate progress to a user to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶179.

Accordingly, a POSITA would have at least found it obvious and been specifically motivated to configure the apparatus of the Beaumier-Chaudhri combination ***such that, based on the change in the magnitude of the gesture being detected on the touch screen, a border is displayed around the object before the menu is displayed***, as recited in [131]. Appx-C, ¶180.

24. Claim 132 Analysis

Beaumier and Chaudhri render obvious claim 132 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶181-185.

[132] The apparatus of claim 125, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, at least one aspect of a border of the object is altered before the menu is displayed.

The Beaumier-Chaudhri combination renders obvious Claim [132].

As discussed with respect to Claim [131], *supra*, displaying a border around the object (*e.g.*, the album being selected by the user) was a well-known method for focusing a user's attention on relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶182. "For instance, FIG. 22 a uses a colorized 'blob' to highlight the center selection, whereas other non-patron selectable elements may be blurred, in accordance with certain exemplary embodiments." Appx-D, [0127]. A POSITA would have understood and found obvious that a "colorized blob" around the user's selection is a type of "border." Appx-C, ¶182. However, as

shown in FIGS. 6 and 7, the album objects described by Beaumier already have a boarder, as illustrated below. Appx-C, ¶182.

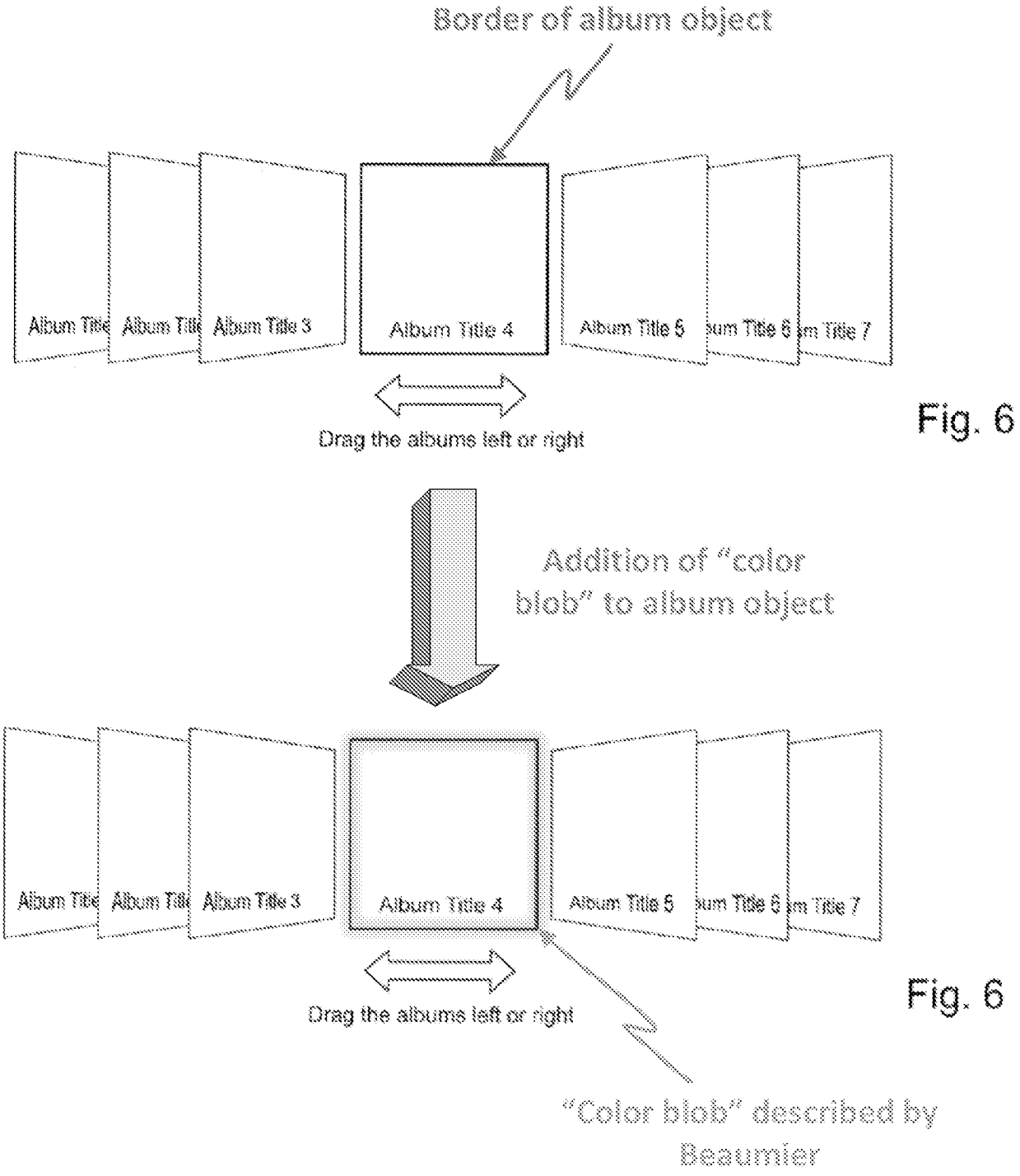


Fig. 6

Fig. 6

Appx-D, FIG. 6 (Modified and Annotated)

Indeed, it was well known to bolden or highlight borders to indicate the selection of a user interface element. *See, e.g.*, Appx-I, [0300] (describing that "a bold or otherwise visually highlighted border" is used to identify that a user interface element "is presently selected"); Appx-C, ¶183. Thus, based on the teachings of a Beaumier, a POSITA would have understood and found obvious that the colorized blob described by Beaumier and produced as part of the selection gesture would have been an alteration to the existing border of the album object. Appx-C, ¶183.

Further, as discussed with respect to Claim [131], *supra*, a POSITA would have at least found obvious that displaying the colorized blob (*i.e.*, border) would have been ***based on the change in the magnitude of the gesture being detected on the touch screen*** and ***before the menu is displayed***, as this is one of a limited number of ways to display the colorized blob in response to the user's selection. Appx-C, ¶184; *see Uber Technologies, Inc. v. X One, Inc.*, 957 F. 3d 1334, 1339-40 (Fed. Cir. 2020). Indeed, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri) describes using visual cues, such as color, to indicate progress to a user to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶184.

Accordingly, a POSITA would have at least found it obvious and been specifically motivated to configure the apparatus of the Beaumier-Chaudhri combination ***such that, based on the change in the magnitude of the gesture being detected on the touch screen, at least one aspect of a border of the object is altered before the menu is displayed***, as recited in [132]. Appx-C, ¶185.

25. Claim 134 Analysis

Beaumier and Chaudhri render obvious claim 134 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶186-190.

[134] The apparatus of claim 125, wherein the apparatus is configured such that the view and the menu are displayed by being sharpened and magnified.

The Beaumier-Chaudhri combination renders obvious Claim [134].

The '754 Patent does not use the word "sharp" or "sharpened" outside of the claims. Appx-C, ¶187. However, a POSITA would have understood the word "sharp" in a graphical context to be a subjective perception that is related to edge contrast. Appx-J, 1; Appx-C, ¶187.

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different

embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

Beaumier describes that these browsing displays are designed "to simulate a more three-dimensional look-and-feel, and provide more of a sense of immersion when interacting with the user interface." Appx-D, [0075]. This interactive and immersive experience is facilitated by "the displayed items (e.g., album jackets or other identifiers) being updated as the user interacts with the display," and may additionally include the application of "size, color, blurriness, and/or other effects." Appx-D, [0077]. Based on these teachings, a POSITA would have understood and found obvious that these various effects would have been applied dynamically to better create the "immersive" experience sought by Beaumier. Appx-C, ¶189. Indeed, as discussed with respect to Claims [130]-[132], *supra*, it was well known to dynamically apply the visual effects described by Beaumier to user interface objects to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088] (describing the transition of the "optical intensity" of user interface objects, such as the "color, hue, color saturation, brightness, contrast, transparency, and any combination thereof" to provide an "indication of progress

of the gesture" to help provide the user sensory feedback that their ongoing gesture is transitioning a user interface between different states); Appx-C, ¶189. Thus, a POSITA would have at least found it obvious to utilize the "fading" and "enlarging" described by Beaumier dynamically as the jukebox user interface transitions between states (*e.g.*, between the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a with the tags). *See* Appx-H, [0079]-[0088]; Appx-C, ¶189.

Based on these teachings, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the view and the menu*** (*e.g.*, the tags displayed as a result of a press and hold of an album cover, as discussed with respect to Element [125.a], *supra*) ***are displayed by being sharpened and magnified*** (*e.g.*, the tags are "faded in" (and thus sharpened) and "enlarged" (and thus magnified) as part of the press and hold gesture in order to provide a more "immersive" experience and help provide the user visual cues as to the completion of their gesture to transition between the user interface states), as recited in [134]. Appx-C, ¶190.

26. Claim 136 Analysis

Beaumier and Chaudhri render obvious claim 136 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶191-194.

[136] The apparatus of claim 125, wherein the apparatus is configured such that the object includes a hyperlink, the particular application includes a network

browser application, and the information includes: at least one of: at least a portion of a web page associated with the hyperlink, or a web address associated with the hyperlink.

The Beaumier-Chaudhri combination renders obvious Element [136].

For example, Beaumier describes that, "[i]n certain exemplary embodiments, a link to the artist's homepage, Facebook or other social networking or other site also may be provided." Appx-D, [0114]. "[C]ertain exemplary embodiments [] allow users to . . . login to social networking sites," and the "interface of certain exemplary embodiments may help unify local content and central server content, as well as content available only from social networking sites." Appx-D, [0073]-[0074]. Further, Beaumier describes that "portals" associated with certain artists are displayed to users on the jukebox and may include "one or more of images, themes, wireframe displays, web pages, etc., that is/are context specific." Appx-D, [0116]. Beaumier does not specify or limit the manner in which these links and/or webpages are displayed by the jukebox. Appx-C, ¶192. Thus, a POSITA would have understood and found obvious that at least one way to display these links and/or web pages would have been as part of the objects displayed in the browsing modes described with respect to FIGS. 6 and 7 or with respect to FIG. 8b. Appx-C, ¶192.

While Beaumier does not specifically describe the use of a network browser application, a POSITA would have understood and found obvious that a network

browser application would have been used in order to allow a user to view the sites associated with the links described by Beaumier. Appx-C, ¶193. In fact, by providing an interface through which "a link to the artist's homepage, Facebook or other social networking or other site" (*see* Appx-D, [0114]) and an interface through which web page may be displayed (*see* Appx-D, [0116]), a POSITA would have understood that the jukebox would have provided the functionality of a network browser application. Appx-C, ¶193. And the use of network browser applications to display webpages on touchscreen devices was well known as of the Critical Date. *See, e.g.*, Appx-K, [0092], [0710]-[0777]; Appx-C, ¶193.

Accordingly, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the object includes a hyperlink, the particular application includes a network browser application, and the information includes: at least one of: at least a portion of a web page associated with the hyperlink, or a web address associated with the hyperlink***, as recited in [136]. Appx-C, ¶194.

27. Claim 137 Analysis

Beaumier and Chaudhri render obvious claim 137 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶195-198.

[137] The apparatus of claim 136, wherein the apparatus is configured such that the interface includes a first network browser application tab, and the another interface includes a second network browser application tab.

The Beaumier-Chaudhri combination renders obvious Element [137].

As discussed with respect to Claim [137], by providing an interface through which "a link to the artist's homepage, Facebook or other social networking or other site" (*see* Appx-D, [0114]) and an interface through which web page may be displayed (*see* Appx-D, [0116]), a POSITA would have understood that the jukebox would have provided the functionality of a network browser application. Appx-C, ¶196. And Beaumier explicitly describes that the "portals" associated with certain artists displayed to users on the jukebox may include "one or more . . . web pages . . . ." Appx-D, [0116].

As of the Critical Date, it was well known that browser applications included the ability to display multiple webpages using multiple tabs and windows. *See, e.g.*, Appx-L, [0082]-[0095] (describing that "some web browsers use separate tabs for each web page" and that "the user navigates between different web pages by selecting different tabs," and teaching various ways to better display tabs); Appx-K, [0711] (describing a "[n]ew window icon 3922 that when activated (e.g., by a finger tap on the icon) initiates display of a UI for adding new windows (e.g., web pages) to the browser (e.g., UI 3900G, FIG. 39G), and which may also indicate the number of windows (e.g., '4' in icon 3922, FIG. 39A)"); Appx-C, ¶197. Thus, in

the context of Beaumier, where the jukebox is configured to display "one or more . . . web pages . . . .," a POSITA would have at least found it obvious that the multiple displayed webpages would be displayed in multiple tabs. Appx-C, ¶197.

Accordingly, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the interface includes a first network browser application tab, and the another interface includes a second network browser application tab***, as recited in [137]. Appx-C, ¶198.

28. Claim 142 Analysis

Beaumier and Chaudhri render obvious claim 142 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶199-203.

[142.a] The apparatus of claim 2, wherein the apparatus is configured such that: the gesture includes a press or tap gesture;

Element [142.a] is substantially the same as Element [123.a]. Appx-C, ¶199. The Beaumier-Chaudhri combination renders obvious Element [142.a] for at least the same reasons described above with respect to Element [123.a]. *See* Element [123.a], *supra*; Appx-C, ¶199.

[142.b] the at least one other object is displayed via an interface associated with a particular application;

Element [142.b] is substantially the same as Element [123.b]. Appx-C, ¶200. The Beaumier-Chaudhri combination renders obvious Element [142.b] for

at least the same reasons described above with respect to Element [123.b]. *See* Element [123.b], *supra*; Appx-C, ¶200.

[142.c] the at least part of the gesture on the touch screen is detected on the object; and

Element [142.c] is substantially the same as Element [123.c]. Appx-C, ¶201. The Beaumier-Chaudhri combination renders obvious Element [142.c] for at least the same reasons described above with respect to Element [123.c]. *See* Element [123.c], *supra*; Appx-C, ¶201.

[142.d] in response to the completion of the gesture being detected while the magnitude, including a duration magnitude, of the gesture detected on the touch screen is detected to remain below a duration threshold, information associated with the object is opened utilizing another interface associated with the particular application; and

Element [142.d] is substantially the same as Element [123.d]. Appx-C, ¶202. The Beaumier-Chaudhri combination renders obvious Element [142.d] for at least the same reasons described above with respect to Element [123.d]. *See* Element [123.d], *supra*; Appx-C, ¶202.

[142.e] when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, a view of the information associated with the object and a menu including at least one option are sharpened and magnified in connection with a display thereof, where the view and the menu are displayed in a first virtual display layer that appears above a second virtual display layer including at least a portion of the interface, including the at least portion of the at least one other object, that is blurred, and remains blurred after detection of the completion of the gesture when the

duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold.

Element [142.e] is substantially the same as an amalgamation of Claims [125], [126], and [134]. Appx-C, ¶203. The Beaumier-Chaudhri combination renders obvious Element [142.d] for at least the same reasons described above with respect to Claims [125], [126], and [134]. *See* Claims [125], [126], [134], *supra*; Appx-C, ¶203.

29. Claim 143 Analysis

Beaumier and Chaudhri render obvious claim 143 of the '754 patent, and each of its claim elements, for the reasons explained below.

[143] The apparatus of claim 142, wherein the apparatus is configured such that the view includes a preview.

Claim [143] is substantially the same as Element [127.a]. Appx-C, ¶204. The Beaumier-Chaudhri combination renders obvious Claim [143] for at least the same reasons described above with respect to Element [127.a]. *See* Element [127.a], *supra*; Appx-C, ¶204.

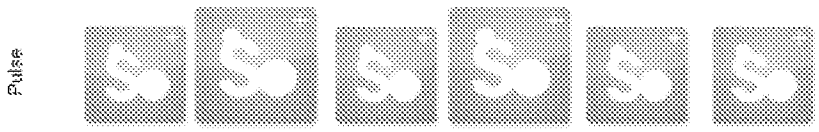
30. Claim 144 Analysis

Beaumier and Chaudhri render obvious claim 144 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶205-209.

[144] The apparatus of claim 142, wherein the apparatus is configured such that, during detection of at least another part of the gesture before the display of the view and the menu, a size of the object is pulsed.

The Beaumier-Chaudhri combination renders obvious Claim [144].

As discussed with respect to Claim [130], *supra*, "pulsing" objects (*e.g.*, making them larger and smaller) was a well-known method for focusing a user's attention of the relevant objects, consistent with the teachings of Beaumier. Appx-C, ¶206. Beaumier teaches the use of changes in size of an object (*e.g.*, "enlarging") to focus a user's attention. Appx-D, [0127]. And similar references refer to "pulsing" user interface objects to help guide a user's attention. Appx-C, ¶206. For example, Chaudhri '842 (another user interface reference including the same inventor as Chaudhri) describes visual cues being utilized to "provide hints or reminders of" gestures to activate functions, and that these cues include the objects being "animated," such as "appear[ing] and disappear[ing] in a pulse-like manner." Appx-H, [0054], [0071]-[0072], [0079]-[0088]; Appx-C, ¶206. Similarly, Harrison describes that "visual properties can also be modified along other dimensions to convey extra information" and describes that one of the possible animations for conveying this information is a "pulse" in which the size of the image grows and shrinks continuously. *See* Appx-W, 1, 6.



Appx-W, FIG. 5

A POSITA would have recognized and found obvious that animating the visual cues in the manner described by Chaudhri '842 would have helped provide

visual feedback to the user to indicate satisfaction of a gesture to complete a particular type of user input. *See* Appx-H, [0071]-[0072], [0079]-[0084]; Appx-C, ¶207. In other words, the visual cues are used as an "indication of progress of the gesture" to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088]; Appx-C, ¶207. Based on these teachings, a POSITA would have at least found it obvious to pulse the size of the object to draw a user's attention to the object and to provide the user sensory feedback that their gesture is transitioning a user interface between different states. Appx-C, ¶207.

When during the gesture the pulsing is provided as compared to other visual cues is a matter of design choice and variations to this timing would have been obvious. Appx-C, ¶208. Indeed, Chaudhri '842 describes different functions by why the visual cues are implemented for showing progress toward completion of the gesture. *See* Appx-H, FIGS. 8A-8C, [0086]-[0087]; Appx-C, ¶208. And Chaudhri '842 describes that combinations of different visual cues may be used together. *See* Appx-H, [0085] (describing that the varied "optical intensity may be the visual differentiation between the user-interface object and the background, based on color, hue, color saturation, brightness, contrast, transparency, and any combination thereof"); Appx-C, ¶208.

Accordingly, a POSITA would have at found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, during detection of at least another part of the gesture before the display of the view and the menu, a size of the object is pulsed***, as recited in [144]. Appx-C, ¶209.

31. Claim 145 Analysis

Beaumier and Chaudhri render obvious claim 145 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶210.

[145] The apparatus of claim 142, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the touch screen, a border is displayed around the object before the menu is displayed.

Claim [145] is substantially the same as Claim [131]. Appx-C, ¶210. The Beaumier-Chaudhri combination renders obvious Claim [145] for at least the same reasons described above with respect to Element [131]. *See* Element [131], *supra*; Appx-C, ¶210.

32. Claim 146 Analysis

Beaumier and Chaudhri render obvious claim 146 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶211.

[146] The apparatus of claim 142, wherein the apparatus is configured such that, based on the change in the magnitude of the gesture being detected on the

touch screen, at least one aspect of a border of the object is altered before the menu is displayed.

Claim [146] is substantially the same as Claim [132]. Appx-C, ¶211. The Beaumier-Chaudhri combination renders obvious Claim [146] for at least the same reasons described above with respect to Element [132]. *See* Element [132], *supra*; Appx-C, ¶211.

33. Claim 147 Analysis

Beaumier and Chaudhri render obvious claim 147 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶212-215.

[147] The apparatus of claim 142, wherein the apparatus is configured such that, when the completion of the gesture is detected while the magnitude, including the duration magnitude, of the gesture detected on the touch screen is detected to remain below the duration threshold, the interface is replaced with the another interface.

The Beaumier-Chaudhri combination renders obvious Claim [147].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available albums as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an album of interest. Appx-C, ¶213. An example of this process is illustrated below. Appx-C, ¶213.

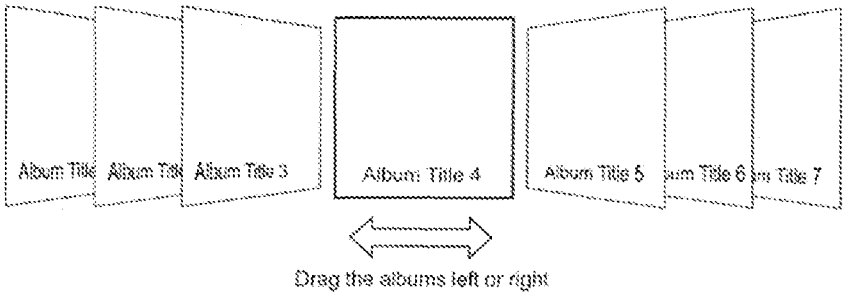


Fig. 6



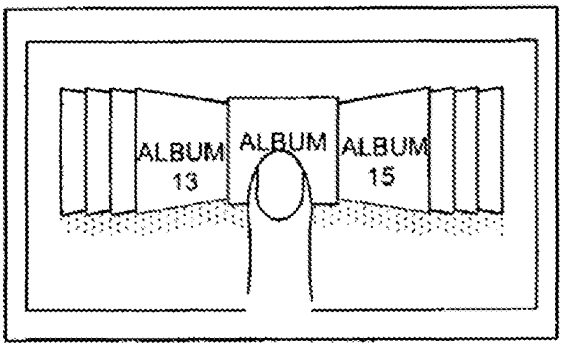


FIG. 23D

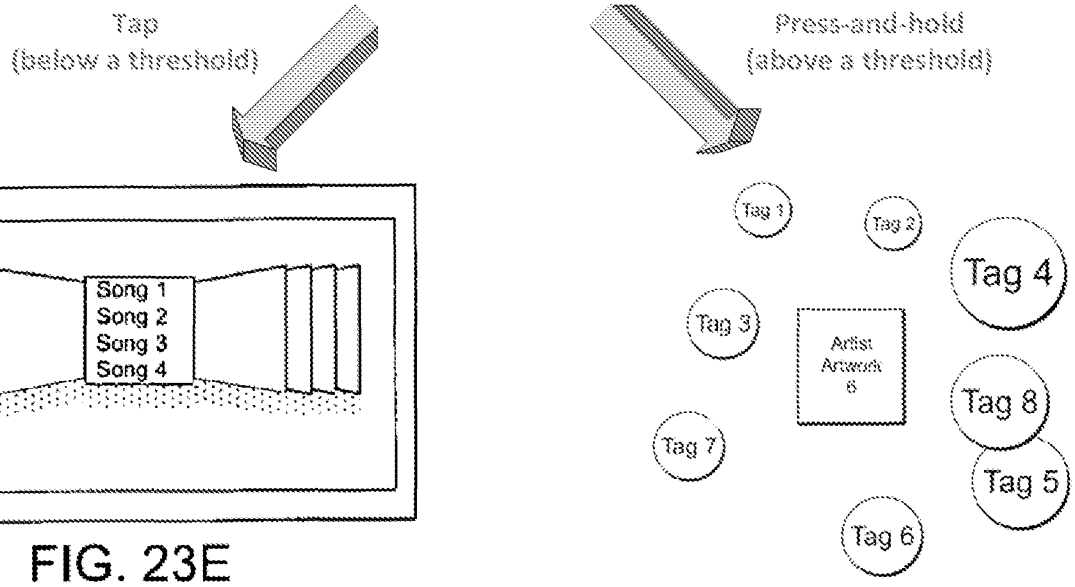


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Based on the teachings of Chaudhri, if "the user taps or presses their finger" on the album cover, the apparatus of the Beaumier-Chaudhri combination would present "a list of songs associated with the album" from the which the user may browse and select a song for addition to the playlist. *See* Appx-E, [0185]-[0203]. Thus, when the user performs a tap gesture, the album cover interface shown in FIG. 6 of Beaumier and FIG. 23A of Chaudhri is replaced by the song list interface shown in FIG. 23E of Chaudhri. Appx-E, [0189]-[0190]; Appx-C, ¶214. In fact, C teaches that, "[i]n some cases, [the list of songs] is an entirely new window (e.g., menu window)." Appx-E, [0190].

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, when the completion of the gesture is detected while the magnitude, including the duration magnitude, of the gesture detected on the touch screen is detected to remain below the duration threshold*** (e.g., the user performs a "tap" gesture with respect to an album)***, the interface is replaced with the another interface***, as recited in [147]. Appx-C, ¶215.

34. Claim 148 Analysis

Beaumier and Chaudhri render obvious claim 148 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶216.

[148] The apparatus of claim 142, wherein the apparatus is configured such that the object includes a hyperlink, the particular application includes a network

browser application, and the information includes at least a portion of a web page associated with the hyperlink.

Claim [148] is substantially the same as Claim [136]. Appx-C, ¶216. The Beaumier-Chaudhri combination renders obvious Claim [148] for at least the same reasons described above with respect to Element [136]. *See* Element [136], *supra*; Appx-C, ¶216.

35. Claim 150 Analysis

Beaumier and Chaudhri render obvious claim 150 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶217-220.

[150] The apparatus of claim 142, wherein the apparatus is configured such that the object includes a message item displayed with a list of message items, the particular application includes a communication application, and the information includes at least a portion of a message associated with the message item.

The Beaumier-Chaudhri combination renders obvious Claim [150].

For example, Beaumier describes that, "[o]nce authenticated, new collections such as playlists, favorite games, interrupted games, chat sessions, records of media consumption, high scores, etc., may become available as new possible collections to be presented as objects in the object viewer." Appx-D, [0059]. Further, Beaumier describes that "[c]ertain exemplary embodiments relate to an out-of-home entertainment center coupled with at least one Internet-based messaging system," and that the entertainment center "send[s] messages to said at least one Internet-based messaging system." Appx-D, [0205]. Beaumier does not

specify or limit the manner in which these chat and messaging sessions are displayed as objects by the jukebox. *See* Appx-D, [0059]; Appx-C, ¶218. Thus, a POSITA would have understood and found obvious that at least one way to display these chat sessions would have been as part of the objects displayed on the jukebox as described with respect to FIGS. 6 and 7 or with respect to FIG. 8b. Appx-C, ¶218.

While Beaumier does not specifically describe the use of a communication application, a POSITA would have understood and found obvious that a communication application would have been used in order to allow a user to view the messages described by Beaumier. Appx-C, ¶219. In fact, by providing an interface through which "new collections such as . . . chat sessions . . . may become available as new possible collections to be presented as objects in the object viewer." (*see* Appx-D, [0059]), a POSITA would have understood that the jukebox would have provided the functionality of a communication application. Appx-C, ¶219. And the use of communication applications to display messages on touchscreen devices was well known as of the Critical Date. *See, e.g.*, Appx-K, [0092], [0215]-[0300]; Appx-C, ¶219.

Accordingly, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the object includes a message item displayed with a list of message***

items, the particular application includes a communication application, and the information includes at least a portion of a message associated with the message item, as recited in [150]. Appx-C, ¶220.

36. Claim 151 Analysis

Beaumier and Chaudhri render obvious claim 151 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶221-245.

[151.a] The apparatus of claim 2, wherein the apparatus is configured such that: the gesture includes a press or tap gesture;

Element [151.a] is substantially the same as Element [123.a]. Appx-C, ¶221. The Beaumier-Chaudhri combination renders obvious Element [151.a] for at least the same reasons described above with respect to Element [123.a]. *See* Element [123.a], *supra*; Appx-C, ¶221.

[151.b] the object and the at least one other object are displayed via a home screen for choosing among a plurality of applications;

The Beaumier-Chaudhri combination renders obvious Element [151.b].

With respect to FIG. 7, Beaumier describes that, "[t]his sort of collection view mode may alter one of more of the images, video segments, and text that is/are presented as the representative of each song, albums, artists, games, or content sources." Appx-D, [0076]. Thus, in addition to browsing and playing music, Beaumier describes that the object may also represent "games" and other "content sources." Appx-D, [0076]; Appx-C, ¶223. In fact, Beaumier describes

that the "collection of content (e.g., music, video, advertisement, and/or other content)" is "arbitrary." Appx-D, [0057].

Beaumier describes that one of the other "content sources" may be "a link to the artist's homepage, Facebook or other social networking or other site also may be provided." *See* Appx-D, [0114]. A POSITA would have understood and found obvious that providing links to such sites on the jukebox presumes that a user would be able to select these links and access them on the jukebox. *See* Appx-D, [0114]; Appx-C, ¶224. Beaumier describes that another of these other "content sources" may be "at least one Internet-based messaging system and/or a social networking site," such that the system may "send messages to said at least one Internet-based messaging system." *See* Appx-D, [0205]; Appx-C, ¶224. Beaumier also describes that the jukebox "may use its network connection, e.g., to email, [or] text message," or to "initiate a voice or VoIP call." *See* Appx-D, [0145], [0149]. Thus, at the very least, Beaumier explicitly describes that the jukebox is able to (1) play audio, (2) play video, (3) browse websites and social networking sites, (4) connect to and send messages via an Internet-based messaging system and/or a social networking site, (4) e-mail, and (5) initiate a voice or VoIP call. Appx-C, ¶224.

A POSITA would have understood and found obvious that these various functionalities would have been associated with a plurality of applications. Appx-

C, ¶225. As discussed in Element [2.a], *supra*, Beaumier describes that "the jukebox devices have similar structure and operation described in U.S. Pat. No. 6,308,204" (i.e., Nathan). Appx-D, [0053]. Nathan describes that the jukebox includes a "multitask operating system comprises the essential component for allowing simultaneous execution of multiple code fragments and for managing priorities between the various tasks." Appx-F, 8:22-25. The operating system includes a number of modules that communicate with a number of application programming interfaces. Appx-F, 6:17-38; 8:26-32. "There are as many programming interfaces as there are applications." Appx-F, 8:32-33. In other words, like most computer systems, different tasks and functions are performed by different applications, which are managed by the multitasking operating system. Appx-C, ¶225. However, Beaumier leaves the implementation details of the applications that perform the various described tasks and functions to a POSITA. Appx-C, ¶225. Thus, a POSITA would have naturally turned to other references related to similar tasks and interfaces to provide examples of implementation details, including, for example, Chaudhri. Appx-C, ¶225.

Chaudhri describes various applications for carrying out the tasks and functions described by Beaumier, as well as other typical tasks and functions associated with touchscreen electronic devices. Appx-C, ¶226. FIG. 13 of Chaudhri illustrates an image-based browser 150 (nearly identical in form and

function to the browsers illustrated in FIGS. 6 and 7 of Beaumier) that is "associated with applications." Appx-E, [0143]. Chaudhri describes that "the images 152 are icons that represent applications that can be launched on the electronic device." Appx-E, [0143]. "By way of example, the application may be a photo management program, a music management program, a video management program, word processing program, spreadsheet program, drawing program, and the like." Appx-E, [0143].

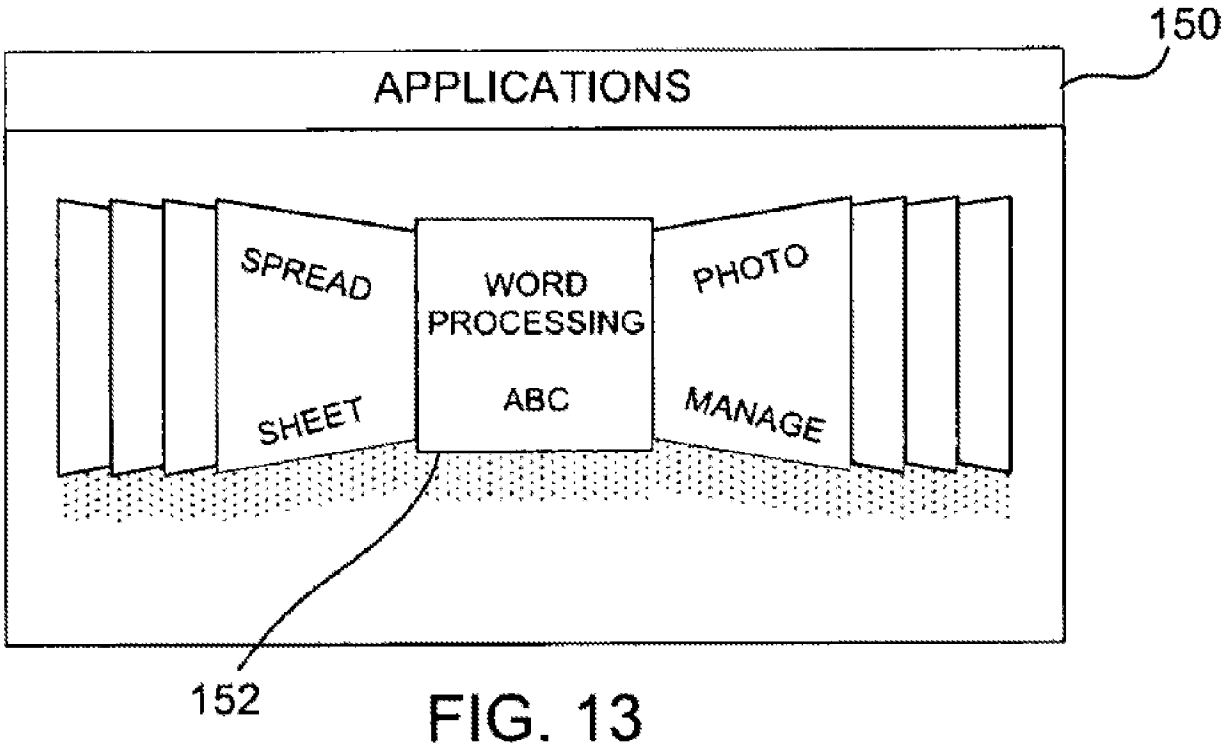


FIG. 13

Appx-E, FIG. 13

Chaudhri similarly describes the ability to switch between "modes," and "the modes may include email, video player, music player, game, phone, microphone, camera, game player and/or the like." Appx-E, [0146]. A POSITA would have

understood and found obvious that these various "modes" were well-known to be associated with different applications, such that performing functions associated with the "mode" would have naturally been accomplished through an application or program associated with the functionality (e.g., an email application, video player application, music player application, game application, phone application, etc.). *See, e.g.*, Appx-K, [0092] (describing a "device [that] supports a variety of applications, such as one or more of the following: a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a blogging application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application"), [0122]; Appx-C, ¶227.

Thus, together, Beaumier and Chaudhri describe scrollable, image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would

have naturally been accomplished through the launching of or interface with an associated application or program. Appx-C, ¶228.

A POSITA would have understood and found obvious that a scrollable browser that provides access to these various functionalities and associated applications is a "home screen." Appx-C, ¶229. A home screen is often associated with a "main" or "root" menu from which user may navigate the different functionalities of the device. *See, e.g.*, Appx-H, [0047]; Appx-K [0163], [0165]. In the context of Beaumier and Chaudhri, a POSITA would have understood that the "home screen" could have been implemented in at least a couple of different ways. Appx-C, ¶229. For example, with respect to FIG. 7 of Beaumier, a POSITA would have understood and found obvious that the multi-axis browser display would have been configurable to support navigation through the various functionalities (and associated applications) described by Beaumier and Chaudhri, such that each different card display associated with a different position on the Z-axis would have been associated with a different "mode" or "application" as described in Chaudhri's various figures, as illustrated below. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶229.

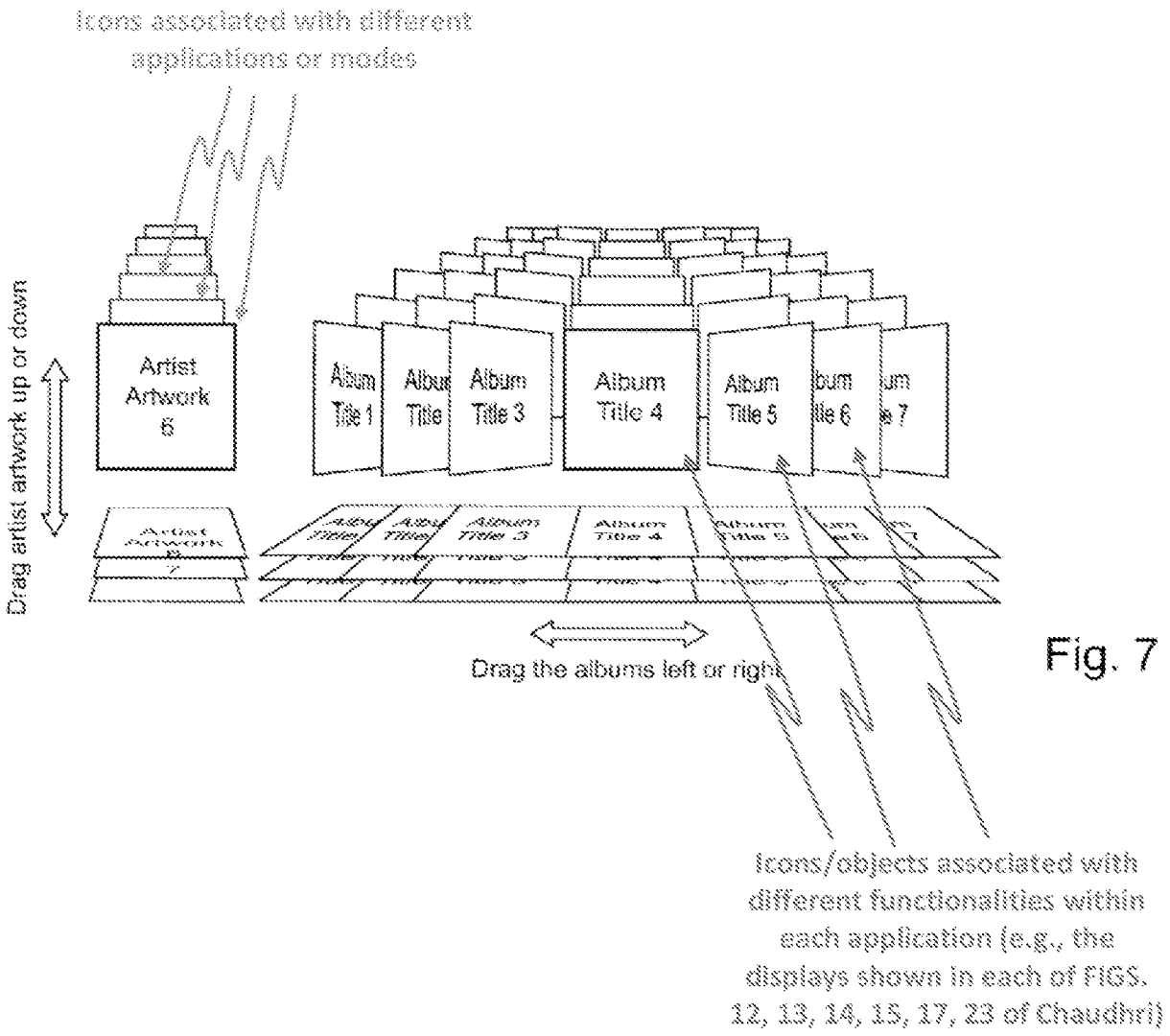
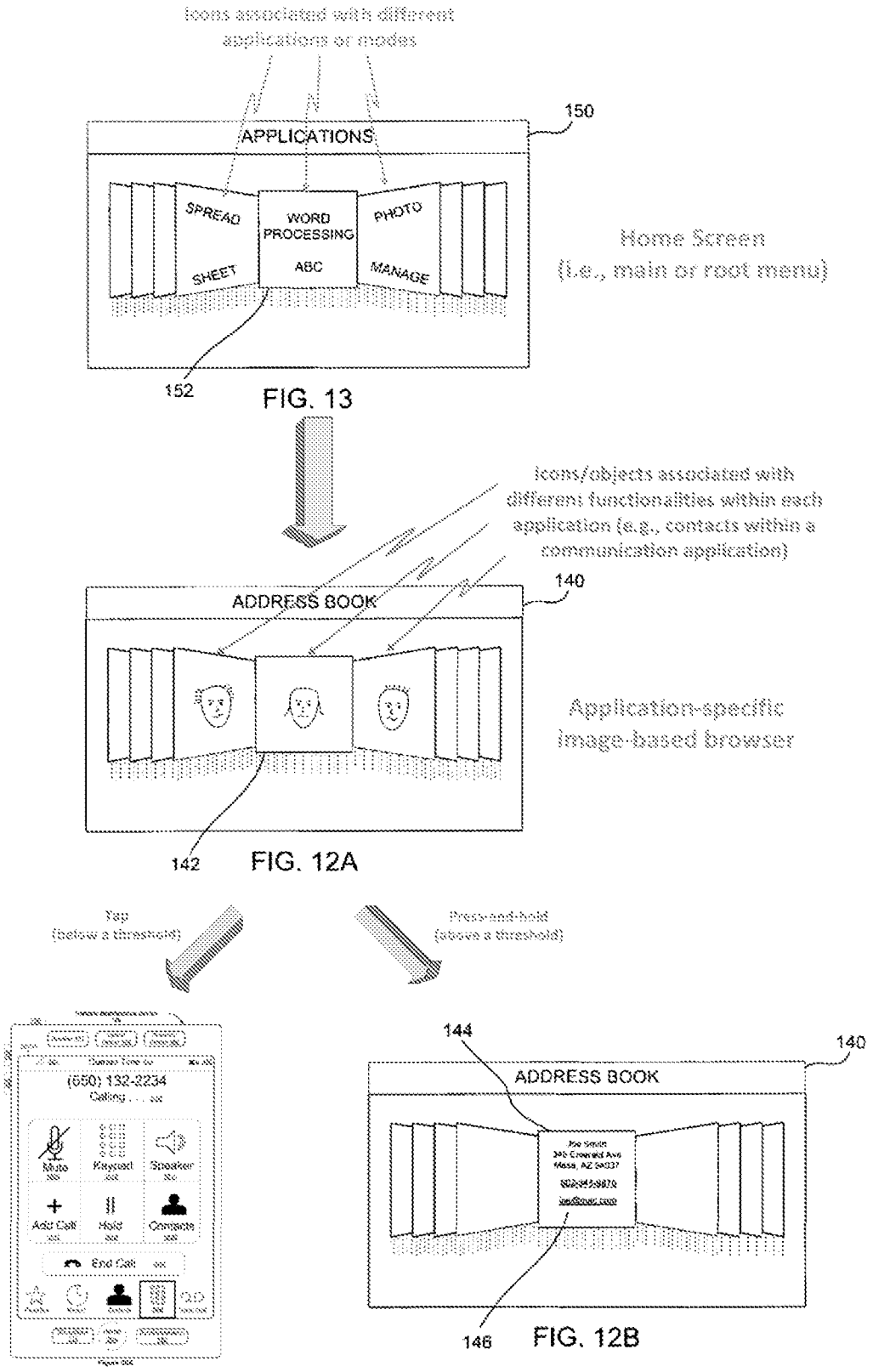


Fig. 7

Appx-D, FIG. 7 (Annotated)

Additionally or alternatively, the list of applications and/or functionalities within them may be displayed in a hierarchal fashion, like is shown in, for example, in FIGS. 14A-D of Chaudhri. *See* Appx-E, [0144]; Appx-C, ¶230. Thus, as the user makes a selection of a particular object or icon within a browser, the browser is replaced with a new browser representing another layer within the menu structure. *See* Appx-E, [0144], [0146] ("It should be appreciated that this browser

may be hierarchal with other browsers. For example, if the phone mode is selected then the browser shown in FIGS. 12A and 12B may be displayed. Alternatively, if the music player mode is selected, then the browser shown in FIG. 10 may be displayed."); Appx-C, ¶230. The figure below shows an example of such a hierarchical interface, beginning with a home screen for selecting between available applications and their associated functions. Appx-C, ¶230.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

In the above example, when a user opens the communication application, for example, they are presented with an address book, as described with respect to FIGS. 12A and 12B of Chaudhri. *See* Appx-E, [0142], [0143], [0146]; Appx-C, ¶231. From the image-browsing interface of the communication application, Chaudhri teaches that the user is presented with an address book of contacts. Appx-E, [0142]. Chaudhri describes several actions associated with a selection of a contact. *See* Appx-E, [0142]. For example, one action is that, "when the user selects the image 142 at the primary position, then contact information 144 associated with the image 142 is opened." Appx-E, [0142]. Another action is that "when the user selects the image 142 at the primary position, a default phone number associated with the image may be used to immediately initiate a phone call." Appx-E, [0142]. A POSITA would have understood and found obvious that the device would have been configured to perform these different actions in response to selections based on different gestures. *See* Appx-E [0086] (describing that the device is capable of detecting and distinguishing between multiple types of input), [0171] (describing different gestures that may be interpreted as a selection); Appx-C, ¶231. Thus, one gesture (*e.g.*, a tap) may "immediately initiate a phone call" and another gesture (*e.g.*, a press and hold or a swipe gesture) may open "contact information 144 associated with the image 142." *See* Appx-E, [0142], [0171]; Appx-C, ¶231.

Regardless of exactly how the browser structure is implemented, a POSITA would have understood from at least the above teachings of Beaumier and Chaudhri that a user would be presented with a "home screen" (*e.g.*, a root or main browser or menu, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri) that provides a user an ability to navigate and access the various functionalities available on the jukebox. Appx-C, ¶232.

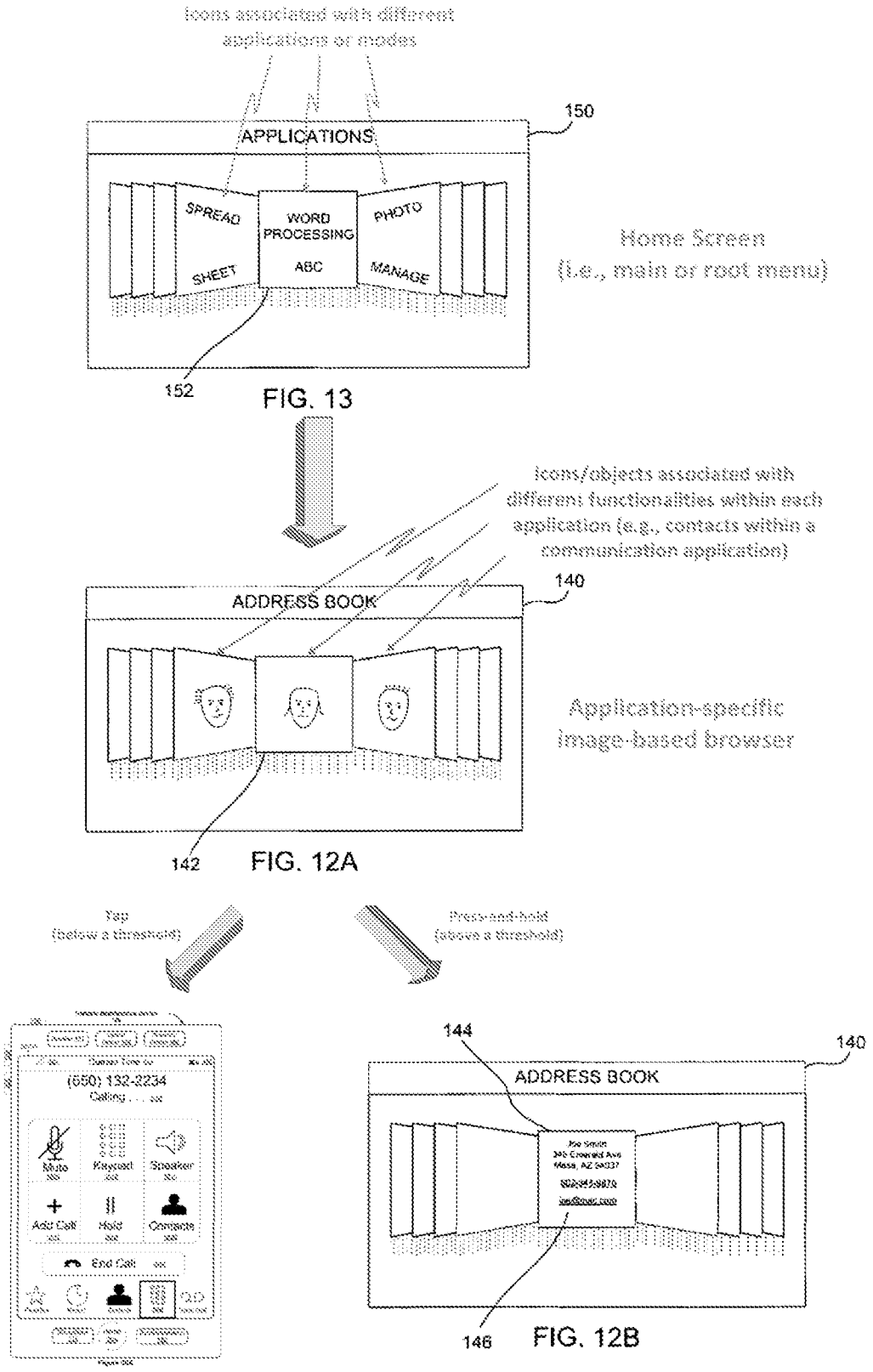
Based on at least the above-described teachings, a POSITA would have at least found it obvious that, in the apparatus of the Beaumier-Chaudhri combination, ***the object and the at least one other object are displayed via a home screen for choosing among a plurality of applications***, as recited in [151.b]. Appx-C, ¶233.

[151.c] the object is associated with a particular application;

The Beaumier-Chaudhri combination renders obvious Element [151.c].

As discussed above with respect to Element [151.b], together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a

plurality of applications and would have naturally been accomplished through the launching of or interface with an associated application or program. Appx-C, ¶235. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications, as illustrated below. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶235.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

In this example implementation of the browser described by Beaumier and Chaudhri, each object or icon would have been associated with functionalities within and associated with a corresponding application (*e.g.*, artists, albums, or songs within a music player application or different links or webpages within a network browser application). Appx-C, ¶236. Moreover, as discussed with respect to Element [123.b], *supra*, a POSITA would have understood that an application launcher application, such as the one shown in Chaudhri's FIG. 13, is an interface that itself includes interfaces (e.g., icons) associated with each of the applications that it is configured to launch. *See, e.g.* Appx-AA, 38:52-58, 42:15-23; Appx-C, ¶236. In this regard, a POSITA would have understood and found obvious that each of the application icons is both an interface of the application launcher application, as well as being associated with the application that it represents, not least because selection of the icon results in the application being launched. Appx-C, ¶236.

Based on at least the above-described teachings, a POSITA would have at least found it obvious that, in the apparatus of the Beaumier-Chaudhri combination, ***the object*** (*e.g.*, an application icon object displayed in the image browser illustrated in Chaudhri's FIG. 13) ***is associated with a particular application*** (*e.g.*, the icon is an interface that is associated with the application that the icon itself represents), as recited in [151.c]. Appx-C, ¶237.

[151.d] the at least part of the gesture on the touch screen is detected on the object; and

The Beaumier-Chaudhri combination renders obvious Element [151.d].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available objects/icons displayed within the browser (e.g., albums) as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an object/icon of interest. Appx-C, ¶239. An example of this process is illustrated below. Appx-C, ¶239.

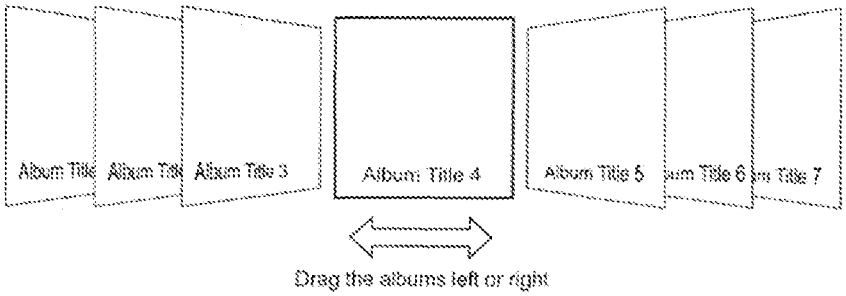


Fig. 6

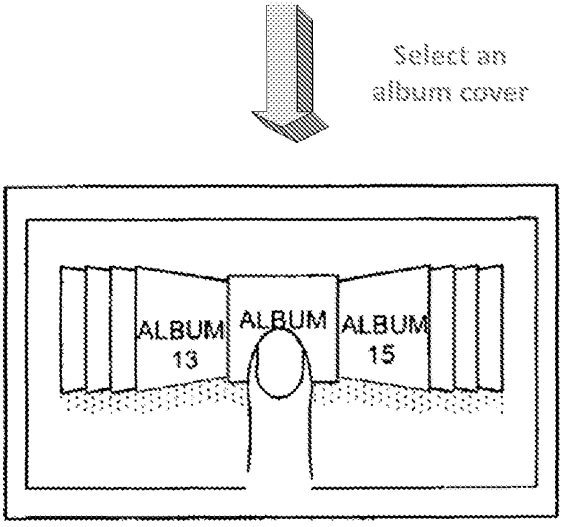


FIG. 23D

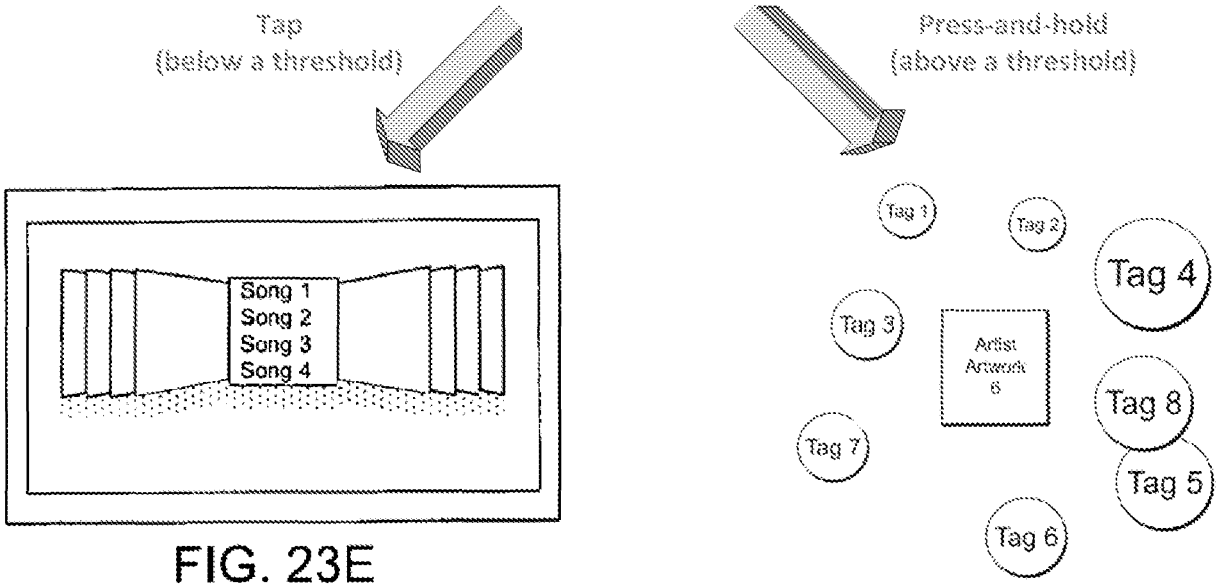


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

A POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, a user touching his/her finger down on the touch screen on an object/icon (e.g., an album), and either lifting the finger off the touch screen under a time threshold (*i.e.*, a tap) or holding it on the screen over a time threshold (*i.e.*, a press-and-hold), are each gestures on the touchscreen. Appx-C, ¶240. Accordingly, POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, ***the at least part of the gesture on the touch screen is detected on the object*** (*e.g.*, on the album being selected by the user), as recited in [151.d]. Appx-C, ¶240.

[151.e] in response to the completion of the gesture being detected while the magnitude, including a duration magnitude, of the gesture detected on the touch screen is detected to remain below a duration threshold, information associated with the object is opened utilizing another interface associated with the particular application.

The Beaumier-Chaudhri combination renders obvious Element [151.e].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available objects/icons displayed within the browser (e.g., albums) as described with respect to FIGS. 6 and 7 of Beaumier, a user would have at least two selection options when they found an object/icon of interest. Appx-C, ¶242. An example of this process is illustrated below. Appx-C, ¶242.

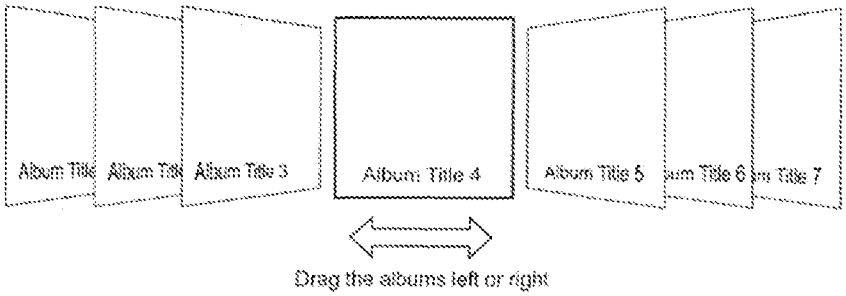
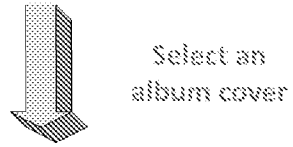


Fig. 6



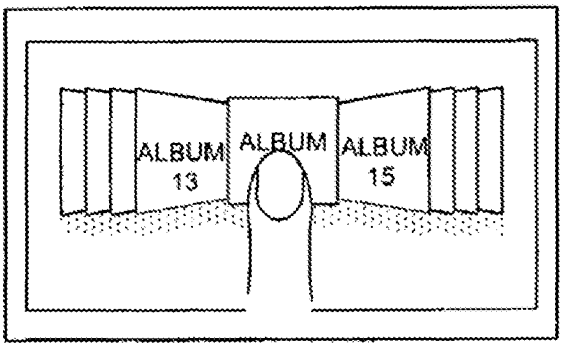


FIG. 23D

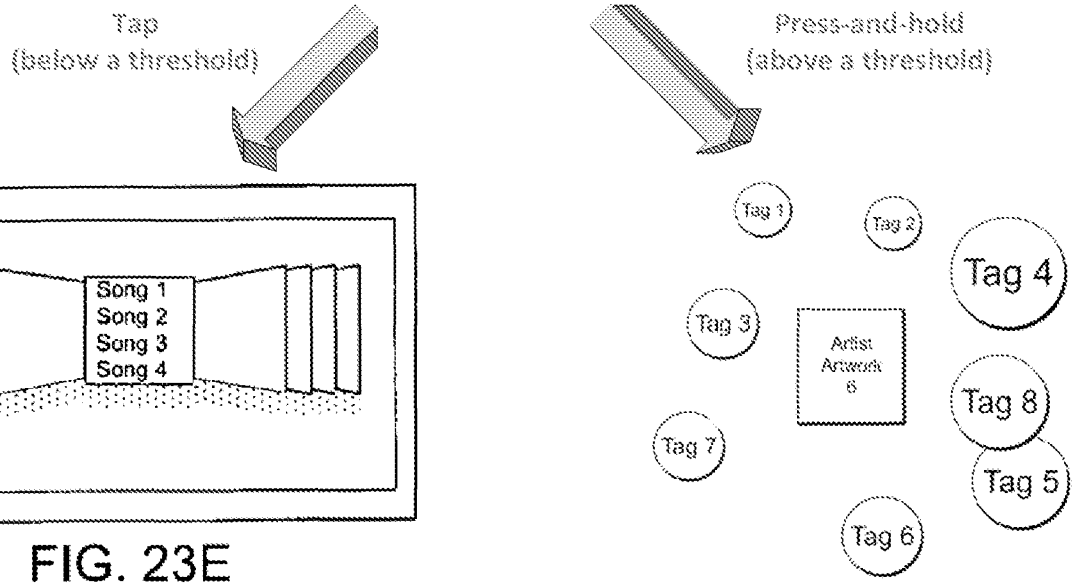


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Based on the teachings of Chaudhri, if "the user taps or presses their finger" on the album cover, the jukebox would present "a list of songs associated with the album" from the which the user may browse and select a song for addition to the playlist. *See* Appx-E, [0185]-[0203]. As shown in FIG. 23E, the list of songs associated with the album is displayed in place of the album's cover art. *See* Appx-E, FIG. 23E, [0190]; Appx-C, ¶243. Because this is a new display of information within the particular application responsible for the various user interface displays in Beaumier's jukebox, the list of songs shown in FIG. 23E is "another interface associated with the particular application," particularly as compared to the previous interface that displayed the album's cover artwork at the same location. *Compare* Appx-E, FIG. 23A *to* FIG. 23E; Appx-C, ¶243. Accordingly, a POSITA would have understood that displaying "a list of songs associated with the album," as described by Chaudhri and illustrated in FIG. 23E, ***is information associated with the object*** (*e.g.*, songs associated with the album that was displayed prior to the user's tap gesture) ***[being] opened utilizing another interface associated with the particular application***, as recited in [151.e]. Appx-C, ¶243.

Further, a POSITA would have understood and found obvious to configure the jukebox to differentiate between a "tap" gesture described by Chaudhri and a "press-and-hold" gesture described by Beaumier based on whether the length of

time that a user's finger is engaged with the touchscreen is either less than the "predefined threshold" described by Beaumier or greater than the "predefined threshold." *See* Appx-D, [0084]; Appx-E, [0086] (recognizing the difference between a "tap" and a "hold" gesture), [0189]-[0190] (describing a "tap" on an album object); Appx-C, ¶244.

Accordingly, in the Beaumier-Chaudhri combination, it would have at least been obvious that, ***in response to the completion of the gesture being detected while the magnitude, including a duration magnitude, of the gesture detected on the touch screen is detected to remain below a duration threshold*** (*e.g.*, detecting a "tap" on an album cover by determining that the amount of time a user's finger remains engaged with the touch screen is below a "predefined threshold"), ***information associated with the object is opened utilizing another interface associated with the particular application***, as recited in [151.e]. Appx-C, ¶245.

37. Claim 152 Analysis

Beaumier and Chaudhri render obvious claim 152 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶246-247.

[152.a] The apparatus of claim 151, wherein the apparatus is configured such that, when the duration magnitude of the gesture detected on the touch screen on the object is detected to increase above the duration threshold, a menu is displayed including at least one option for performing at least one action;

Element [152.a] is substantially the same Claim [101] and at least a portion of Element [125.a]. Appx-C, ¶246. The Beaumier-Chaudhri combination renders

obvious Element [152.a] for at least the same reasons described above with respect to Claim [101] and Element [125.a]. *See* Claim [101], Element [125.a] *supra*; Appx-C, ¶246.

[152.b] where the menu is displayed in a first virtual display layer that appears above a second virtual display layer including at least portion of the home screen, including the at least portion of the at least one other object, that is blurred.

Element [152.b] is substantially the same as at least a portion of Element [125.b]. Appx-C, ¶247. The Beaumier-Chaudhri combination renders obvious Element [152.b] for at least the same reasons described above with respect to Element [125.b]. *See* Element [125.b], *supra*; Appx-C, ¶247.

38. Claim 153 Analysis

Beaumier and Chaudhri render obvious claim 153 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶248-250.

[153] The apparatus of claim 152, wherein the apparatus is configured such that the object includes an application icon.

The Beaumier-Chaudhri combination renders obvious Claim [153].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social

networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶249. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶249.

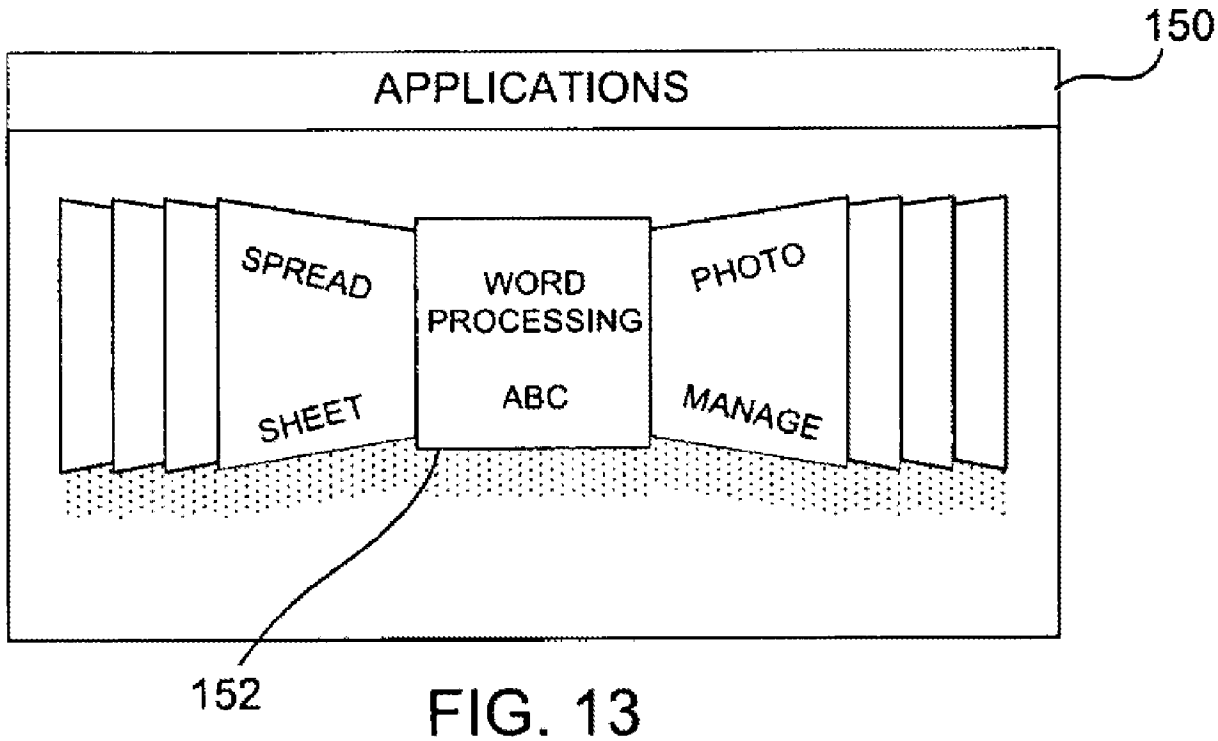


FIG. 13

Appx-E, FIG. 13

Based on at least the above-described teachings, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination

would have ***been configured such that the object includes an application icon***, as recited in [153]. Appx-C, ¶250.

39. Claim 154 Analysis

Beaumier and Chaudhri render obvious claim 154 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶251.

[154] The apparatus of claim 152, wherein the apparatus is configured such that, when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, a view of the information associated with the object is displayed simultaneously with the menu.

Claim [154] is substantially the same as at least a portion of Element [125.a]. Appx-C, ¶251. The Beaumier-Chaudhri combination renders obvious Claim [154] for at least the same reasons described above with respect to Element [125.a]. *See* Element [125.a], *supra*; Appx-C, ¶251.

40. Claim 155 Analysis

Beaumier and Chaudhri render obvious claim 155 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶252.

[155] The apparatus of claim 154, wherein the apparatus is configured such that the view includes a preview.

Claim [155] is substantially the same as Claim [127]. Appx-C, ¶252. The Beaumier-Chaudhri combination renders obvious Claim [155] for at least the same reasons described above with respect to Claim [127]. *See* Claim [127], *supra*; Appx-C, ¶252.

41. Claim 156 Analysis

Beaumier and Chaudhri render obvious claim 156 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶253.

[156] The apparatus of claim 154, wherein the apparatus is configured such that, during detection of at least another part of the gesture before the completion thereof is detected, a size of the object is pulsed before the view and the menu are displayed.

Claim [156] is substantially the same as Claims [110] and [144]. Appx-C, ¶253. The Beaumier-Chaudhri combination renders obvious Claim [156] for at least the same reasons described above with respect to Claims [110] and [144]. *See* Claims [110], [144], *supra*; Appx-C, ¶253.

42. Claim 157 Analysis

Beaumier and Chaudhri render obvious claim 157 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶254.

[157] The apparatus of claim 154, wherein the apparatus is configured such that, during detection of at least another part of the gesture before the completion thereof is detected, a size of the object is pulsed before the view and the menu are displayed.

Claim [157] is substantially the same as Claims [110] and [144]. Appx-C, ¶254. The Beaumier-Chaudhri combination renders obvious Claim [157] for at least the same reasons described above with respect to Claims [110] and [144]. *See* Claims [110], [144], *supra*; Appx-C, ¶254.

43. Claim 158 Analysis

Beaumier and Chaudhri render obvious claim 157 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶255-258.

[158] The apparatus of claim 154, wherein the apparatus is configured such that the view and the menu are displayed by being faded in.

The Beaumier-Chaudhri combination renders obvious Claim [158].

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127].

Beaumier describes that these browsing displays are designed "to simulate a more three-dimensional look-and-feel, and provide more of a sense of immersion when interacting with the user interface." Appx-D, [0075]. This interactive and immersive experience is facilitated by "the displayed items (e.g., album jackets or other identifiers) being updated as the user interacts with the display," and may additionally include the application of "size, color, blurriness, and/or other

effects." Appx-D, [0077]. Further, Beaumier describes that the display of pop-up screens "may be accompanied by the blurring, fading, and/or reduction to grayscale of user interface elements behind the popup screen." Appx-D, [0173]. Based on these teachings, a POSITA would have understood and found obvious that these various effects would have been applied dynamically to better create the "immersive" experience sought by Beaumier. Appx-C, ¶257. Indeed, it was well known that, during transitions between user interface states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a) to "fade in" objects associated with the new user interface state and "fade out" objects associated with the old user interface state. *See, e.g.*, Appx-H, [0079]-[0088]; Appx-C, ¶257.

Based on at least the above-described teachings, a POSITA would have understood and found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the view and the menu are displayed by being faded in***, as recited in [158]. Appx-C, ¶258.

44. Claim 159 Analysis

Beaumier and Chaudhri render obvious claim 159 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶259.

[159] The apparatus of claim 154, wherein the apparatus is configured such that the view and the menu are displayed by being sharpened and magnified.

Claim [159] is substantially the same as Claim [134]. Appx-C, ¶259. The Beaumier-Chaudhri combination renders obvious Claim [159] for at least the same reasons described above with respect to Claim [134]. *See* Claim [134], *supra*; Appx-C, ¶259.

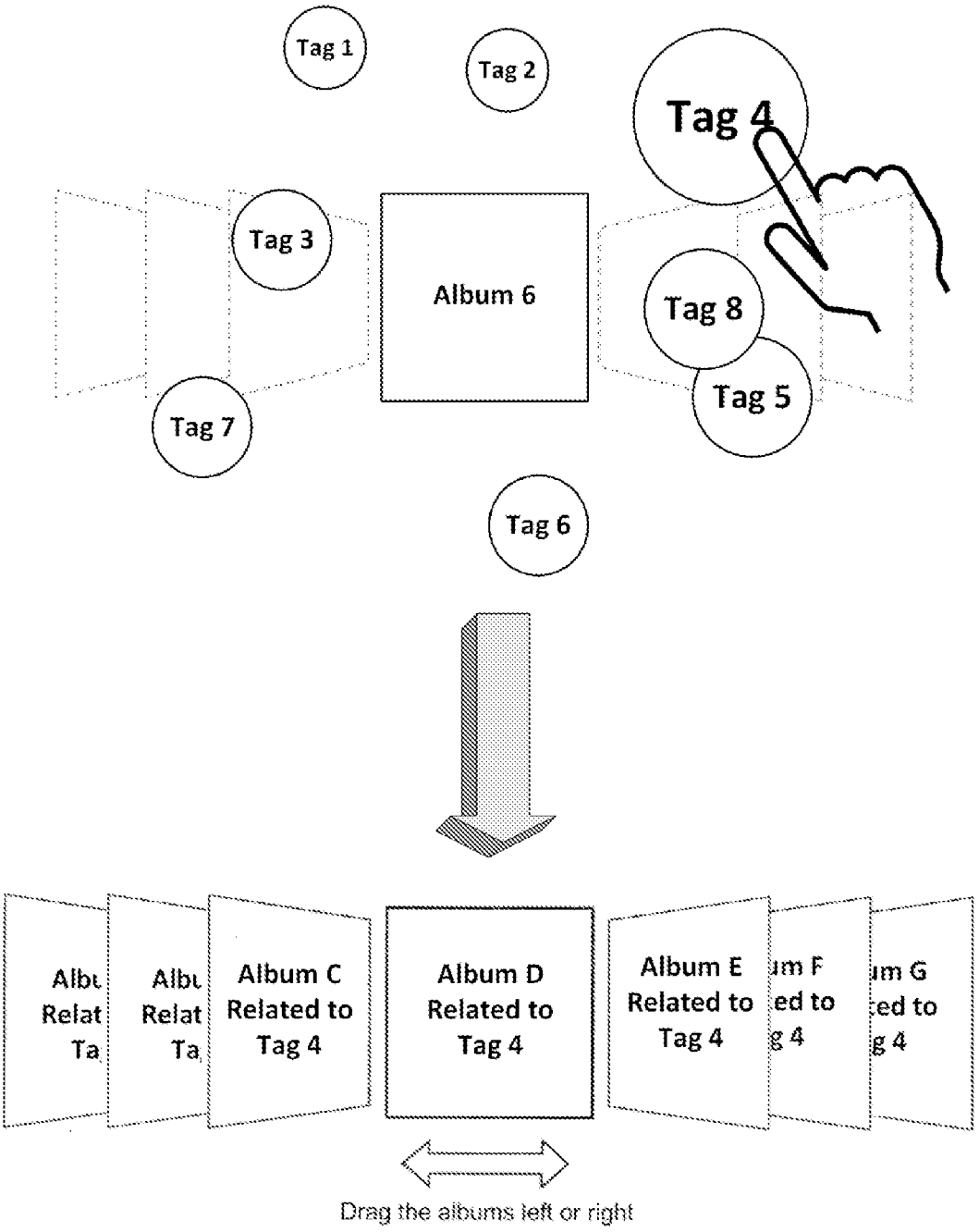
45. Claim 160 Analysis

Beaumier and Chaudhri render obvious claim 160 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶260-263.

[160] The apparatus of claim 152, wherein the apparatus is configured such that the at least one action is performed on the object.

The Beaumier-Chaudhri combination renders obvious Claim [160].

As discussed with respect to Claim [101], *supra*, in the case of FIG. 8a, Beaumier's tags are a form of menu. Appx-C, ¶261. Beaumier describes that "[c]licking on one floating object may in certain exemplary embodiments display more music objects sharing the same tag." Appx-D, [0086]. "For example, clicking on tag 3 in FIG. 8a may present a collection of artists filtered by tag 3 using a user interface depicted in FIG. 6." Appx-D, [0086]. In other words, as illustrated below, when a user clicks on one of the tags shown in FIG. 8a, the interface depicted in FIG. 8a is replaced with the interface depicted in FIG. 6, such that an action is performed on the album (*i.e.*, the object) to display a collection of artists filtered by the clicked tag. Appx-C, ¶261.



In other words, by clicking the tag, the action of replacing the displayed music objects with a new set of music objects filtered by the clicked tag is performed on the album (i.e., the object). Appx-C, ¶262.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one action is performed on the object***, as recited in [160]. Appx-C, ¶263.

46. Claim 161 Analysis

Beaumier and Chaudhri render obvious claim 161 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶264-269.

[161] The apparatus of claim 152, wherein the apparatus is configured such that the at least one action is performed on the information associated with the object.

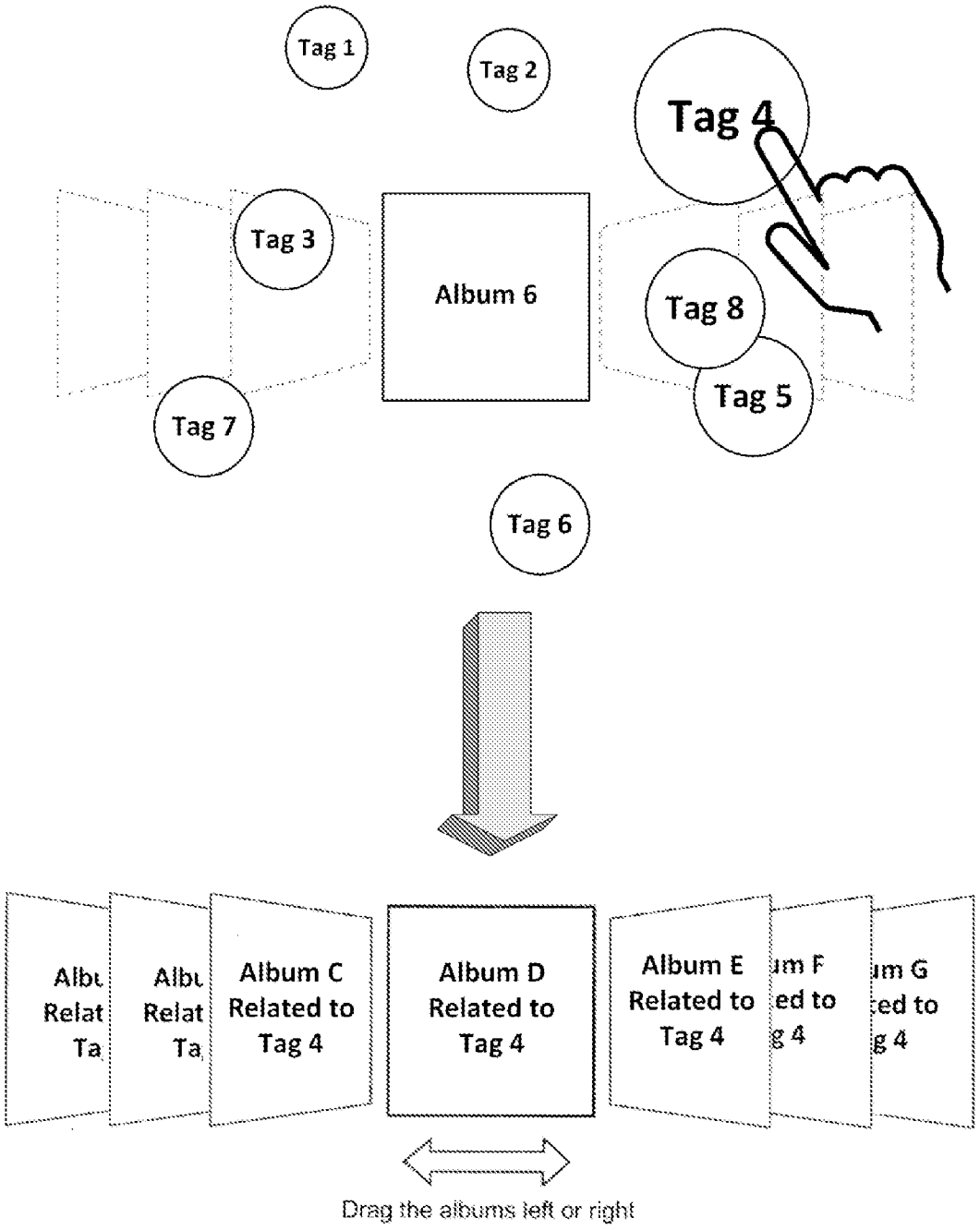
The Beaumier-Chaudhri combination renders obvious Claim [161].

As discussed with respect to Element [151.e], *supra*, a song name is "the information." Appx-C, ¶265. In certain circumstances, at least some of the tags that are displayed as a result of a press and hold gesture may include the same information as is displayed when a user taps the album cover (*e.g.*, one or more song titles/names). Appx-C, ¶265. According to Beaumier, "[f]or music, metadata and/or tags may be representative of information including, for example, artist name, album name, song name, genre/style (which may be hierarchical in some instances), Billboard position (when applicable), release year, popularity based on network plays information, lyrics, tempo, beats per minute (BPM), mood, instrumental characteristics (e.g., strident electric guitars, booming drums, twangy

guitar, etc.), vocal characteristics (e.g., aggressive, prominent vocal harmonies, screaming, etc.), intensity characteristics (e.g., high energy, moderate, laid back, etc.) timbre (e.g., bright, dark, rich, etc.), and/or the like." Appx-D, [0203]. Thus, in at least some situations, one or more of the tags displayed when a user presses and holds the album cover may also be song names included on the album. *See* Appx-D, [0203]; Appx-C, ¶265.

This may be the case, for example, where a song is a cover that has been performed by multiple artists, such that tapping on the song name would result in a filtered list artists who have also performed versions of the same song. Appx-C, ¶266. Beaumier describes that "[c]licking on one floating object may in certain exemplary embodiments display more music objects sharing the same tag." Appx-D, [0086]. "For example, clicking on tag 3 in FIG. 8a may present a collection of artists filtered by tag 3 using a user interface depicted in FIG. 6." Appx-D, [0086]. Thus, a POSITA would have understood and found obvious that clicking on a tag that includes a "song name" associated with the album would have resulted in "may present a collection of artists filtered by" that song name. Appx-C, ¶266.

As discussed with respect to Claim [160], *supra*, when a user clicks on one of the tags shown in FIG. 8a, the interface depicted in FIG. 8a is replaced with the interface depicted in FIG. 6, such that an action is performed on the album (i.e., the object) to display of artists filtered by the clicked tag. Appx-C, ¶267.



In other words, by clicking the tag, the action of replacing the displayed music objects with a new set of music objects filtered by the clicked tag is performed on the tags and the information displayed in them (*i.e.*, information associated with the object). Appx-C, ¶268.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one action is performed on the information associated with the object,*** as recited in [161]. Appx-C, ¶269.

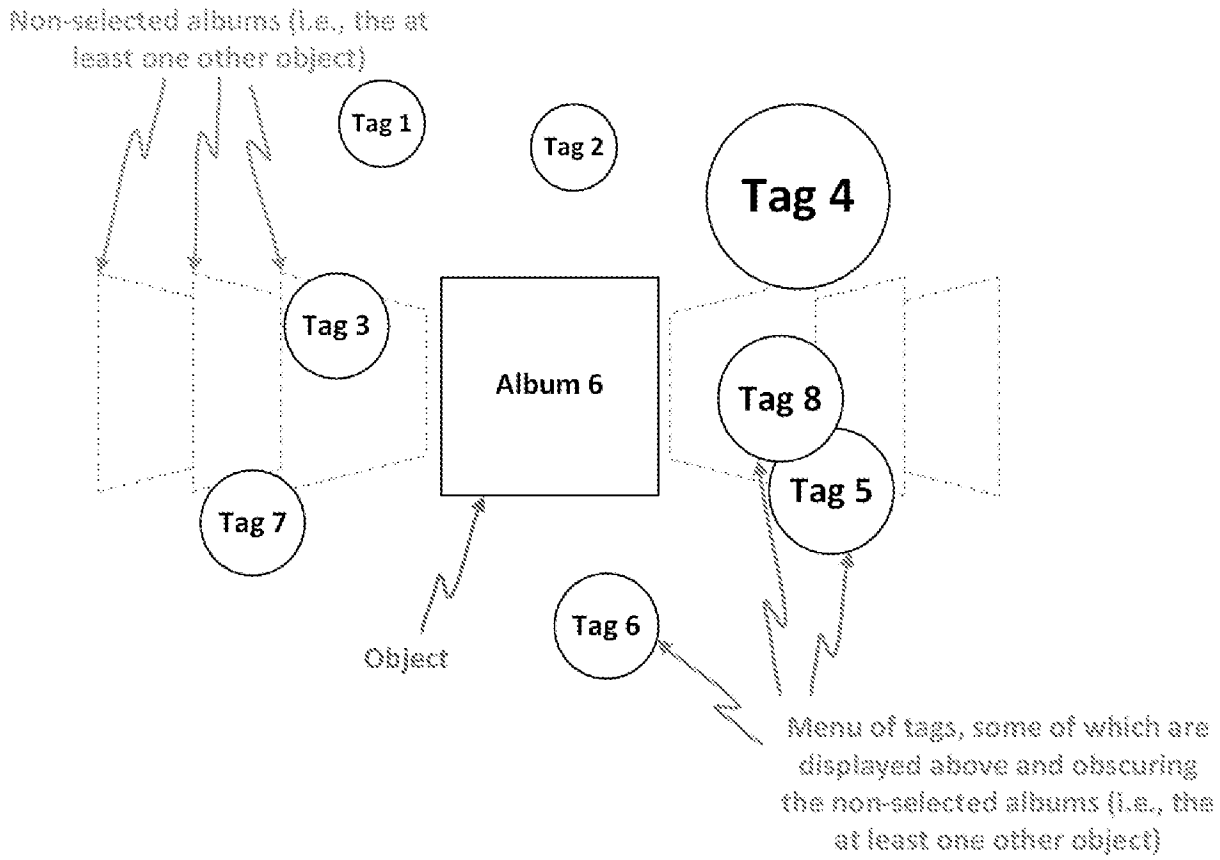
47. Claim 162 Analysis

Beaumier and Chaudhri render obvious claim 162 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶270-275.

[162] The apparatus of claim 152, wherein the apparatus is configured such that the at least portion of the at least one other object is blurred, by at least a portion of the menu in the first virtual display layer at least partially obscuring the at least portion of the at least one other object while the at least portion of the menu in the first virtual display layer is displayed as being at least partially translucent.

The Beaumier-Chaudhri combination renders obvious Claim [162].

As discussed with respect to Element [2.d], *supra*, a POSITA would have understood and found obvious that when a user presses and holds an album cover and various tags are displayed as shown and described with respect to FIG. 8a of Beaumier, the other albums being displayed (*e.g.*, in FIG. 6 or 7) would have been blurred to help bring focus to the selected album and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶271. An example of this is provided below, where the blurred background albums are shown with dotted lines, consistent with Beaumier's FIG. 22c and its related teachings. *See* Appx-D, [0127]; Appx-C, ¶271.



In this example implementation, the tags are being shown to be "above" or "on top of" the albums below, which have been blurred (as discussed with respect to Element [2.d], *supra*). Appx-C, ¶272. As discussed with respect to Elements [125.a] and [125.b], *supra*, a POSITA would have understood and found obvious that Beaumier's tags are a form of menu and that these tags would have been displayed in one or more virtual layers "above" the one or more virtual layers in which the other albums that were not selected are displayed in. Appx-C, ¶272.

As discussed with respect to Element [2.d], Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived

by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127]. Similarly, Chaudhri describes that, "[w]hen rendering the images on a display device, the controller 52 can [] produce transitions, animations, shadows, reflections or other visual effects." Appx-E, [0098]. Chaudhri describes that, to create certain of these visual effects, its apparatus is capable of "altering the transparency" and even creating transparency gradients, such that images are "semi-transparent at the top to fully transparent at the bottom." Appx-E, [0114]. Chaudhri describes that these visual effects help create the 3D visual effect of the image browser and "has the advantage of simulating flipping through an actual bin of albums." Appx-E, [0012]-[0114], [0187]. Thus, in order to help focus the user's attention and provide a more engaging browsing experience, Beaumier and Chaudhri describe applying various visual effects, such as blurring, fading, and transparency to various of the displayed object. Appx-C, ¶273. A POSITA would have found it an obvious aesthetic design choice to apply any one or a combination of these visual effects to any of

the displayed objects or portions thereof. Appx-C, ¶273; *see* MPEP § 2144.04(I) (discussing the obviousness of aesthetic design changes).

In fact it was well known to utilize varying levels of transparency to help focus a user's attention on the most relevant aspects of a user interface. *See* Appx-G, 2 ("The layers' transparency can be changed so that the background (context) can be more or less visible. The less detailed layers are blurred so as to not distract the viewer, but serve as context."); Appx-C, ¶274. And it was known to specifically make menus transparent or translucent so that other objects displayed as part of the user interface are not completely "hidden by the pop-up menu window." Appx-M, [0039], [0070]; Appx-C, ¶274.

Based on at least these teachings, a POSITA would have found it at least an obvious aesthetic design choice that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least portion of the at least one other object is blurred, by at least a portion of the menu in the first virtual display layer at least partially obscuring the at least portion of the at least one other object while the at least portion of the menu in the first virtual display layer is displayed as being at least partially translucent***, as recited in [162]. Appx-C, ¶275.

48. Claim 163 Analysis

Beaumier and Chaudhri render obvious claim 163 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶276-280.

[163] The apparatus of claim 152, wherein the apparatus is configured such that the at least one option is displayed, without necessitating prior launch of the particular application.

The Beaumier-Chaudhri combination renders obvious Claim [163].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶277. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶277.

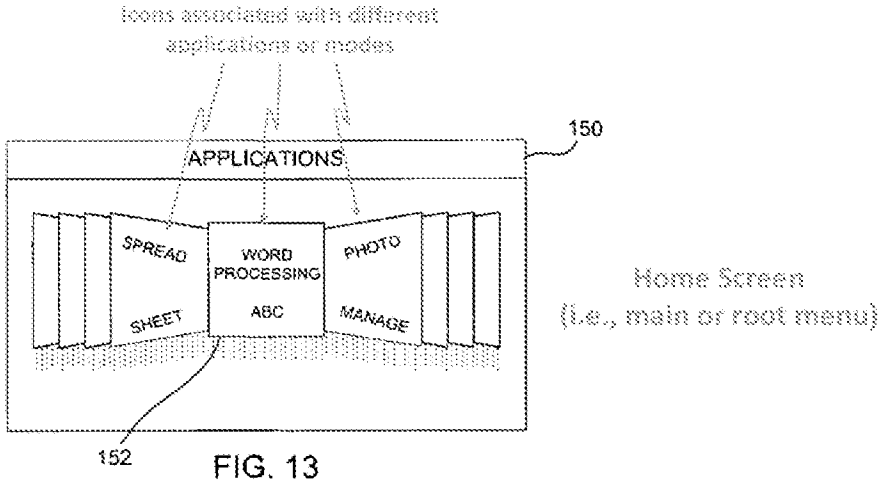


FIG. 13

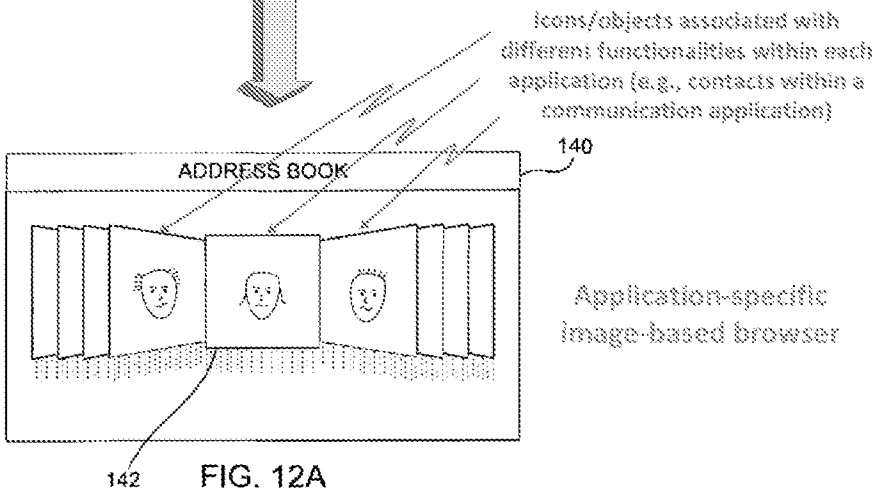


FIG. 12A

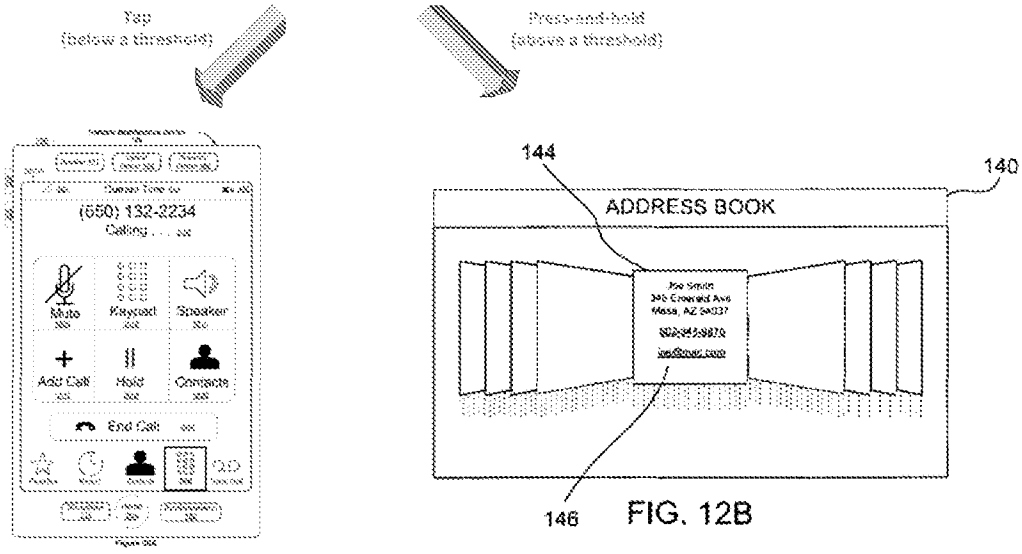


FIG. 12B

Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

As discussed with respect to Element [2.d], *supra*, Beaumier teaches that, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D, [0084], [0127]. As discussed with respect to Element [125.a], *supra*, a POSITA would have understood and found obvious that Beaumier's tags are a form of menu and that it would have been an obvious rearrangement of parts and aesthetic design choice to alternatively display the information and options in a sequential list of options or any other suitable menu format. *See, e.g.*, Appx-E, [0103] (describing that list menus of text and image browsing menus may be used interchangeably and alternatively), [0105] (describing that list menus of text and image browsing menus may be used together with one another), [0233] (showing a transition between a vertical text-based list menu and a horizontal image-based browser menu); Appx-K, FIG. 14, [0369] (describing the opening of a menu of options based on a tap gesture), [0581] (describing the opening of a menu of "additional" options based on tapping an icon); Appx-C, ¶278; *see* MPEP §§ 2144.04(I), 2144.04(V)(C).

While Beaumier does not specifically describe a situation where a user presses and holds selectable objects other than an album cover, a POSITA would have understood and found it obvious that a press and hold gesture would have

resulted in a similar display of information and options related to the selected object (*e.g.*, information and options related to an application in the application browser shown in FIG. 13 of Chaudhri). *See* Appx-D, [0084]-[0086]; Appx-C, ¶279. Chaudhri describes launching applications associated with the menu of images after the user has selected an option. *See, e.g.*, Appx-E, [0097] ("By way of example, a user may select a button that opens, closes, minimizes, or maximizes a window, or an icon that launches a particular application or functionality."), [0121] ("If the desired image has been selected, then the method 100 proceeds to block 106 where an action associated with the image is performed. This may for example include opening a menu, playing a media file, launching an application, initiating a mode, enlarging an image, initiating a phone call, opening another browser, and/or the like."). Based at least on these teachings, a POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, when a user presses and holds one of the objects displayed, for example, in the imaging browsing interface illustrated in FIG. 13 of Chaudhri (reproduced above), a menu of information and options associated with the object would be displayed over the browser, and when a user selects an appropriate option, an associated action would be taken (*e.g.*, an application associated with the object and option may be launched). Appx-C, ¶279. As described with respect to [123.b], *supra*, each of the icons associated with an application in the imaging browsing interface

illustrated in FIG. 13 of Chaudhri is both an interface of the application launcher application, as well as an interface of the application that it represents, because selection of the icon results in the application being launched. Appx-C, ¶279. Because the icons are an interface of the application launcher application, a POSITA would have understood and found obvious that the menu of options would be displayed by and within the application launcher application and that the applications with which each icon is associated need not themselves be launched prior to the at least one option being displayed in the application launcher application. Appx-C, ¶279.

Accordingly, based at least on the above discussed teachings, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one option is displayed, without necessitating prior launch of the particular application***, as recited in [163]. Appx-C, ¶280.

49. Claim 164 Analysis

Beaumier and Chaudhri render obvious claim 164 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶281-285.

[164] The apparatus of claim 151, wherein the apparatus is configured such that the information associated with the object is opened utilizing the interface associated with the particular application, by the home screen being replaced with the interface.

The Beaumier-Chaudhri combination renders obvious Claim [164].

As discussed with respect to Element [2.d] and Claim [163], *supra*, Beaumier teaches that, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album are displayed. *See* Appx-D, [0084], [0127]. As discussed with respect to Element [125.a], *supra*, a POSITA would have understood and found obvious that Beaumier's tags are a form of menu and that it would have been an obvious rearrangement of parts and aesthetic design choice to alternatively display the information and options in a sequential list of options or any other suitable menu format. *See, e.g.*, Appx-E, [0103] (describing that list menus of text and image browsing menus may be used interchangeably and alternatively), [0105] (describing that list menus of text and image browsing menus may be used together with one another), [0233] (showing a transition between a vertical text-based list menu and a horizontal image-based browser menu); Appx-K, FIG. 14, [0369] (describing the opening of a menu of options based on a tap gesture), [0581] (describing the opening of a menu of "additional" options based on tapping an icon); Appx-C, ¶282; *see* MPEP §§ 2144.04(I), 2144.04(V)(C).

As discussed with respect to Claim [163], *supra*, while Beaumier does not specifically describe a situation where a user presses and holds selectable objects other than an album cover, a POSITA would have understood and found it obvious

that a press and hold gesture would have resulted in a similar display of information and options related to the selected object (*e.g.*, information and options related to a video or a contact in a contact book). *See* Appx-D, [0084]-[0086]; Appx-C, ¶283. Chaudhri describes launching applications associated with the menu of images after the user has selected an option. *See, e.g.*, Appx-E, [0097] ("By way of example, a user may select a button that opens, closes, minimizes, or maximizes a window, or an icon that launches a particular application or functionality."), [0121] ("If the desired image has been selected, then the method 100 proceeds to block 106 where an action associated with the image is performed. This may for example include opening a menu, playing a media file, launching an application, initiating a mode, enlarging an image, initiating a phone call, opening another browser, and/or the like."). Based at least on these teachings, a POSITA would have understood and found obvious that, in the Beaumier-Chaudhri combination, when a user presses and holds one of the objects displayed, for example, in the imaging browsing interface illustrated in FIG. 7 of Beaumier, a menu of information and options associated with the object would be displayed over the browser, and when a user selects an appropriate option from the menu, an associated action would be taken (*e.g.*, an application associated with the object and option may be launched). Appx-C, ¶283. As described by Chaudhri, at least one optional action is to "maximize" a window, which a POSITA would have

understood and found obvious would have covered the entire user interface an obscured all of the user interface objects displayed below it, including for example, a home screen that included the originally selected object. *See* Appx-E, [0097] ("By way of example, a user may select a button that opens, closes, minimizes, or maximizes a window, or an icon that launches a particular application or functionality."), [0121] ("If the desired image has been selected, then the method 100 proceeds to block 106 where an action associated with the image is performed. This may for example include opening a menu, playing a media file, launching an application, initiating a mode, enlarging an image, initiating a phone call, opening another browser, and/or the like."); Appx-C, ¶283.

Accordingly, based at least on the above discussed teachings, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the information associated with the object is opened utilizing the interface associated with the particular application, by the home screen being replaced with the interface***, as recited in [164]. Appx-C, ¶284.

50. Claim 165 Analysis

Beaumier and Chaudhri render obvious claim 165 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶285-299.

[165.a] The apparatus of claim 2, wherein the apparatus is configured such that: the gesture includes a press or tap gesture;

Element [165.a] is substantially the same as Element [123.a]. Appx-C, ¶285. The Beaumier-Chaudhri combination renders obvious Element [165.a] for at least the same reasons described above with respect to Element [123.a]. *See* Element [123.a], *supra*; Appx-C, ¶285.

[165.b] the object and the at least one other object are displayed via a home screen for choosing among a plurality of applications;

Element [165.b] is substantially the same as Element [151.b]. Appx-C, ¶286. The Beaumier-Chaudhri combination renders obvious Element [165.b] for at least the same reasons described above with respect to Element [151.b]. *See* Element [151.b], *supra*; Appx-C, ¶286.

[165.c] the object includes an application icon associated with a particular application;

The Beaumier-Chaudhri combination renders obvious Element [165.c].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of

which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶288. To navigate through these functionalities, a POSITA would have understood and found obvious using a multi-axis browser display, like the one illustrated in FIG. 7 multi-axis browser display, such that each different card display associated with a different position on the Z-axis would have been associated with a different "mode" or "application" as described in Chaudhri's various figures, as illustrated below. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶288.

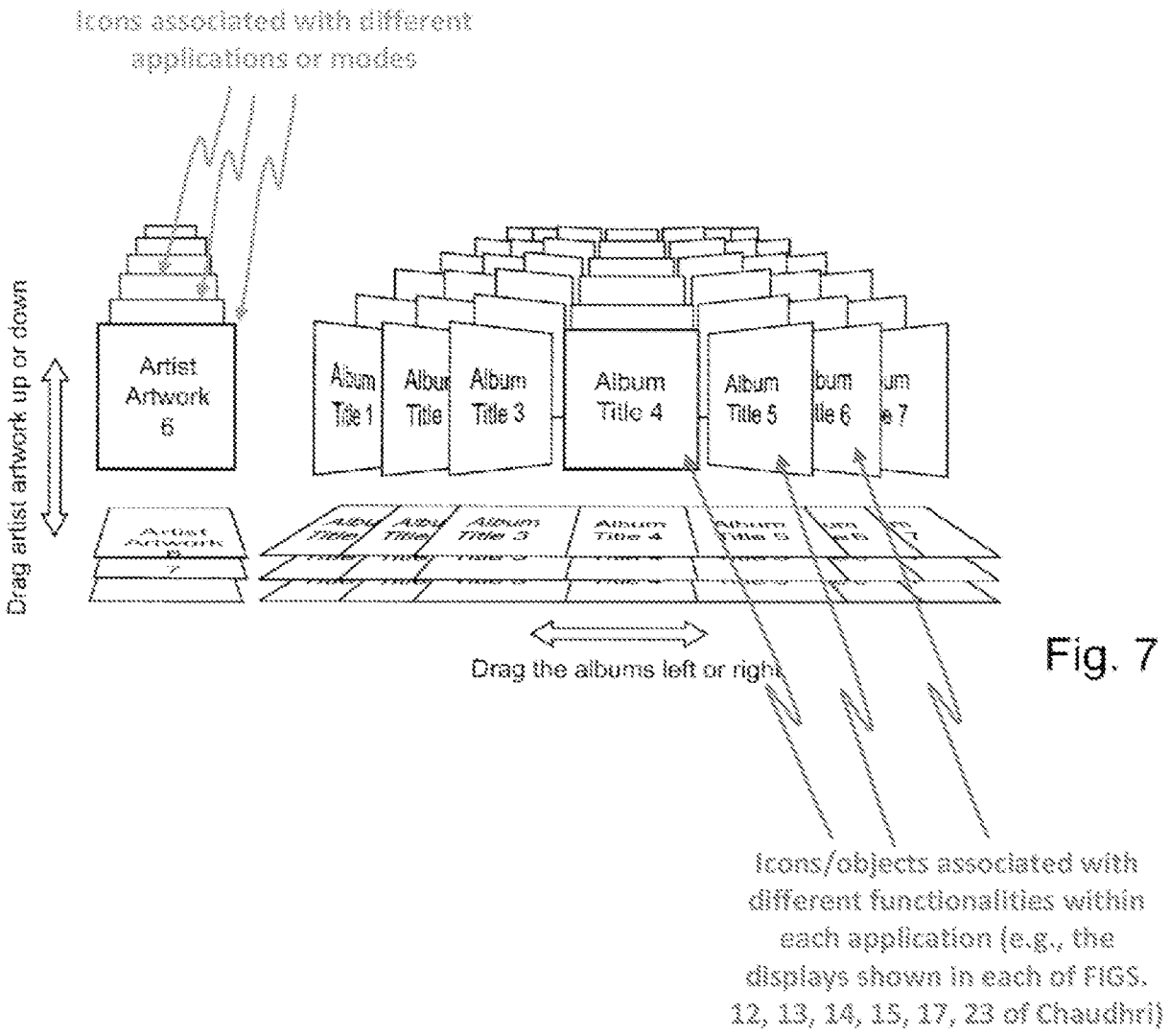


Fig. 7

Appx-D, FIG. 7 (Annotated)

In this example implementation of the browser described by Beaumier and Chaudhri, each of the rows along the Z axis of the three-dimensional browser would have been associated with interfaces of one or more application, as illustrated above. Appx-C, ¶289. And each object or icon within a row would have been associated with functionalities within and associated with a corresponding application (*e.g.*,

artists, albums, or songs within a music player application or different links or webpages within a network browser application). Appx-C, ¶289.

Based on at least the above-described teachings, a POSITA would have at least found it obvious that, in the apparatus of the Beaumier-Chaudhri combination, ***the object includes an application icon associated with a particular application***, as recited in [165.c]. Appx-C, ¶290.

[165.d] the at least part of the gesture on the touch screen is detected on the object; and

Element [165.d] is substantially the same as Element [151.d]. Appx-C, ¶291. The Beaumier-Chaudhri combination renders obvious Element [165.d] for at least the same reasons described above with respect to Element [151.d]. *See* Element [151.d], *supra*; Appx-C, ¶291.

[165.e] in response to the completion of the gesture being detected while the magnitude, including a duration magnitude, of the gesture detected on the touch screen on the object is detected to remain below a duration threshold, information associated with the object is opened utilizing an interface associated with the particular application;

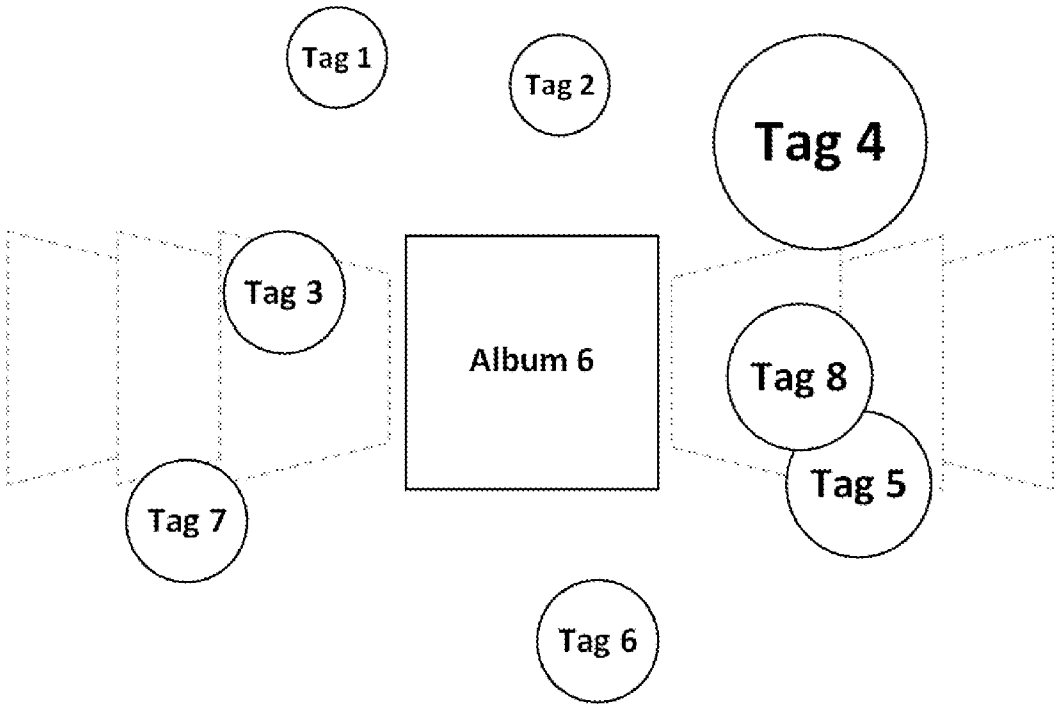
Element [165.e] is substantially the same as Element [151.e]. Appx-C, ¶292. The Beaumier-Chaudhri combination renders obvious Element [165.e] for at least the same reasons described above with respect to Element [151.e]. *See* Element [151.e], *supra*; Appx-C, ¶292.

[165.f] when the duration magnitude of the gesture detected on the touch screen on the object is detected to increase above the duration threshold, a menu

is magnified and sharpened to include at least one option for performing at least one action,

The Beaumier-Chaudhri combination renders obvious Element [165.f].

As discussed with respect to Element [2.d], *supra*, Beaumier teaches that, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D, [0084], [0127]. As discussed with respect to Element [125.a], *supra*, a POSITA would have understood and found obvious that Beaumier's tags are a form of menu and that it would have been an obvious rearrangement of parts and aesthetic design choice to alternatively display the information and options in a sequential list of options or any other suitable menu format. *See, e.g.*, Appx-E, [0103] (describing that list menus of text and image browsing menus may be used interchangeably and alternatively), [0105] (describing that list menus of text and image browsing menus may be used together with one another) [0233] (showing a transition between a vertical text-based list menu and a horizontal image-based browser menu); Appx-K, FIG. 14, [0369] (describing the opening of a menu of options based on a tap gesture), [0581] (describing the opening of a menu of "additional" options based on tapping an icon); Appx-C, ¶294; *see* MPEP §§ 2144.04(I), 2144.04(V)(C).



The '754 Patent does not use the word "sharp" or "sharpened" outside of the claims. Appx-C, ¶295. However, a POSITA would have understood the word "sharp" in a graphical context to be a subjective perception that is related to edge contrast. Appx-J, 1; Appx-C, ¶295.

As discussed in Section VII.A.1 and with respect to Element [2.d], *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are

many more features available and those features are more powerful." Appx-D, [0127].

Beaumier describes that these browsing displays are designed "to simulate a more three-dimensional look-and-feel, and provide more of a sense of immersion when interacting with the user interface." Appx-D, [0075]. This interactive and immersive experience is facilitated by "the displayed items (e.g., album jackets or other identifiers) being updated as the user interacts with the display," and may additionally include the application of "size, color, blurriness, and/or other effects." Appx-D, [0077]. Based on these teachings, a POSITA would have understood and found obvious that these various effects would have been applied dynamically to better create the "immersive" experience sought by Beaumier. Appx-C, ¶297. Indeed, as discussed with respect to Claims [109]-[112], *supra*, it was well known to dynamically apply the visual effects described by Beaumier to user interface objects to help provide the user sensory feedback that their gesture is transitioning a user interface between different states (*e.g.*, the state shown in Beaumier's FIGS. 6 and 7 and the state shown in Beaumier's FIG. 8a). *See* Appx-H, [0079]-[0088] (describing the transition of the "optical intensity" of user interface objects, such as the "color, hue, color saturation, brightness, contrast, transparency, and any combination thereof" to provide an "indication of progress of the gesture" to help provide the user sensory feedback that their ongoing gesture

is transitioning a user interface between different states); Appx-C, ¶297. Thus, a POSITA would have at least found it obvious to utilize the "fading" and "enlarging" described by Beaumier dynamically as the jukebox user interface transitions between states (*e.g.*, between the state shown in Beaumier's FIGS. 6 and 7 and the states shown in Beaumier's FIGS. 8a or 22c). *See* Appx-H, [0079]-[0088]; Appx-C, ¶297.

Based on these teachings, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been configured such that, ***when the duration magnitude of the gesture detected on the touch screen on the object is detected to increase above the duration threshold, a menu is magnified and sharpened to include at least one option for performing at least one action*** (*e.g.*, the menu of tags is "faded in" (and thus sharpened) and "enlarged" (and thus magnified) as part of the press and hold gesture in order to provide a more "immersive" experience and help provide the user visual cues as to the completion of their gesture to transition between the user interface states), as recited in [165.e]. Appx-C, ¶298.

[165.g] where the menu is displayed in a first virtual display layer that appears above a second virtual display layer including at least portion of the home screen, including the at least portion of the at least one other object, that is blurred.

Element [165.g] is substantially the same as Element [125.b]. Appx-C, ¶299. The Beaumier-Chaudhri combination renders obvious Element [125.b] for

at least the same reasons described above with respect to Element [125.b]. *See* Element [125.b], *supra*; Appx-C, ¶299.

51. Claim 166 Analysis

Beaumier and Chaudhri render obvious claim 166 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶300-305.

[166] The apparatus of claim 165, wherein the apparatus is configured such that, when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, a view of data associated with the object is displayed simultaneously with the menu.

The Beaumier-Chaudhri combination renders obvious Claim [166].

As discussed with respect to Element [2.d], *supra*, Beaumier teaches that, if "a user presses and holds a music object such as artist artwork (e.g., in FIG. 6 or in FIG. 7), an album artwork or a song title label for a period of time greater than a predefined threshold," additional information and options related to the album is displayed. *See* Appx-D, [0084], [0127]. For example, "descriptive words or 'tags' associated" with the album may be displayed, as shown with respect to FIG. 8a, or an "enlargement of an album jacket to highlight its selection" along with additional information and options related to the album could be displayed, as shown with respect to FIG. 22c. Appx-D, [0084]-[0086], [0127].

As discussed with respect to claim [101], *supra*, in the case of FIG. 8a, Beaumier's tags are a form of menu, and, in the case of FIG. 22c, the pop-up screen is a type of menu. Appx-C, ¶302. In both cases, Beaumier describes

displaying a view of data associated with the object simultaneously with the menu. Appx-C, ¶302.

For example, in the case of FIG. 8a, Beaumier describes that the tags are "associated for each artist, album and song titles" and "may be representative of information including, for example, artist name, album name, song name, genre/style (which may be hierarchical in some instances), Billboard position (when applicable), release year, popularity based on network plays information, lyrics, tempo, beats per minute (BPM), mood, instrumental characteristics (e.g., strident electric guitars, booming drums, twangy guitar, etc.), vocal characteristics (e.g., aggressive, prominent vocal harmonies, screaming, etc.), intensity characteristics (e.g., high energy, moderate, laid back, etc.) timbre (e.g., bright, dark, rich, etc.), and/or the like. Potential suppliers of this and/or other information include, for example, AMG, BMAT, DoubleV3, EchoNest MixZing, Gracenote, Mufin MusicIP, Music Box, Music Genome Project, and Syntonetic." *See* Appx-D, [0084]-[0086], [0203]. In other words, in addition to being a menu item, each tag is also a view of data associated with the object (*e.g.*, the release year or genre of the album). Appx-C, ¶303.

In the case of FIG. 22c, the pop-window includes information such as copyright information, the name of the artist, and the name of the album. *See*

Appx-D, FIG. 22c; Appx-C, ¶304. Each of these are data associated with the object. Appx-C, ¶304.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that, when the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, a view of data associated with the object is displayed simultaneously with the menu***, as recited in [166]. Appx-C, ¶305.

52. Claim 167 Analysis

Beaumier and Chaudhri render obvious claim 167 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶306-310.

[167] The apparatus of claim 166, wherein the apparatus is configured such that the view includes a preview.

The Beaumier-Chaudhri combination renders obvious Claim [167].

As discussed with respect to Element [127.a], the '754 Patent does not use the term "preview" outside of the claims. *See generally* Appx-A 1:1-95:7; Appx-C, ¶307. In the context of the '754 Patent and related art, a POSITA would have understood the term "preview" to at least encompass "an introductory or preliminary message, sample, or overview; a foretaste." Appx-M, 4; Appx-C, ¶307.

As discussed with respect to Claim [166], *supra*, in the case of FIG. 8a, Beaumier's tags are a form of menu, and, in the case of FIG. 22c, the pop-up screen is a type of menu. Appx-C, ¶308. In both cases, Beaumier describes displaying a view of data associated with the object simultaneously with the menu. Appx-C, ¶308. In the example of FIG. 22c, the view also includes a "preview." Appx-C, ¶308.

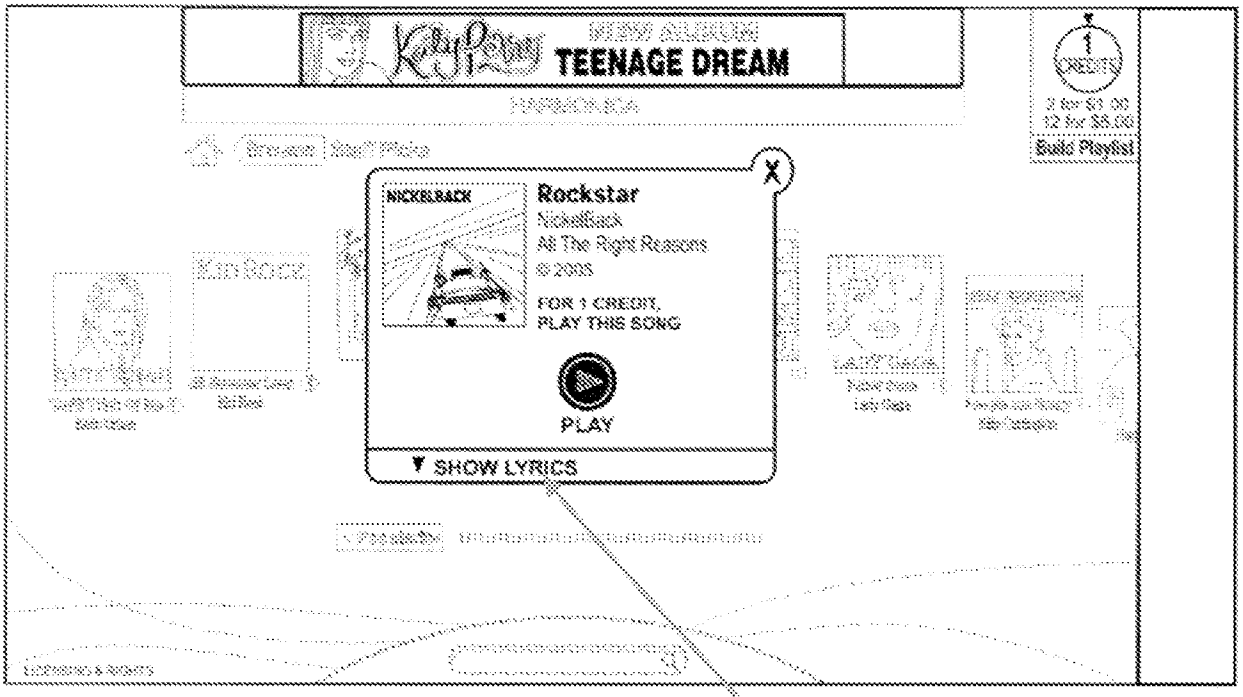


Fig. 22c

Show lyrics option for displaying the lyrics of the album

Appx-D, FIG. 22c (Annotated)

For example, as shown in FIG. 22c, the pop-up screen is able to display lyrics associated with the album. *See* Appx-D, FIG. 22c; Appx-C, ¶309. A POSITA would have understood and found obvious that lyrics for an album are a type of "preview," because they are "an introductory or preliminary message, sample, or overview" of the album. Appx-C, ¶309. The lyrics are only one part of the music that would have been played in the case the user decided to, for example, press the play option in the pop-up screen, and thus they are a "sample" of that music and the words that will be sung as part of that music. Appx-C, ¶309.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the view includes a preview***, as recited in [167]. Appx-C, ¶310.

53. Claim 168 Analysis

Beaumier and Chaudhri render obvious claim 168 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶311-313.

[168] The apparatus of claim 166, wherein the apparatus is configured such that the information associated with the object includes the data associated with the object.

The Beaumier-Chaudhri combination renders obvious Claim [168].

As discussed with respect to Claim [166], *supra*, in the case of FIG. 8a, Beaumier's tags are a form of menu, and, in the case of FIG. 22c, the pop-up screen is a type of menu. Appx-C, ¶312. In both cases, Beaumier describes

displaying a view of data associated with the object simultaneously with the menu. Appx-C, ¶312. For example, in the case of FIG. 8a, Beaumier describes that the tags are "associated for each artist, album and song titles" and "may be representative of information including, for example, artist name, album name, song name, genre/style (which may be hierarchical in some instances), Billboard position (when applicable), release year, popularity based on network plays information, lyrics, tempo, beats per minute (BPM), mood, instrumental characteristics (e.g., strident electric guitars, booming drums, twangy guitar, etc.), vocal characteristics (e.g., aggressive, prominent vocal harmonies, screaming, etc.), intensity characteristics (e.g., high energy, moderate, laid back, etc.) timbre (e.g., bright, dark, rich, etc.), and/or the like. Potential suppliers of this and/or other information include, for example, AMG, BMAT, DoubleV3, EchoNest MixZing, Gracenote, Mufin MusicIP, Music Box, Music Genome Project, and Syntonetic." *See* Appx-D, [0084]-[0086], [0203]. Thus, in at least certain circumstances, when a user presses and holds the album cover, at least one of the views of data associated with the object is a song title contained within the album. *See* Appx-D, [0084]-[0086], [0203]; Element [124.a], *supra* (further describing circumstances in which a tag is a song title); Appx-C, ¶312.

Therefore, in at least certain circumstances, the information associated with the object that is displayed when a user taps on the album cover (*see* Element

165.e], *supra*) is the same as a view of data associated with the object displayed when a user presses and holds the album cover (*e.g.*, a song title contained on the album). Appx-C, ¶313. Accordingly, based at least on the above discussed teachings, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the information associated with the object includes the data associated with the object***, as recited in [168]. Appx-C, ¶313.

54. Claim 169 Analysis

Beaumier and Chaudhri render obvious claim 169 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶314.

[169] The apparatus of claim 166, wherein the apparatus is configured such that, during detection of at least another part of the gesture before the completion thereof is detected, the object is pulsed before the view and the menu are displayed.

Claim [169] is substantially the same as Claims [110] and [144]. Appx-C, ¶314. The Beaumier-Chaudhri combination renders obvious Claim [169] for at least the same reasons described above with respect to Claims [110] and [144]. *See* Claims [110], [144], *supra*; Appx-C, ¶314.

55. Claim 170 Analysis

Beaumier and Chaudhri render obvious claim 170 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶315.

[170] The apparatus of claim 166, wherein the apparatus is configured such that the information associated with the object is opened utilizing the interface

associated with the particular application, by the home screen being replaced with the interface.

Claim [170] is substantially the same as Claim [164]. Appx-C, ¶315. The Beaumier-Chaudhri combination renders obvious Claim [170] for at least the same reasons described above with respect to Claim [164]. *See* Claim [164], *supra*; Appx-C, ¶315.

56. Claim 171 Analysis

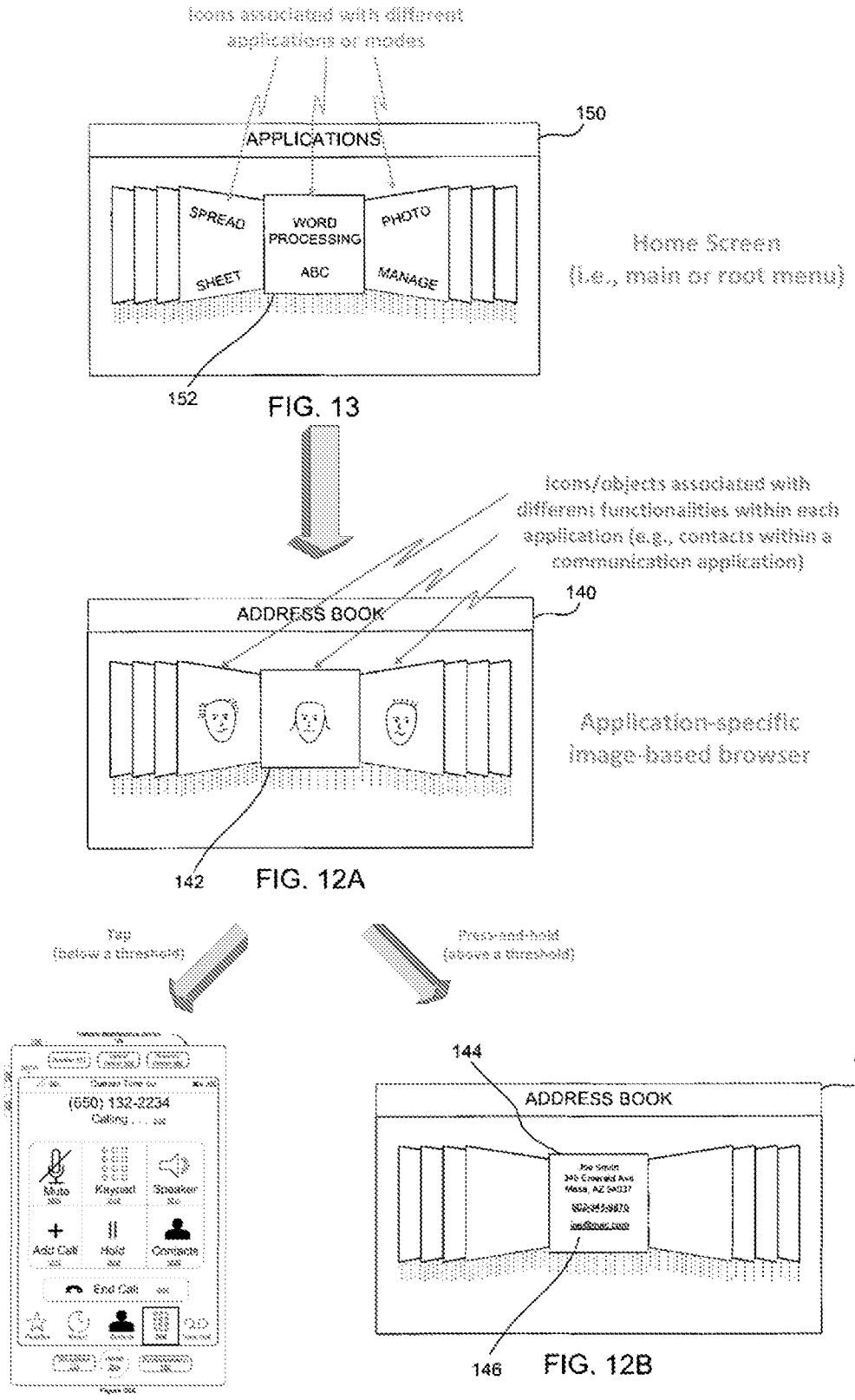
Beaumier and Chaudhri render obvious claim 171 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶316-319.

[171] The apparatus of claim 165, wherein the apparatus is configured such that the particular application includes a navigation application; the application icon includes a navigation application icon; and the at least one option includes an option for access to navigation information utilizing the navigation application.

The Beaumier-Chaudhri combination renders obvious Claim [171].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated

application or program. Appx-C, ¶317. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶317.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a navigation application. Appx-C, ¶318. It was well known in the art that at least one of the applications commonly installed on electronic devices were navigation applications. *See, e.g.*, Appx-I, [0094]-[0095] (describing an electronic device with GPS module for use with a map module), [0132] ("the map module 154 may be used to receive, display, modify, and store maps and data associated with maps (*e.g.*, driving directions; data on stores and other points of interest at or near a particular location; and other location-based data)."); Appx-K, [0121]-[0122], [1081]-[1095]; Appx-C, ¶318. In the context of a jukebox in a public location (*e.g.*, a bar), a navigation application may be useful to help people get directions as they are leaving the location. Appx-C, ¶318. Moreover, Beaumier describes that its interfaces are also applicable to "handheld devices," an even more appropriate apparatus form factor for the inclusion of a navigation application. Appx-D, [0206]; Appx-C, ¶318. Indeed, Chaudhri employs a very similar image-based browsing interface on a "mobile phone (e.g., cellular phone)." Appx-E, [0060].

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the particular application includes a navigation application; the application icon includes a navigation***

application icon; and the at least one option includes an option for access to navigation information utilizing the navigation application, as recited in [171]. Appx-C, ¶319.

57. Claim 172 Analysis

Beaumier and Chaudhri render obvious claim 172 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶320-322.

[172] The apparatus of claim 171, wherein the apparatus is configured such that the navigation information includes an estimated time of arrival.

The Beaumier-Chaudhri combination renders obvious Claim [172].

As discussed with respect to Claim [171], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a navigation application. Appx-C, ¶321. It was well known that navigation application provided "driving directions; data on stores and other points of interest at or near a particular location; and other location-based data." Appx-I, [0132]; Appx-C, ¶321. And as part of providing driving directions, it was well known to provide an estimated time or arrival. *See, e.g.*, Appx-O, Abstract, [0003], [0054] ("ETA is an important feature provided by a vehicle navigation system"); Appx-C, ¶321.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri

combination would have been ***configured such that the navigation information includes an estimated time of arrival***, as recited in [172]. Appx-C, ¶322.

58. Claim 173 Analysis

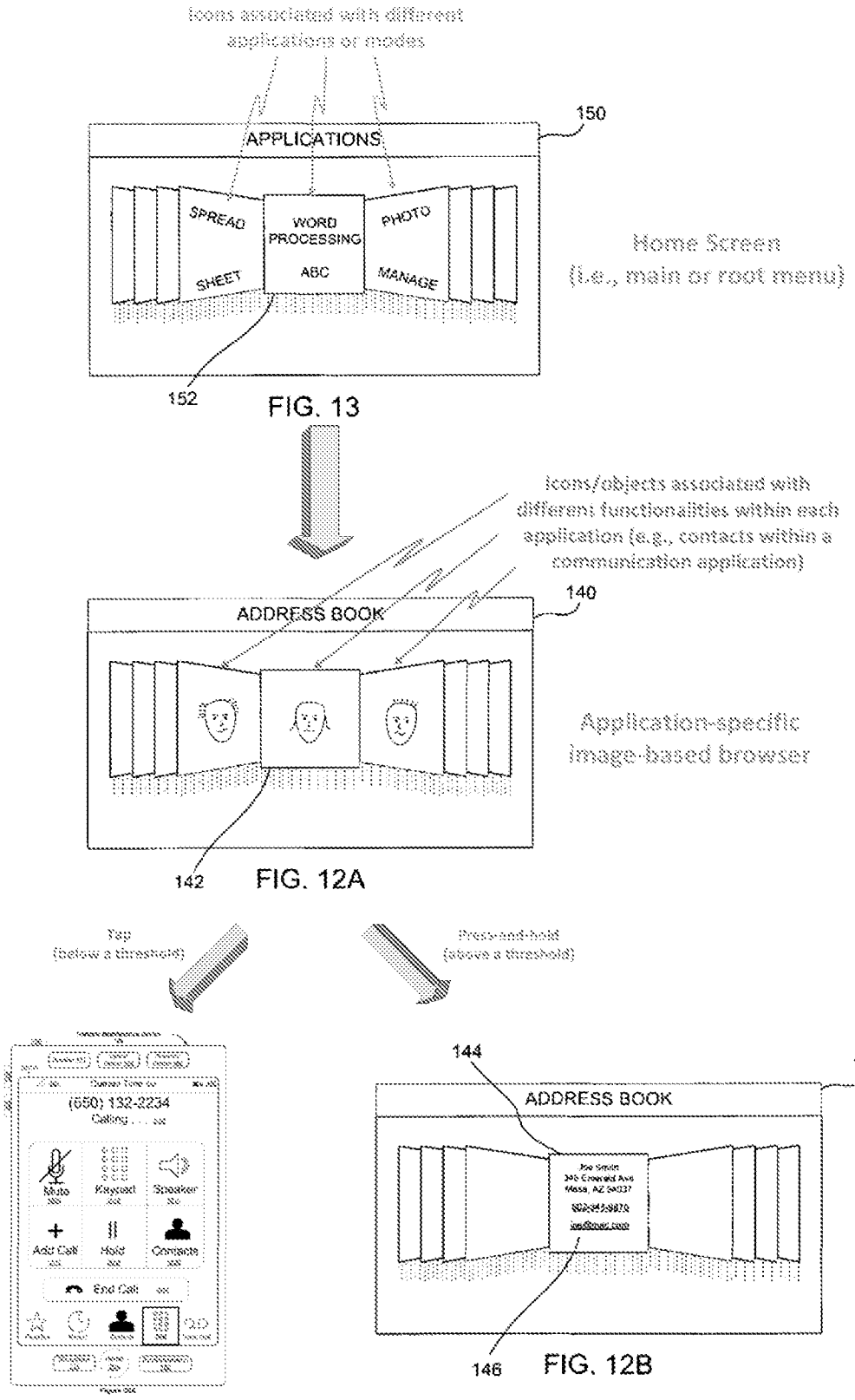
Beaumier and Chaudhri render obvious claim 173 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶323-326.

[173] The apparatus of claim 165, wherein the apparatus is configured such that the particular application includes a browser application; the application icon includes a browser application icon; and the at least one option includes an option for access to bookmarks utilizing the browser application.

The Beaumier-Chaudhri combination renders obvious Claim [173].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶324. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user

could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶324.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a browser application. Appx-C, ¶325. It was well known in the art that at least one of the applications commonly installed on electronic devices were broswer applications. *See, e.g.*, Appx-I, [0095] (describing an electronic device with a browser module), [0125]-[0127] (describing that the browser module "may be used to browse the Internet, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages"); Appx-K, [0122], [0710]-[0872] (generally describing the operation of a browsing application); Appx-C, ¶325. At least one of the well-known menu options of a browser application was a bookmark icon "that when activated (e.g., by a finger tap on the icon) initiates display of a bookmarks list or menu for the browser." Appx-K, [0711]. In fact, Chaudhri describes an embodiment in which the browse window "is displaying a website image" and "selection of the website image may display a webpage form the website associated with the website image." Appx-E, [0131].

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the particular application includes a browser application; the application icon includes a browser***

application icon; and the at least one option includes an option for access to bookmarks utilizing the browser application, as recited in [173]. Appx-C, ¶326.

59. Claim 174 Analysis

Beaumier and Chaudhri render obvious claim 173 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶327-329.

[174] The apparatus of claim 173, wherein the apparatus is configured such that the at least one option further includes an option for opening a new tab utilizing the browser application.

The Beaumier-Chaudhri combination renders obvious Claim [174].

As discussed with respect to Claim [172], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a browser application. Appx-C, ¶328. It was well known that browser applications included the ability to display multiple webpages using multiple tabs and windows. *See, e.g.*, Appx-L, [0082]-[0095] (describing that "some web browsers use separate tabs for each web page" and that "the user navigates between different web pages by selecting different tabs," and teaching various ways to better display tabs); Appx-K, [0711] (describing a "[n]ew window icon 3922 that when activated (e.g., by a finger tap on the icon) initiates display of a UI for adding new windows (e.g., web pages) to the browser (e.g., UI 3900G, FIG. 39G), and which may also indicate the number of windows (e.g., '4' in icon 3922, FIG. 39A)"); Appx-C, ¶328.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one option further includes an option for opening a new tab utilizing the browser application***, as recited in [173]. Appx-C, ¶329.

60. Claim 175 Analysis

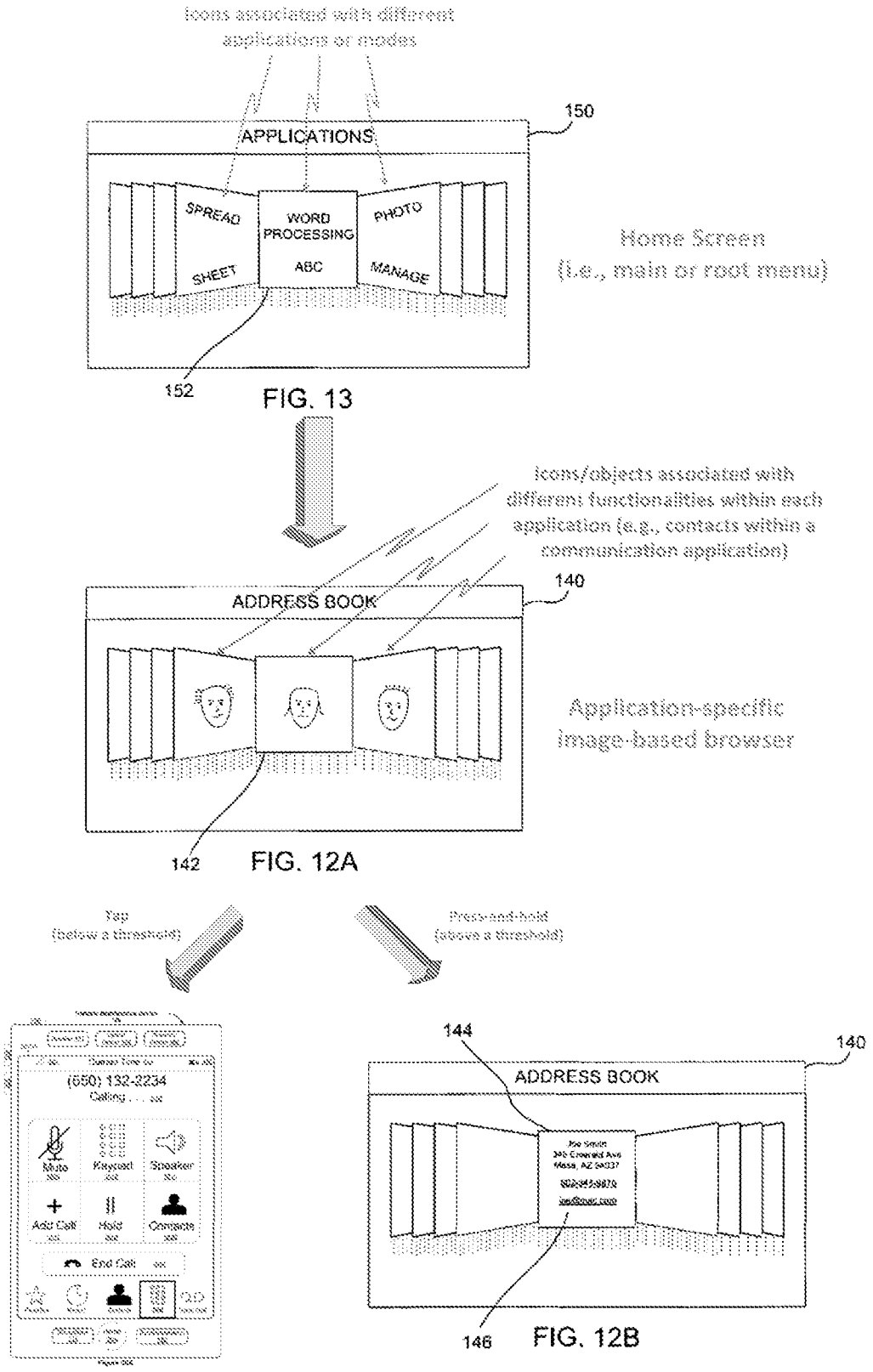
Beaumier and Chaudhri render obvious claim 175 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶330-333.

[175] The apparatus of claim 165, wherein the apparatus is configured such that the particular application includes a media application; the application icon includes a media application icon; and the at least one option includes an option for selecting at least one track to be played utilizing the media application.

The Beaumier-Chaudhri combination renders obvious Claim [173].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated

application or program. Appx-C, ¶331. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶331.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a media application. Appx-C, ¶332. One of the primary purposes of Beaumier's is to play media. *See* Appx-D, [0003]-[0004] ("Jukeboxes have been around for decades and provide users with the ability to select desired music for reproduction in a convenient and advantageous manner."). And Chaudhri describes that one of the applications in its application browser is a "music management program," and provides a browser for music playback. *See* Appx-E, [0138], [0143], [0185]-[0194]. Indeed, media applications were well-known applications for electronic devices. *See, e.g.*, Appx-I, [0095] (describing an electronic device with a music player module), [0125] (describing that the music player module "allows the user to download and play back recorded music and other sound files stored in one or more file formats, such as MP3 or AAC files"); Appx-K, [0873]-[1013] (describing the operation of a music an video playing application, including "an exemplary user interface for presenting tracks (e.g., songs) within an album, which is displayed in response to a user selection 4370 of an individual album" and "an exemplary user interface for playing a track, which is displayed in response to a user selection (e.g., by gesture 4378 in FIG. 43R) of an individual track"); Appx-C, ¶332.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the particular application includes a media application; the application icon includes a media application icon; and the at least one option includes an option for selecting at least one track to be played utilizing the media application***, as recited in [175]. Appx-C, ¶333.

61. Claim 176 Analysis

Beaumier and Chaudhri render obvious claim 176 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶334-337.

[176] The apparatus of claim 165, wherein the apparatus is configured such that the particular application includes a communication application; the application icon includes a communication application icon; and the at least one option includes an option for access to one or more communication techniques for a contact.

The Beaumier-Chaudhri combination renders obvious Claim [176].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social

networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶335. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶335.

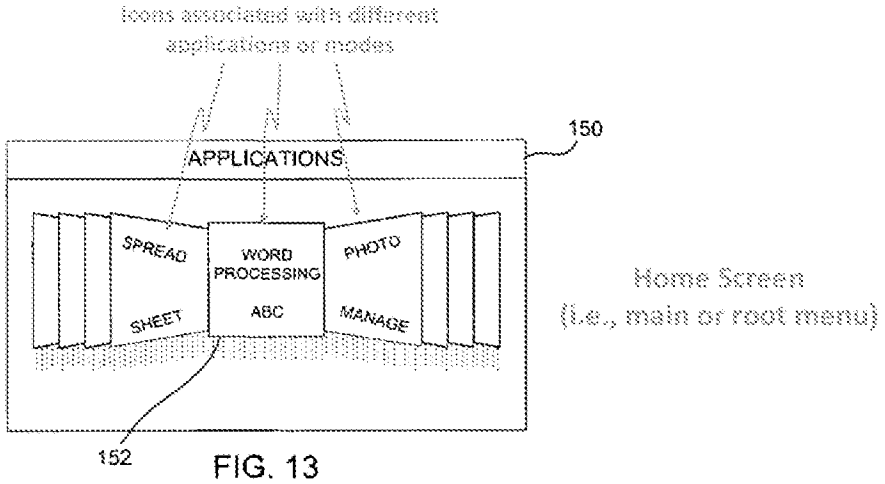


FIG. 13

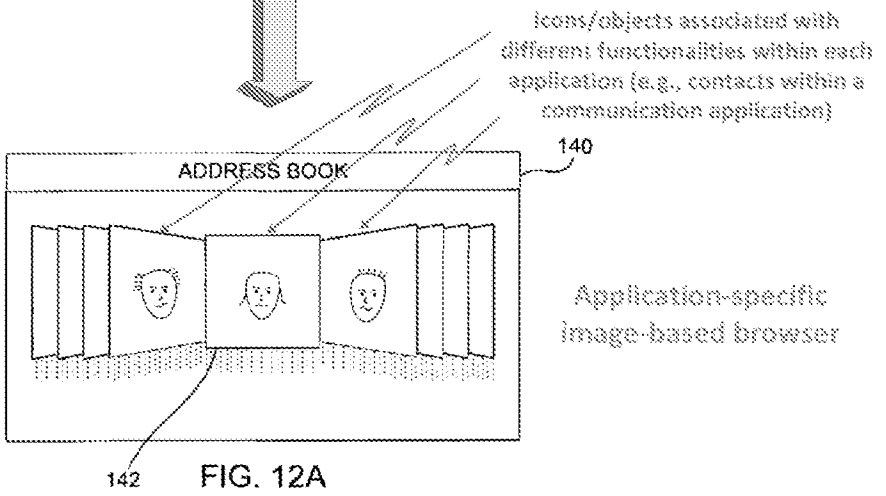


FIG. 12A

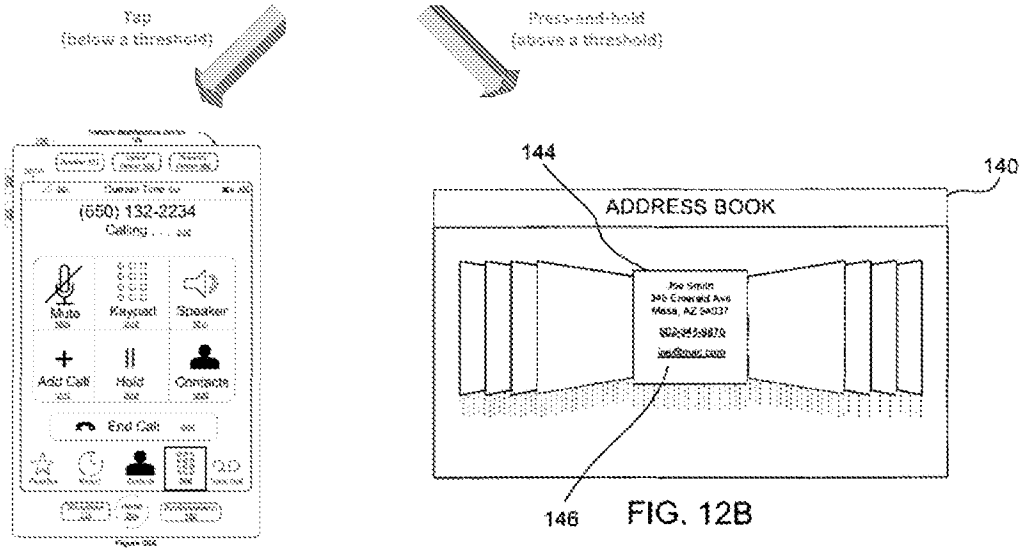


FIG. 12B

Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a media application. Appx-C, ¶339. Chaudhri describes that one of the applications to which the image browsing interface is particularly useful is a communication application that includes an address book. Appx-E, FIG. 12A-B, [0142]. "As shown, the images 142 of the image based browser 140 are pictures that represent individuals whose contact information is stored in an address book." Appx-E, [0142]. In some embodiments, "when the user selects the image 142 at the primary position, a default phone number associated with the image may be used to immediately initiate a phone call." Appx-E, [0142].

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the particular application includes a communication application; the application icon includes a communication application icon; and the at least one option includes an option for access to one or more communication techniques for a contact***, as recited in [176]. Appx-C, ¶337.

62. Claim 177 Analysis

Beaumier and Chaudhri render obvious claim 177 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶338-340.

[177] The apparatus of claim 176, wherein the apparatus is configured such that the at least one option further includes an option for creating a new message utilizing the communication application.

The Beaumier-Chaudhri combination renders obvious Claim [176].

As discussed with respect to Claim [176], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a communication application. Appx-C, ¶339. Chaudhri describes that one of the applications to which the image browsing interface is particularly useful is a communication application that includes an address book. Appx-E, FIG. 12A-B, [0142]. "As shown, the images 142 of the image based browser 140 are pictures that represent individuals whose contact information is stored in an address book." Appx-E, [0142]. In some embodiments, "[w]hen email is selected then a mail window is opened with the email address already entered." Appx-E, [0142].

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one option further includes an option for creating a new message utilizing the communication application***, as recited in [177]. Appx-C, ¶340.

63. Claim 178 Analysis

Beaumier and Chaudhri render obvious claim 178 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶341-344.

[178] The apparatus of claim 176, wherein the apparatus is configured such that the communication application includes an instant message application, and the one or more communication techniques for the contact, include an instant message service.

The Beaumier-Chaudhri combination renders obvious Claim [178].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶342. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶342.

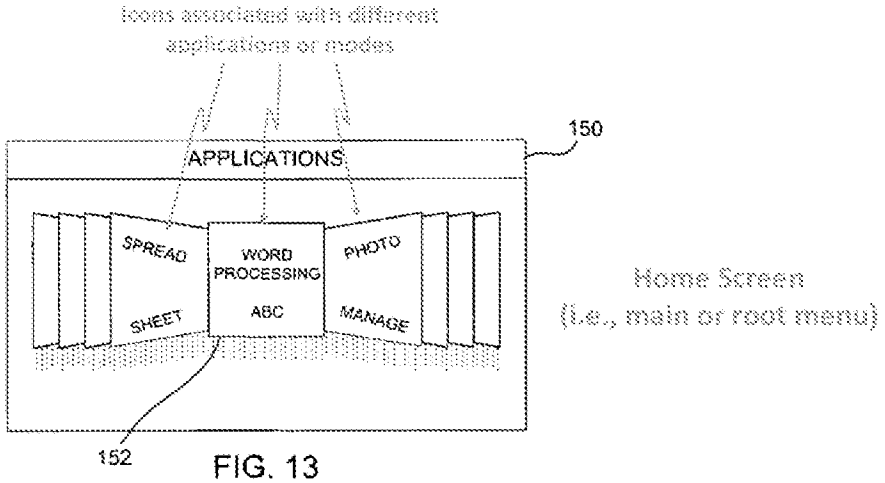


FIG. 13

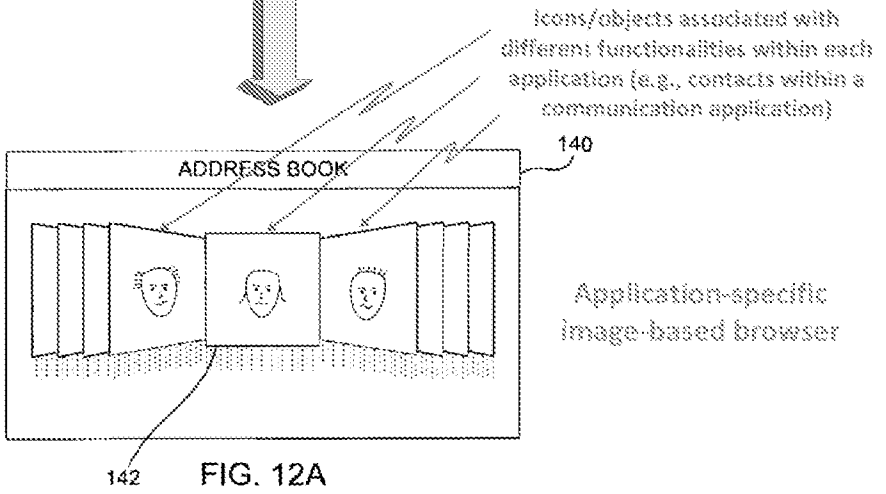


FIG. 12A

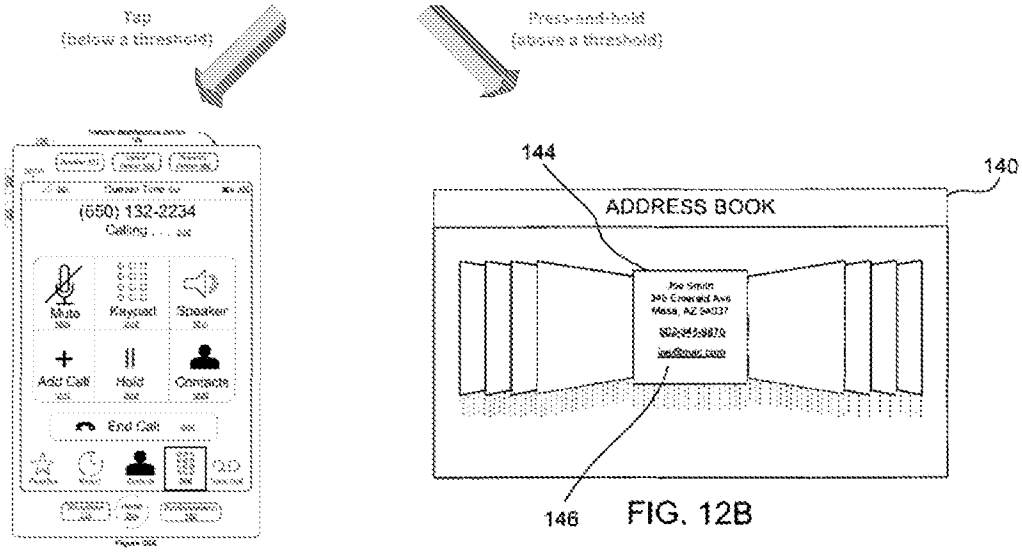


FIG. 12B

Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been an instant messaging application. Appx-C, ¶343. Indeed, Beaumier describes displaying "chat sessions" in the object viewer. Appx-D, [0059]. It was well known in the art that at least one of the applications commonly installed on electronic devices were instant messaging applications. *See, e.g.*, Appx-I, [0095] (describing an electronic device with a "an instant messaging (IM) module"), [0120] (describing that the instant messaging module "may be used to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages and to view received instant message"); Appx-K, [0215]-[0328] (generally describing the operation of an instant messaging application on an electronic device); Appx-C, ¶343.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the communication application includes an instant message application, and the one or more***

communication techniques for the contact, include an instant message service, as recited in [178]. Appx-C, ¶344.

64. Claim 179 Analysis

Beaumier and Chaudhri render obvious claim 179 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶345-347.

[179] The apparatus of claim 176, wherein the apparatus is configured such that the communication application includes a contacts application, and the one or more communication techniques for the contact, include a phone service.

The Beaumier-Chaudhri combination renders obvious Claim [179].

As discussed with respect to Claim [176], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a communication application. Appx-C, ¶346. Chaudhri describes that one of the applications to which the image browsing interface is particularly useful is a communication application that includes an address book. Appx-E, FIG. 12A-B, [0142]. "As shown, the images 142 of the image based browser 140 are pictures that represent individuals whose contact information is stored in an address book." Appx-E, [0142]. In some embodiments, "when the user selects the image 142 at the primary position, a default phone number associated with the image may be used to immediately initiate a phone call." Appx-E, [0142].

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the communication application includes a contacts application, and the one or more communication techniques for the contact, include a phone service***, as recited in [176]. Appx-C, ¶347.

65. Claim 180 Analysis

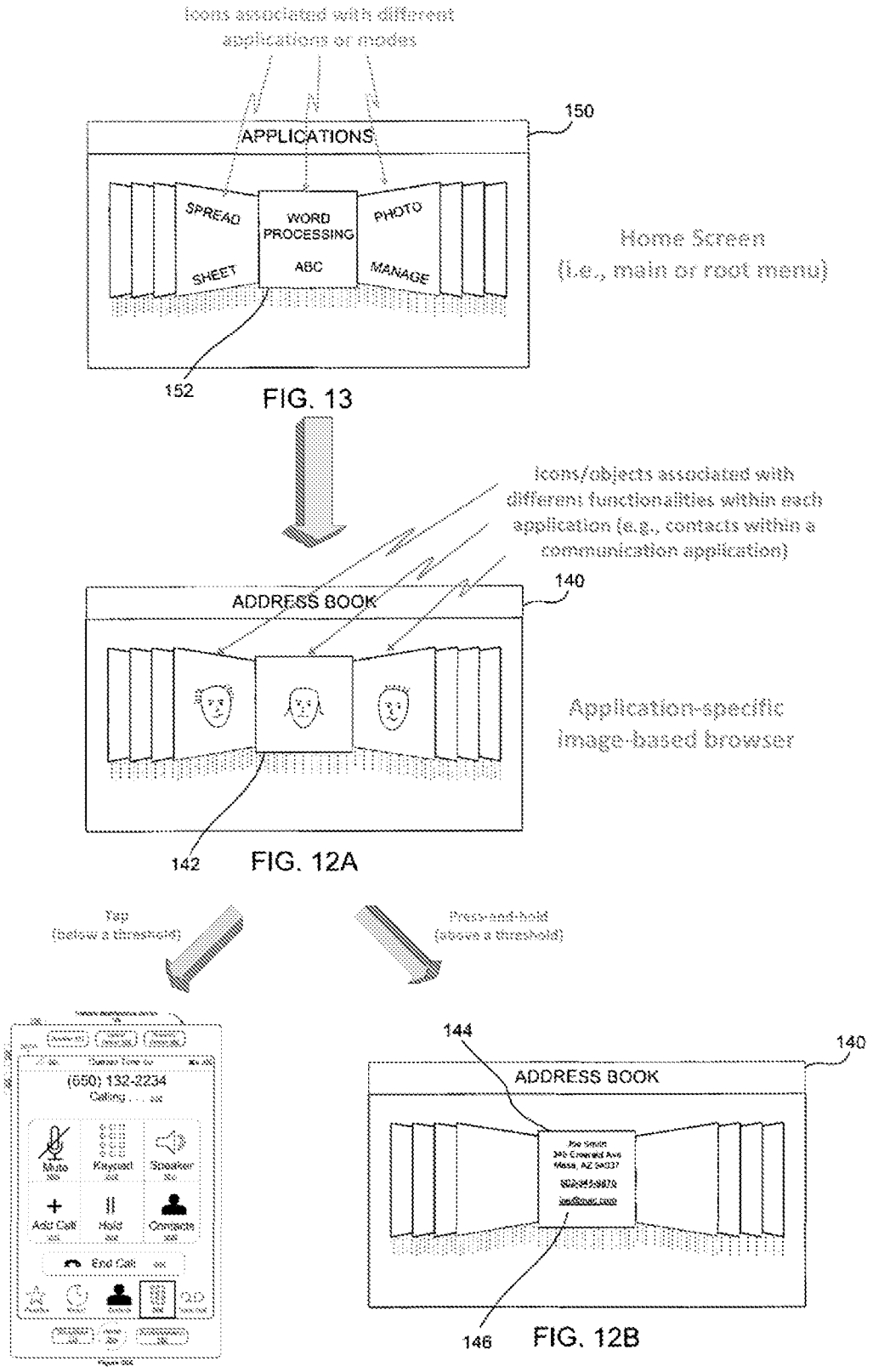
Beaumier and Chaudhri render obvious claim 180 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶348-351.

[180] The apparatus of claim 165, wherein the apparatus is configured such that the particular application includes a calendar application; the application icon includes a calendar application icon; and the at least one option includes an option for creating an appointment utilizing the calendar application.

The Beaumier-Chaudhri combination renders obvious Claim [180].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally

been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶351. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶351.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a calendar application. Appx-C, ¶350. Chaudhri describes that one of the applications to which the image browsing interface is particularly useful is a "date book or calendar" application. *See* Appx-E, FIGS. 14A-D, [0144]; Appx-C, ¶350. "As shown in FIG. 14D, when the user selects a particular hour, a data entry window 164 is opened that allows the user to enter text associated with the selected hour/day/month." Appx-E, [0144]. "The user can therefore schedule events," which a POSITA would have understood are the same as "appointments." Appx-E, [0144]; Appx-C, ¶350.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the particular application includes a calendar application; the application icon includes a calendar application icon; and the at least one option includes an option for creating an appointment utilizing the calendar application***, as recited in [180]. Appx-C, ¶351.

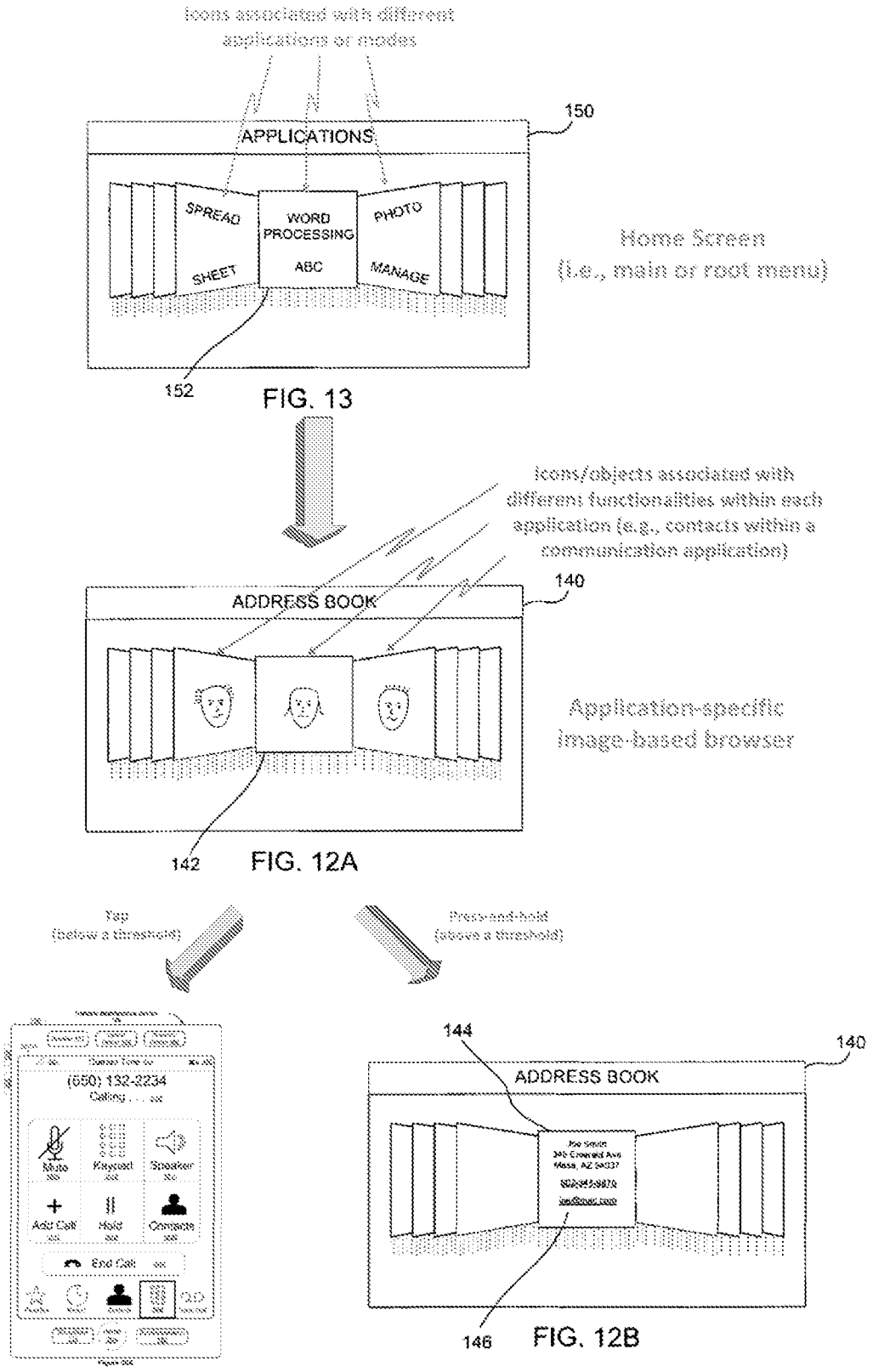
66. Claim 181 Analysis

Beaumier and Chaudhri render obvious claim 181 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶352-355.

[181] The apparatus of claim 165, wherein the apparatus is configured such that the particular application includes a camera application; the application icon includes a camera application icon; and the at least one option includes an option for setting a camera setting.

The Beaumier-Chaudhri combination renders obvious Claim [181].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶353. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶353.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a camera application. Appx-C, ¶354. Beaumier describes that the jukebox may include a camera. *See* Appx-D, [0018], [0138]-[0140]. Chaudhri describes that its device includes a camera and that one of the modes that can be selected with the image-based browser is a camera mode. Appx-E, [0060], [0146]. And media applications were well-known applications for electronic devices. *See, e.g.*, Appx-I, [0095] (describing an electronic device with a camera module 143 for still and/or video images), [0122] (describing that the camera module "may be used to capture still images or video (including a video stream) and store them into memory 102, modify characteristics of a still image or video, or delete a still image or video from memory 102"); Appx-K [0329]-[0368] (generally describing the operation of a camera application on an electronic device, including setting certain camera settings, such as a "Timer 1010 for taking an image after a predefined time delay"); Appx-C, ¶354.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the particular application includes a camera application; the application icon includes a camera***

application icon; and the at least one option includes an option for setting a camera setting, as recited in [181]. Appx-C, ¶355.

67. Claim 182 Analysis

Beaumier and Chaudhri render obvious claim 182 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶356-358.

[182] The apparatus of claim 181, wherein the apparatus is configured such that the at least one option, when selected, results in the camera application being launched in a manner that reflects the camera setting.

The Beaumier-Chaudhri combination renders obvious Claim [182].

As discussed with respect to Claim [181], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a camera application. Appx-C, ¶357. It was well known that at least two settings for use of a camera application are to take still and video images. *See, e.g.*, Appx-I [0122] (describing that the camera module "may be used to capture still images or video (including a video stream)); Appx-C, ¶357. It was also well known that in order to set the camera in each mode, a user would have been presented with options in a menu for each of still and video. *See, e.g.*, Appx-K [0329] (describing a user interface that includes a "shutter 1006 for taking still images" and "[r]ecord button 1008 for starting and stopping video recording); Appx-C, ¶357. It would have been obvious to a POSITA that a menu associated with the camera application would have included

options for setting the camera up in each of these still and video capture modes, such that when a user selected one of these options, the camera application was launched in either still and video capture mode (*i.e.*, reflecting the selected camera setting). Appx-C, ¶357.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one option, when selected, results in the camera application being launched in a manner that reflects the camera setting***, as recited in [182]. Appx-C, ¶358.

68. Claim 183 Analysis

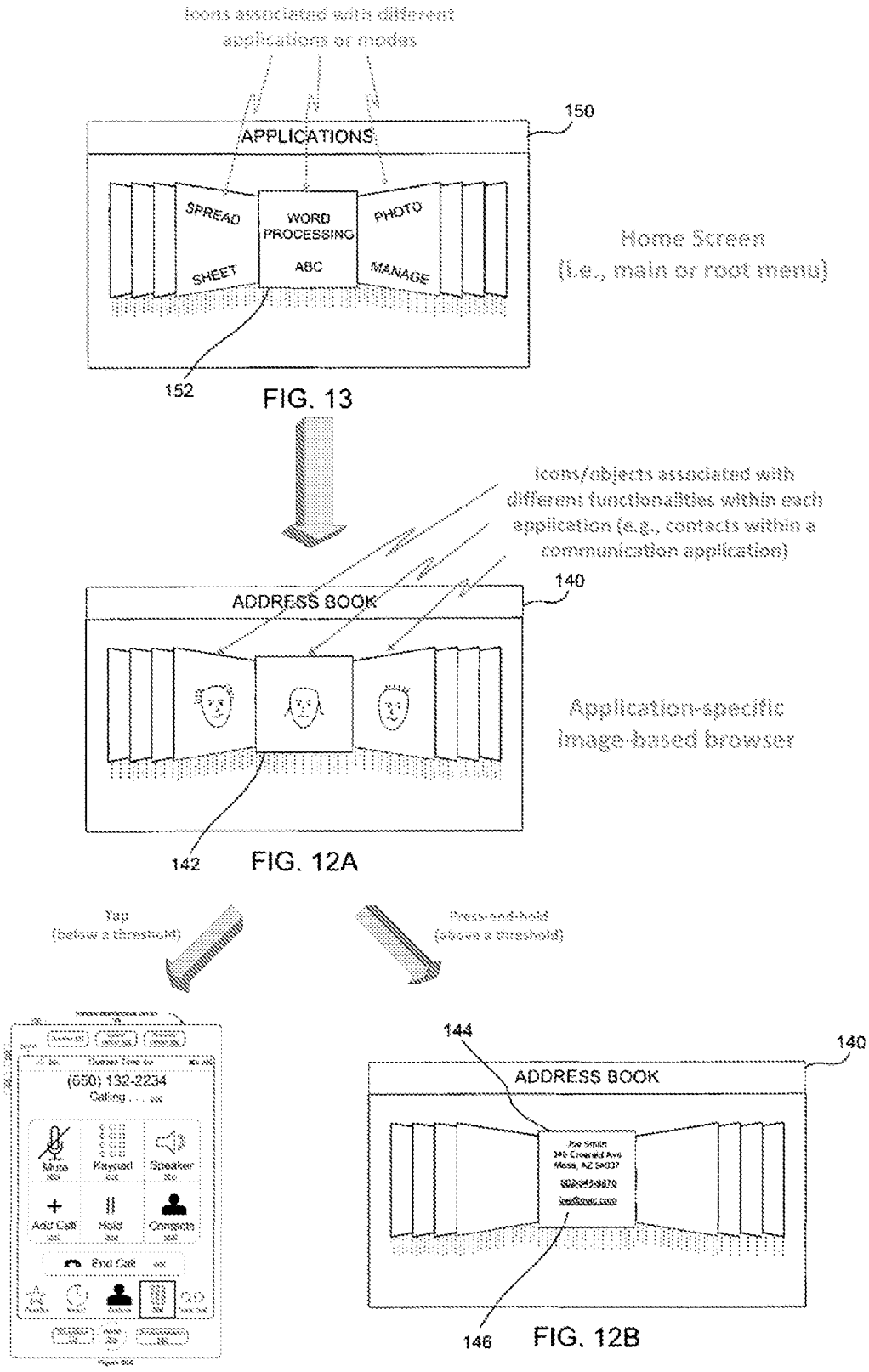
Beaumier and Chaudhri render obvious claim 183 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶359-362.

[183] The apparatus of claim 165, wherein the apparatus is configured such that the particular application includes a phone application; the application icon includes a phone application icon; and the at least one option includes an option for accessing at least one of a voicemail or a favorite, utilizing the phone application.

The Beaumier-Chaudhri combination renders obvious Claim [183].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIGS. 6 and 7 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing

video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶360. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶360.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a camera application. Appx-C, ¶361. As noted with respect to Claim [171], *supra*, Beaumier describes that its interfaces are also applicable to "handheld devices." Appx-D, [0206]; Appx-C, ¶361. Chaudhri describes that at least one type of handheld device to which the image-based browsers described in both Beaumier and Chaudhri are applicable are "mobile phone (e.g., cellular phone)." Appx-E, [0060]; Appx-C, ¶361. Further, Chaudhri describes a "phone mode" and that, "if the phone mode is selected then the browser shown in FIGS. 12A and 12B may be displayed." Appx-E, [0146]. In the phone mode, "when the user selects the image 142 at the primary position, a default phone number associated with the image may be used to immediately initiate a phone call." Appx-E, [0142]. Indeed, phone applications were well-known applications for electronic devices. *See, e.g.*, Appx-I, [0095] (describing an electronic device with a telephone module), [0117] (describing that the telephone module "may be used to enter a sequence of characters corresponding to a telephone number, access one or more telephone numbers in the address book 137, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation and disconnect or hang up when the conversation is completed"); Appx-K, [0506]-[0620] (generally describing the operation of a telephone application on an electronic

device, including describing "exemplary user interface for displaying and managing favorite contacts" and "exemplary user interfaces for voicemail"); Appx-C, ¶361.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the particular application includes a phone application; the application icon includes a phone application icon; and the at least one option includes an option for accessing at least one of a voicemail or a favorite, utilizing the phone application***, as recited in [183]. Appx-C, ¶362.

69. Claim 184 Analysis

Beaumier and Chaudhri render obvious claim 184 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶363-365.

[184] The apparatus of claim 183, wherein the apparatus is configured such that the at least one option includes an option for accessing the voicemail utilizing the phone application.

The Beaumier-Chaudhri combination renders obvious Claim [184].

As discussed with respect to Claim [181], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a camera application. Appx-C, ¶364. It was well known that telephone applications included "user interfaces for

voicemail." *See, e.g.*, Appx-K, FIGS. 32A-32H, [0581]-[0620]; Appx-C, ¶364. For example, user interfaces for managing voicemail were known to include a "speaker icon 3216 that when activated (e.g., by a finger tap on the icon) initiates playback of the voicemail through a speaker" and a "[d]elete symbol icon 3222 that when activated (e.g., by a finger tap on the icon) initiates display of a UI to confirm that the user wants to delete the corresponding voicemail." *See, e.g.*, Appx-K, [0581]; Appx-C, ¶364.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one option includes an option for accessing the voicemail utilizing the phone application***, as recited in [182]. Appx-C, ¶365.

70. Claim 185 Analysis

Beaumier and Chaudhri render obvious claim 184 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶366-.

[185] The apparatus of claim 183, wherein the apparatus is configured such that the at least one option includes a first option for accessing the voicemail utilizing the phone application, and a second option for accessing the favorite utilizing the phone application.

The Beaumier-Chaudhri combination renders obvious Claim [184].

As discussed with respect to Claim [181], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the

Beaumier-Chaudhri combination would have been a camera application. Appx-C, ¶367. It was well known that telephone applications included "user interfaces for voicemail" and "user interface[s] for displaying and managing favorite contacts." *See, e.g.*, Appx-K, FIGS. [0529]-[0534] (describing "an exemplary user interface for displaying and managing favorite contacts"), [0581]-[0620] (describing "user interfaces for voicemail"); Appx-C, ¶367.

Accordingly, based at least on the above discussed teachings, a POSITA would have found it obvious that the apparatus of the Beaumier-Chaudhri combination would have been ***configured such that the at least one option includes a first option for accessing the voicemail utilizing the phone application, and a second option for accessing the favorite utilizing the phone application***, as recited in [185]. Appx-C, ¶368.

71. Claim 225 Analysis

Beaumier and Chaudhri render obvious claim 225 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶369-372.

[225.a] A method, comprising: at an apparatus including a display, at least one non-transitory memory, a touch screen, and one or more processors in communication with the at least one non-transitory memory and the touch screen:

Element [225.a] is substantially the same as Element [2.a], except in the form of a method. Appx-C, ¶369. The Beaumier-Chaudhri combination renders obvious Element [225.a] for at least the same reasons described above with respect

to Element [2.a]. *See* Element [2.a], *supra*; Appx-C, ¶369. Moreover, Beaumier teaches that it "provide[s] improvements in the form of digital jukebox devices with techniques for providing appropriate and/or customized media, and associated methods," and that both "[m]ethods of making and/or using such jukebox devices also may be provided, as may non-transitory computer readable storage mediums tangibly storing instructions for using such jukebox devices/providing such user interfaces." Appx-D, [0013], [0083]. Thus, a POSITA would have understood and found obvious that Beaumier discloses a method. Appx-C, ¶369.

[225.b] displaying an object;

Element [225.b] is substantially the same as at least of portion of Element [2.b]. Appx-C, ¶370. The Beaumier-Chaudhri combination renders obvious Element [225.b] for at least the same reasons described above with respect to Element [2.b]. *See* Element [2.b], *supra*; Appx-C, ¶370.

[225.c] detecting at least part of a gesture on the touch screen; and

Element [225.c] is substantially the same as Element [2.c]. Appx-C, ¶371. The Beaumier-Chaudhri combination renders obvious Element [225.c] for at least the same reasons described above with respect to Element [2.c]. *See* Element [2.c], *supra*; Appx-C, ¶371.

[225.d] in response to the detection of the at least part of the gesture without a completion of the gesture being detected, blurring, based on a change in a

magnitude of the gesture being detected on the touch screen, at least a portion of at least one other object.

Element [225.d] is substantially the same as Element [2.d]. Appx-C, ¶372. The Beaumier-Chaudhri combination renders obvious Element [225.d] for at least the same reasons described above with respect to Element [2.d]. *See* Element [2.d], *supra*; Appx-C, ¶372.

72. Claim 230 Analysis

Beaumier and Chaudhri render obvious claim 230 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶373-376.

[230] The method of claim 225, wherein, in response to the magnitude, including a distance magnitude, of the gesture detected on the touch screen being detected to increase above a distance threshold, a menu is displayed with at least one option.

The Beaumier-Chaudhri combination renders obvious Claim [230].

As opposed to tapping on an object in order to display a list menu (*e.g.*, a list of songs), Chaudhri alternatively describes the "the user may vertically swipe at the image at the primary position." Appx-E, [0189]. "As shown in FIG. 23E, the portable electronic device recognizes . . . vertical swipe and presents a list of songs associated with the album at the primary position." Appx-E, [0190]. "The direction of rotation may be related to the direction of the vertical swipe if a vertical swipe is used thereby making it appear as if the user is flipping the image around." Appx-E, [0190]. This process is illustrated, for example, with respect to FIGS. 26A-26E. Appx-E, FIGS. 26A-26E, [0208]-[0214]; Appx-C, ¶374.

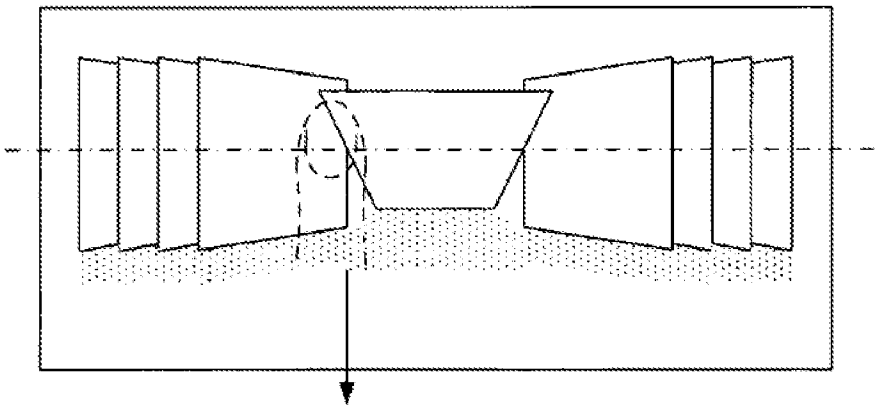


FIG. 26B

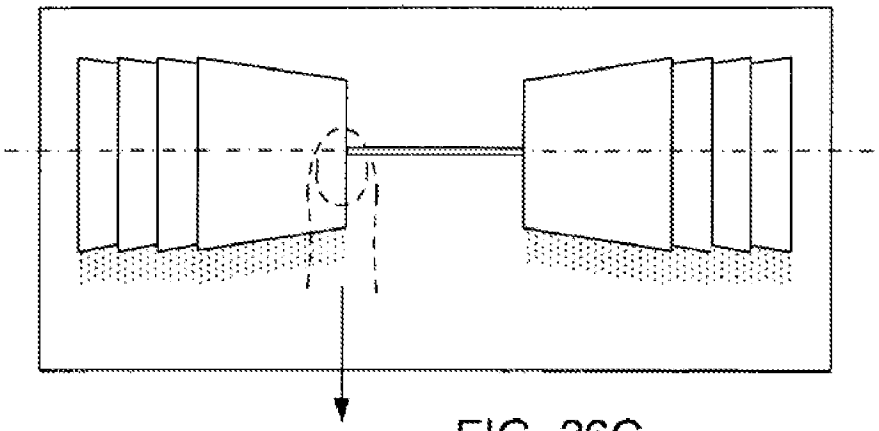


FIG. 26C

Appx-E, FIGS. 26B-C

Chaudhri describes that this list of songs is a "menu," as it is a list of songs from which the user may select. Appx-E, [0190] ("In some cases, this is an entirely new window (e.g., menu window)," meaning that the list is a menu, regardless of whether it is opened in a new menu or not), [0180] (describing that "selectable data associated with the primary or highlighted image is presented . . . in a vertical menu list format"); Appx-C, ¶375. From this menu shown, for example, in FIG. 23E, Chaudhri describes that "the user performs a selection event

by pressing or tapping their finger as for example over the desired song," and "the portable electronic device recognizes the selection event and starts playing the song." Appx-E, [0193]-[0194]. Further, Chaudhri discloses that "the edge of the image at the beginning of the slide follows the finger as it moves vertically." Appx-E, [0209]. It also discloses that this following of the finger "continues until the top and bottom edges of the image are aligned with the horizontal axis." Appx-E, [0210]. And the rear view of the image (disclosing the menu) does not begin to appear until the image is rotated beyond 90 degrees (see Fig 26D-E). *See* Appx-E, FIG. 26D-E; Appx-C, ¶375. In light of these disclosures, a POSITA would have understood and found obvious that, in order for the menu to be displayed, the edge of the image must be dragged sufficiently far (a threshold distance) to rotate the image beyond 90 degrees. Appx-C, ¶375.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been configured such that ***in response to the magnitude, including a distance magnitude, of the gesture detected on the touch screen being detected to increase above a distance threshold*** (*e.g.*, the vertical swipe gesture to open the song list)***, a menu is displayed with at least one option*** (*e.g.*, the song list is displayed), as recited in [230]. Appx-C, ¶376.

73. Claim 232 Analysis

Beaumier and Chaudhri render obvious claim 232 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶377-380.

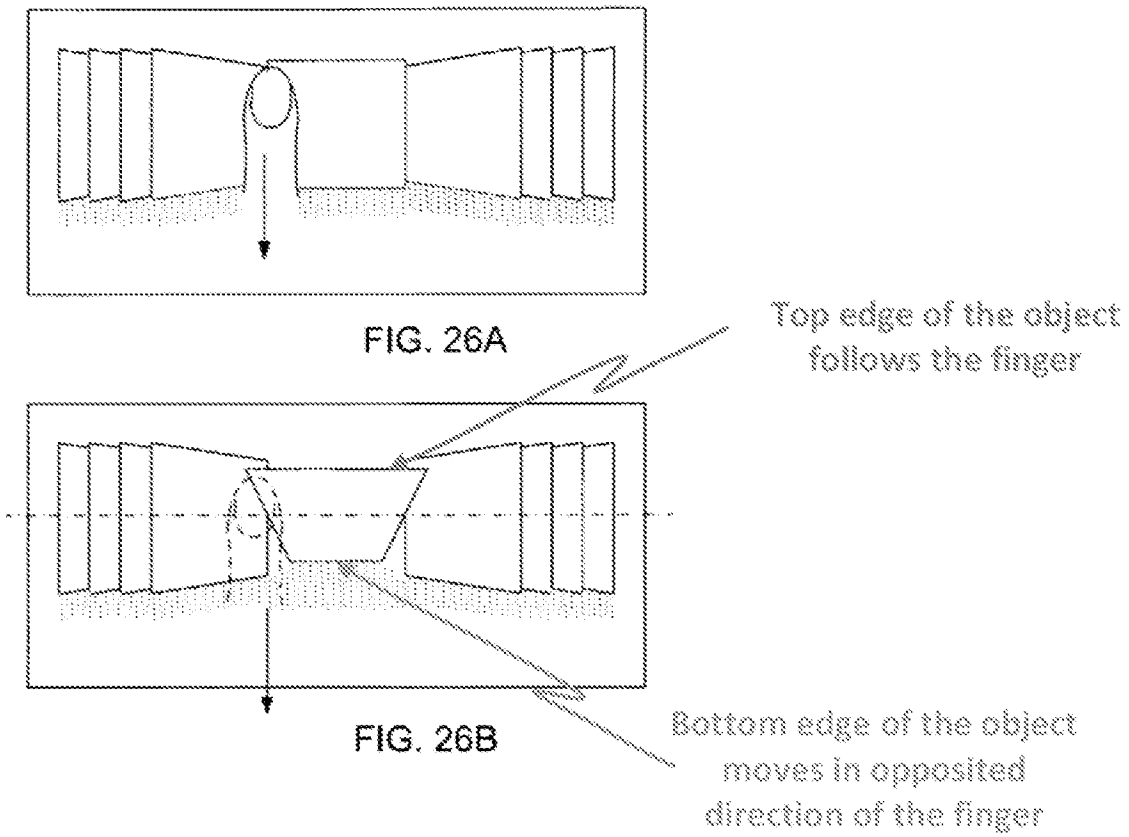
[232] The method of claim 230, wherein, based on the change in the magnitude of the gesture being detected on the touch screen on the object in a first direction, the object is moved in a second direction.

The Beaumier-Chaudhri combination renders obvious Claim [232].

As discussed with respect to Claim [230], *supra*, as opposed to tapping on an object in order to display a list menu (*e.g.*, a list of songs), Chaudhri alternatively describes the "the user may vertically swipe at the image at the primary position," which may result in a transition effect being applied to the object (*e.g.*, a flipping of the object along an axis corresponding to the swipe) Appx-E, [0189]-[0190].

As part of this flipping, Chaudhri illustrates and describes that "a first portion of the element above a horizontal axis is configured to enlarge while a second portion of the element below the horizontal axis configured to shrink." Appx-E, [0209]. In other words, as shown in FIGS. 26A-B, the top edge of the object follows the user's finger, while the bottom edge of the object moves in the opposite direction in order to appear as though the object is flipping. *See* Appx-E, FIGS. 26A-B, [0209]. Furthermore, Chaudhri describes that, "[o]f course, the images may also be moved opposite the direction of the finger swipe," which, in

the case of a flip like the one described with respect to FIGS. 26A-E, would mean that the flip appears to move in the opposite direction to the user's swipe and as described above. *See* Appx-E, [0188], [0208] (describing that "[t]he slide can be either up or down"); Appx-C, ¶379.



Appx-E, FIGS. 26A-B

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri combination would have been configured such that ***based on the change in the magnitude of the gesture being detected on the touch screen on the object in a first direction, the object is moved in a second direction*** (*e.g.*, the bottom edge of the object moves in a second direction opposite

a first direction of a vertical swipe of the finger or vice versa), as recited in [232]. Appx-C, ¶380.

B. [GROUND 2] – Obviousness of Claims 83, 85, 86, 186, 188, 193, 195, 196, 198, and 205-207 Based on Beaumier, Chaudhri, and Wang

1. Wang

Wang describes "a method and a system for reducing the surge noise and stray capacitance noise of a touch panel control circuit and thereby preventing such noises from lowering the accuracy of touch point determination." Appx-P, [0002]. Wang recognized that in touch panels, like those utilized in Beaumier and Chaudhri, "[w]henever the ambient temperature, moisture, or electrical field changes, the signals of a capacitive touch panel tend to shift or are subject to noise, both of which are detrimental to the sensing accuracy of the capacitive touch panel." Appx-P, [0007]-[0010]; Appx-C, ¶381. Accordingly, Wang teaches techniques for determining whether a touch is "valid or otherwise according to a predetermined touch point distance and a predetermined number of valid measurements so as to increase the accuracy of touch point determination." Appx-P, [0013].

As described with respect to FIG. 4, Wang's technique relies upon two measurements to determine whether a touch is valid: distance and time. *See* Appx-P, [0039]-[0058]; Appx-C, ¶382. Specifically, Wang describes "[t]aking the

capacitive values of each sensor of the touch panel 20 successively during a period of time (step S10)." Appx-P, [0040]. Wang's method averages the values detected by the touch panel over the period of time, removing the largest and smallest values. Appx-P, [0041]-[0043]. Based on whether the detected values on the touch panel are above a threshold, Wang's method determines a potential set of touch points on the touch panel. Appx-P, [0044]-[0045]. Wang's method then tracks those potential touch points through successive sensing time points during the period of time to determine whether they are within a distance threshold of one another over the course of the time period (steps S40, S50, and S60) and whether the touch points are detected a threshold successive number of times in a row during the time period (step S70). *See* Appx-P, [0050]-[0057]; Appx-C, ¶382. If a potential touch point is not within a predetermined threshold distance of successive potential touch points over the course of the sensing time points or the potential touch point is not detected over for a threshold number of successive time points (*i.e.*, the touch does not remain in contact with the touch panel for a sufficient amount of time), the potential touch point is determined invalid and discarded. *See* Appx-P, [0050]-[0057]; Appx-C, ¶382. In other words, a touch on the touch screen must be detected for a minimum amount of time to be determined valid. *See* Appx-P, [0057]-[0058]; Appx-C, ¶382.

Others have similarly recognized that the distance a touch travels and the amount of time it remains in contact with a touchscreen is useful in differentiating between valid and invalid inputs, as well as differentiating between different types of input (*e.g.*, differentiating between taps and swipes). *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶383. For example, in the context of a mobile device with a touchscreen that may need to operate in various different conditions (*e.g.*, different storage locations), Saponas recognized the need to "exclude[e] invalid detected touches and strokes." *See* Appx-R, [0001]-[0002], [0004]-[0006]; Appx-C, ¶383. Based on the operating condition of the electronic device and its touchscreen (*e.g.*, whether it's being used normally or is in a storage condition), Saponas sets a "baseline sensitivity setting" that "determine, at least in part, which touches will and which touches will not be detected by touch element 112." *See* Appx-R, [0026], [0045]-[0046]; Appx-C, ¶383. A "valid touch" is "a direct or indirect touch that is detected and meets, whereas an invalid touch is defined as a touch that is detected but does not meet, the characteristics of a valid touch." Appx-R, [0027]. "Various types of touches may occur, including a tap (which is defined as a single touch lasting less than or equal to a predetermined time), a press (which is defined as a touch that persists for at least a predetermined minimum amount of time), a stroke or moving contact/touch (a touch that in a substantially uninterrupted manner traverses at least a predetermined minimum

portion of the touch element 112) and the like." Appx-R, [0027]. Like Wang, Saponas teaches that touches may be determined invalid and excluded "based on one or more attributes or parameters of the touch or stroke." Appx-R, [0048]. For example, "touches that have a duration that is less than a predetermined minimum amount of time, that do not traverse a predetermined minimum portion of the touch-sensing surface, that do not traverse a predetermined target portion of or location upon the touch-sensitive surface, or that fail to satisfy other criteria or parameters may be rejected." Appx-R, [0048].

Similarly, Westerman describes differentiating between tap and swipe gestures based on both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Appx-Q, [0018]-[0019], [0060]-[0064]. Westerman describes measuring the distance a "finger path event" moved and time of the motion. "If there is little motion, i.e., less than the threshold," or "[i]f the time of the motion is greater than the swipe gesture timeout threshold, i.e., took too long to be a swipe gesture, the event is interpreted as a key tap." Appx-Q, [0061]-[0062]. "Alternatively, if the path has been determined to exceed the minimum length threshold for a swipe gesture (block 1007) and has been determined to be less than the maximum time threshold for a swipe threshold (block 1009), the path can be interpreted as a swipe event." Appx-Q, [0064].

2. The Combination of Beaumier, Chaudhri, and Wang, Reasons to Combine, & Expectation of Success

As discussed in Sections VII.A.1-3, *supra*, Beaumier and Chaudhri both relate to electronic devices with touchscreens and utilize various types of touches (*e.g.*, taps and swipes) to manipulate user interfaces. Appx-C, ¶385. However, beyond the threshold for a press-and-hold gesture, Beaumier does not describe or limit the criteria upon which it relies for detecting and differentiating between the "press and hold," "dragging," "swiping," "clicking," or general selection gestures that it describes. *See, e.g.*, Appx-D, [0058], [0075], [0084], [0086], [0097], [0102]. Similarly, Chaudhri generally describes using the "number of objects, location, speed, direction, length of action, etc." associated with a gesture, but does not specifically describe or limit how these or other criteria are used to detect and differentiate between gestures. *See, e.g.*, Appx-E, [0078], [0152]-[0153], [0167], [0179]. Thus, a POSITA would have recognized and found obvious that a touchscreen device of the Beaumier-Chaudhri combination would benefit from the above-described teachings of Wang—as well as the related teachings of Saponas and Westerman. Appx-C, ¶385. Specifically, Wang teaches techniques for improving the accuracy with which a touchscreen, like the ones utilized in Beaumier and Chaudhri, differentiate between valid and invalid touches, and a POSITA would have recognized that these benefits are particularly useful in the

context of the electronic device of the Beaumier-Chaudhri combination. Appx-P, [0002], [0007]-[0010], [0013]; Appx-C, ¶385.

Wang enumerates several reasons that would have motivated a POSITA to make this combination, including, that "[n]oise can be effectively filtered out to increase the accuracy of touch point determination" and "[i]naccurate sensing results attributable to environmental effects on the touch panel can be minimized to increase the precision of touch point determination." Appx-P, [0016]-[0020]. Wang teaches that the possibilities for noise and inaccuracies are particularly problematic "[w]henever the ambient temperature, moisture, or electrical field changes." Appx-P, [0007]. A POSITA would have recognized that such "environmental effects" would be particularly concerning in the case of a jukebox "located in a bar, restaurant, club" where environmental conditions may be highly variable. *See* Appx-D, [0004], [0062], [0109], [0207]; Appx-C, ¶386. Similarly, environmental conditions may vary greatly in the case of a portable, handheld electronic device (*see* Appx-D, [0206]; Appx-E, [0005]-[0006], [0059]-[0061], [0265]), particularly where the handheld electronic device would be subject to various different storage locations (*see* Appx-R, [0001]-[0002], [0004]-[0006], [0027], [0048]). Appx-C, ¶386. Accordingly, a POSITA would have recognized and found obvious the benefits described by Wang as being of particular relevance

in the context of the electronic device of the Beaumier-Chaudhri combination. Appx-C, ¶386.

From a POSITA's perspective in 2011, integrating the supplemental teachings of Wang (and/or Saponas and Westerman) with Beaumier and Chaudhri would have involved nothing more than applying known solutions to known problems in the field of computer interfaces and applications to achieve predictable outcomes. Appx-C, ¶387. The fundamental aspects of Beaumier and Chaudhri's disclosures would remain intact, bolstered by the well-known and beneficial teachings of Wang (and/or Saponas and Westerman). Appx-C, ¶387.

3. Claim 83 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 83 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶388-392.

[83] The apparatus of claim 2, wherein the apparatus is configured such that, when a distance magnitude of the gesture detected on the touch screen is detected to increase above a distance threshold, and a duration magnitude of the gesture detected on the touch screen is detected to increase above a duration threshold, a menu is displayed with at least one option.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [83].

As discussed in Section VII.A.3 and with respect to [2.c], *supra*, in the Beaumier-Chaudhri combination, as a user browses through the available albums as described with respect to FIG. 6 of Beaumier, a user would have at least two

selection options when they found an album of interest: tap or press-and-hold. Appx-C, ¶389. In addition to the press-and-hold gesture to open more information about an object (*e.g.*, an album), Beaumier also describes that a user may select an object (*e.g.*, an album cover) by "swiping" the object or "dragging a particular object to a blank area." *See* Appx-D, [0058] (describing objects as being selected either "by a swipe to the left or right" or "by holding a touch for a period of time greater than some threshold"), [0102] ("Pressing and holding or dragging a particular object to a blank area may indicate a selection."), [0127]; Appx-C, ¶389. Indeed, it was well-known that different gestures can be assigned to different responsive actions associated with the user interface. *See, e.g.*, Appx-D, [0086] (describing various gestures—including "swipes or slides" and "pressing, tapping or holding"—associated with different actions); Appx-Q, [0053]-[0055] (teaching that "an interface can be provided to permits user to customize the activity that will be performed in response to various swipe gestures"). In these implementations, a POSITA would have understood and found obvious that a dragging gesture would have been utilized in place of or in addition to the press-and-hold gesture to display more information about the selected object. Appx-C, ¶389. An example of this process is illustrated below. Appx-C, ¶389.

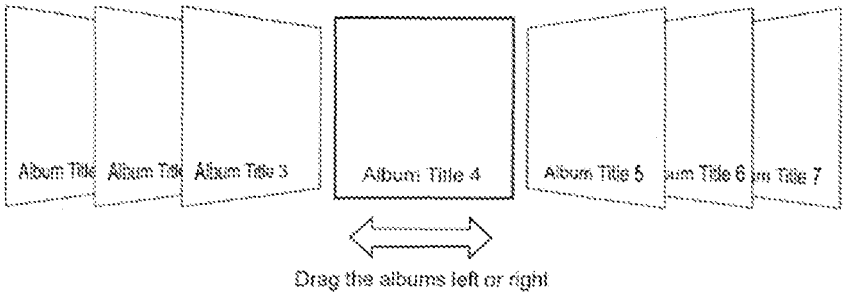
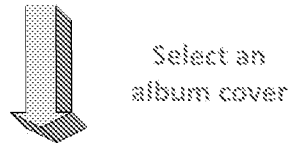


Fig. 6



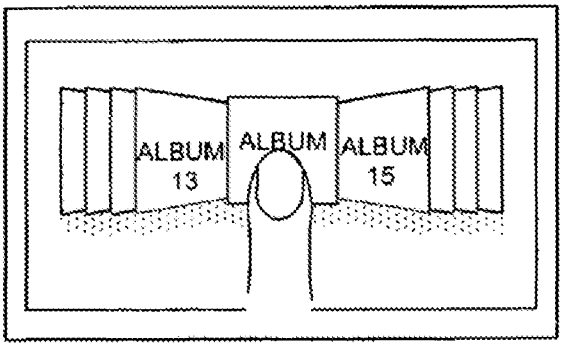


FIG. 23D

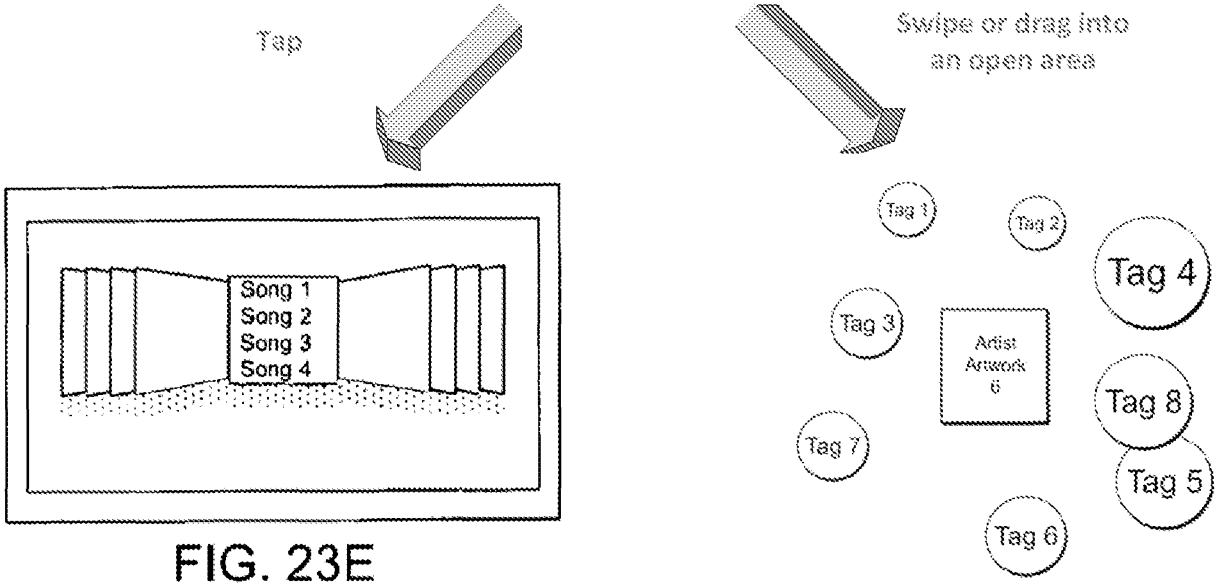
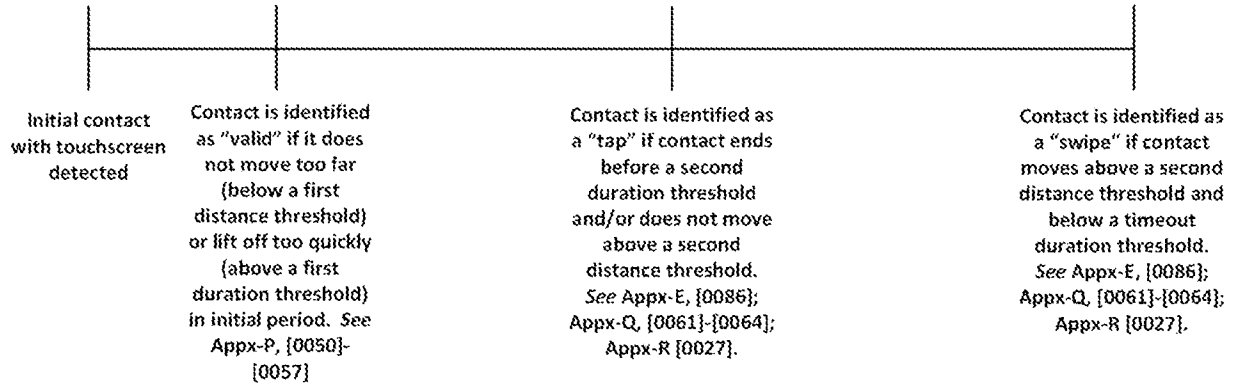


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

In implementations where, for example, a swipe gesture opens more information about the object (*e.g.*, the tags shown in FIG. 8a or the pop-up screen of FIG. 22c), Wang teaches that, in order to accurately determine whether a detected gesture is a valid tap or swipe gesture, the device of the Beaumier-Chaudhri-Wang combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA would have found obvious that the device of the Beaumier-Chaudhri-Wang combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶390. One example of this classification is shown in the following diagram. Appx-C, ¶390.



Thus, for either a tap or a swipe gesture, the touch must last at least on initial "validity" threshold, as taught in Wang. *See* Appx-P, [0050]-[0057]. Then a POSITA would have understood and found obvious that the tap or swipe gestures would have been differentiated based on duration and distance magnitude thresholds (*e.g.*, a tap would be below a distance threshold and a swipe would be above a distance threshold). *See, e.g.*, Appx-E, [0086]; Appx-Q, [0061]-[0064]; Appx-R, [0027]; Appx-C, ¶391.

As discussed with respect to Claim [101], *supra*, a POSITA would have understood and found obvious that the tags of Beaumier's FIG. 8a and pop-up screen of Beaumier's FIG. 22c are menus. Appx-C, ¶392. Thus, when a user swipes an object in FIG. 6, a menu is displayed. Appx-C, ¶392. And in order to detect a swipe, the apparatus of the Beaumier-Chaudhri-Wang combination would need to detect a touch that exceeds a validity duration threshold and a distance magnitude. Appx-C, ¶392. Accordingly, a POSITA would have found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that, when a distance magnitude of the gesture detected on the touch screen is detected to increase above a distance threshold, and a duration magnitude of the gesture detected on the touch screen is detected to increase above a duration threshold*** (*e.g.*, the user performs a swipe gesture on an album that exceeds Wang's validity duration threshold and exceeds a distance threshold

to differentiate it from a tap)***, a menu is displayed with at least one option*** (*e.g.*, the tags of FIG. 8a or the options associated with the pop-up screen shown in FIG. 22c), as recited in [83]. Appx-C, ¶392.

4. Claim 85 Analysis

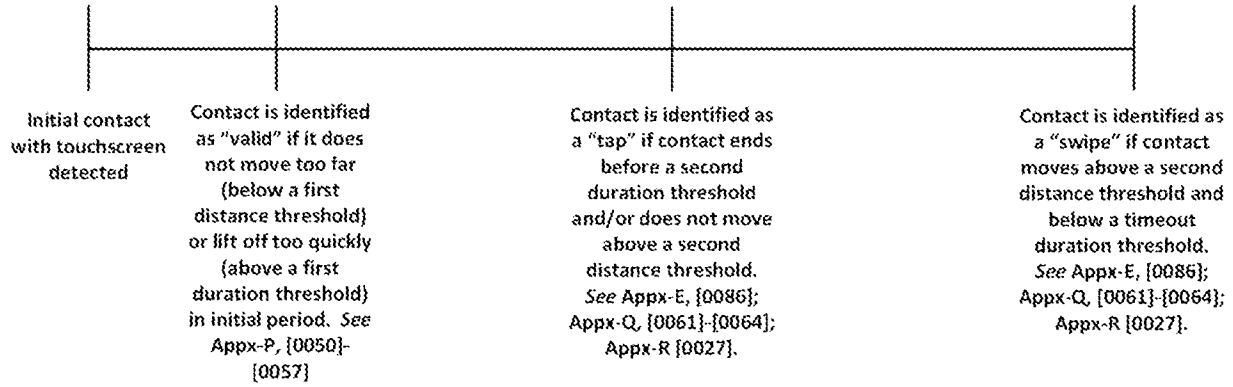
Beaumier, Chaudhri, and Wang render obvious claim 85 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶393-396.

[85] The apparatus of claim 83, wherein the apparatus is configured such that the menu is not displayed, when the distance magnitude of the gesture detected on the touch screen is detected to not increase above the distance threshold and the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [85].

As discussed with respect to Claim [83], *supra*, in implementations where, for example, a swipe gesture opens more information about the object (*e.g.*, the tags shown in FIG. 8a or the pop-up screen of FIG. 22c), Wang teaches that, in order to accurately determine whether a detected gesture is a valid tap or swipe gesture, the device of the Beaumier-Chaudhri-Wang combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA

would have found obvious that the device of the Beaumier-Chaudhri-Wang combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶394. One example of this classification is shown in the following diagram. Appx-C, ¶394.



As shown above, if a gesture is determined as valid (*i.e.*, the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold) and the distance of the gesture is determined to not increase above the distance threshold, the gesture is determined to be a valid tap. Appx-C, ¶395. As discussed with respect to Claim 83, *supra*, a valid tap would not display the menu associated with Beaumier's FIG. 8a or 22c. Appx-C, ¶395. Instead, a tap would display a list of songs, as taught by Chaudhri. *See* Appx-E, [0185]-[0203]; Appx-C, ¶395.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that the menu is not displayed, when the distance magnitude of the gesture detected on the touch screen is detected to not increase above the distance threshold and the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold***, as recited in [85]. Appx-C, ¶396.

5. Claim 86 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 86 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶397-401.

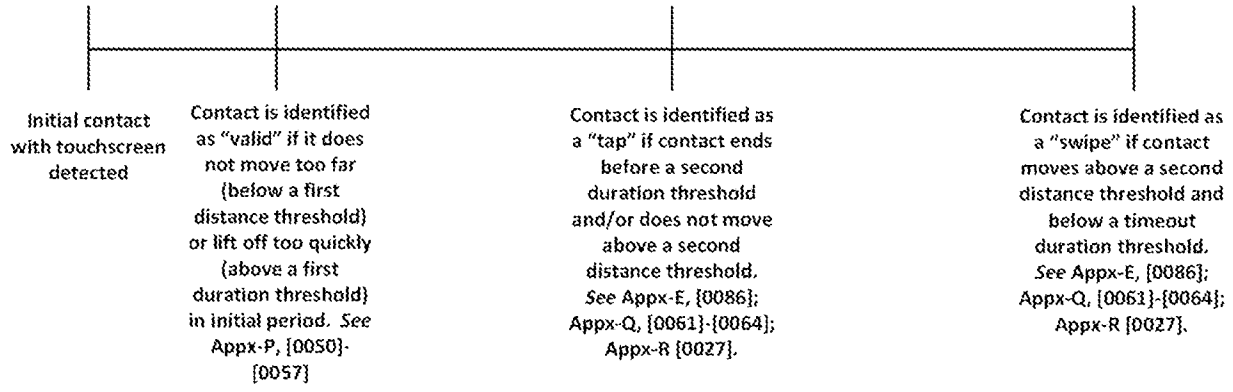
[86] The apparatus of claim 83, wherein the apparatus is configured such that the menu is not displayed and a home screen for choosing among a plurality of applications is displayed, when the distance magnitude of the gesture detected on the touch screen is detected to increase above the distance threshold and the duration magnitude of the gesture detected on the touch screen is detected to not increase above the duration threshold.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [86].

As discussed with respect to Element [151.b], *supra*, a POSITA would have understood from at least the above teachings of Beaumier and Chaudhri that a user would be presented with a "home screen" (*e.g.*, a root or main browser or menu, like those illustrated in FIG. 6 of Beaumier and FIGS. 13 and 16 of Chaudhri) that

provides a user an ability to navigate and access the various functionalities available on the jukebox. Appx-C, ¶398.

As discussed with respect to Claim [83], *supra*, in implementations where, for example, a swipe gesture opens more information about the object (*e.g.*, the tags shown in FIG. 8a or the pop-up screen of FIG. 22c), Wang teaches that, in order to accurately determine whether a detected gesture is a valid tap or swipe gesture, the device of the Beaumier-Chaudhri-Wang combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA would have found obvious that the device of the Beaumier-Chaudhri-Wang combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶399. One example of this classification is shown in the following diagram. Appx-C, ¶399.



As shown above, if a gesture detected on an object displayed as part of a screen (*e.g.*, the home screen described with respect to Element [151.b]) does not exceed the validity duration threshold described by Wang, the gesture will be determined to be invalid and discarded, regardless of whether it exceeds a distance magnitude. Appx-C, ¶400. In this case, the home screen will continue to be displayed, because a valid gesture to select one of the displayed objects of the home screen will not have been detected. Appx-C, ¶400.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that the menu is not displayed and a home screen for choosing among a plurality of applications is displayed, when the distance magnitude of the gesture detected on the touch screen is detected to increase above the distance threshold and the duration magnitude of the gesture detected on the touch screen is detected to not increase above the duration threshold***, as recited in [86]. Appx-C, ¶401.

6. Claim 186 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 186 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶402-429.

[186.a] The apparatus of claim 2, wherein the apparatus is configured such that: the at least part of the gesture is detected on the touch screen on an edge of the touch screen;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [186.a].

As discussed above with respect to Claim [83], *supra*, in addition to the press-and-hold gesture to open more information about an object (*e.g.*, an album), Beaumier also describes that a user may select an object (*e.g.*, an album cover) by "swiping" the object or "dragging a particular object to a blank area." *See* Appx-D, [0058] (describing objects as being selected either "by a swipe to the left or right" or "by holding a touch for a period of time greater than some threshold"), [0102] ("Pressing and holding or dragging a particular object to a blank area may indicate a selection."), [0127]; Appx-C, ¶403. Indeed, it was well-known that different gestures can be assigned to different responsive actions associated with the user interface. *See, e.g.*, Appx-E, [0086] (describing various gestures—including "swipes or slides" and "pressing, tapping or holding"—associated with different actions); Appx-Q, [0053]-[0055] (teaching that "an interface can be provided to

permits user to customize the activity that will be performed in response to various swipe gestures"). In these implementations, a POSITA would have understood and found obvious that a dragging gesture would have been utilized in place of or in addition to the press-and-hold gesture to display more information about the selected object. Appx-C, ¶403. An example of this process is illustrated below. Appx-C, ¶403.

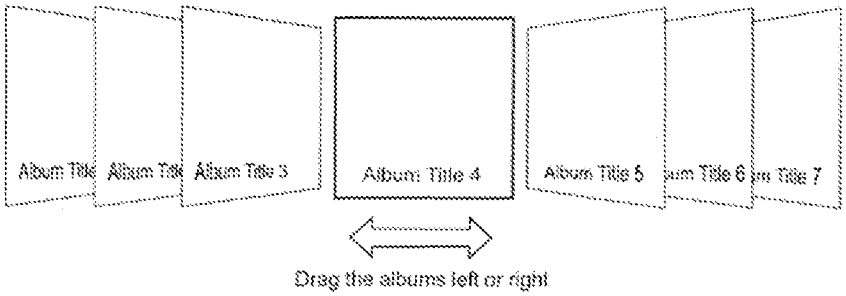
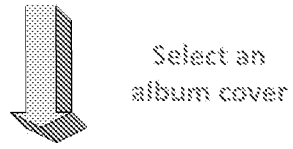


Fig. 6



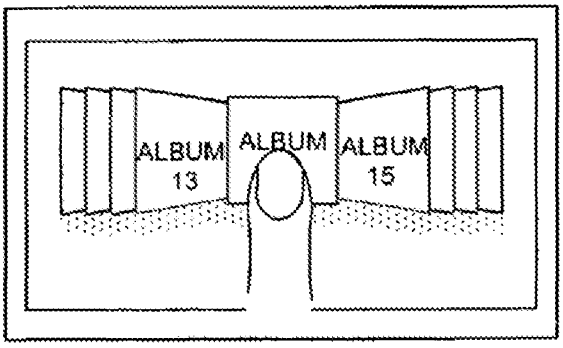


FIG. 23D

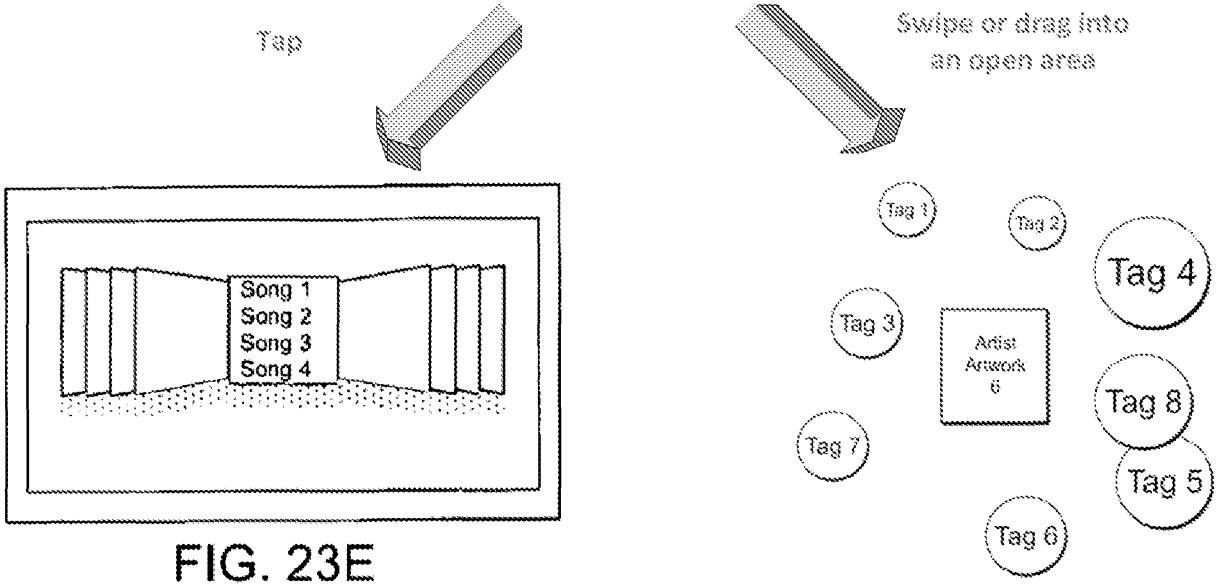
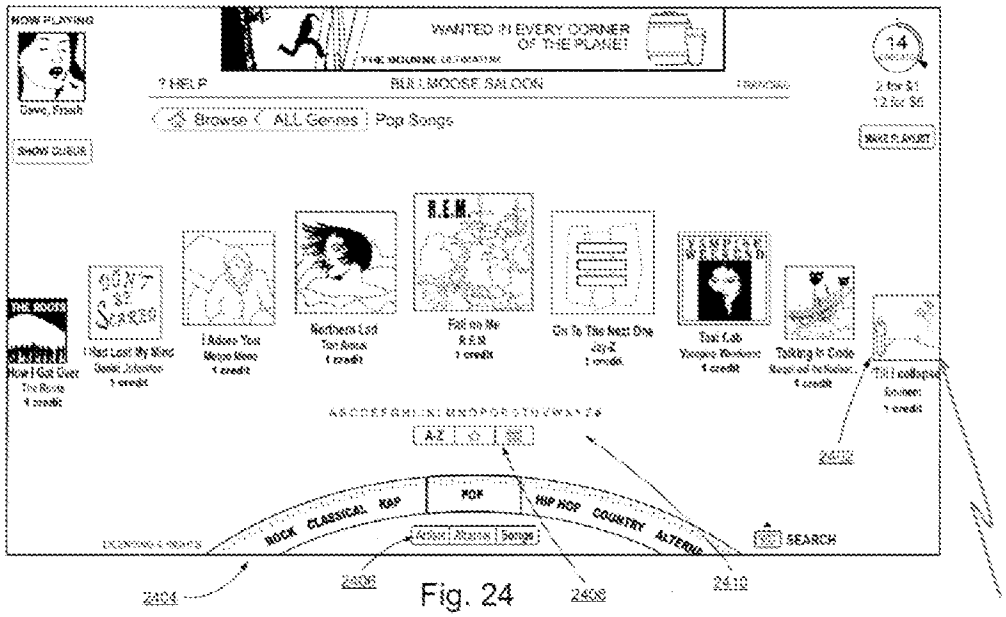


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Either of the tap or swipe gestures of the Beaumier-Chaudhri-Wang combination are performed with respect to an object being selected. *See* Appx-D, [0058], [0102], [0127]; Appx-E, [0086], [0185]-[0203]; Appx-C, ¶404. A POSITA would have understood and found obvious that the object being selected (*e.g.*, an album or application) would have been displayed along or on an edge of the touch screen. Appx-C, ¶404. For example, in FIG. 6, Beaumier illustrates numerous objects positioned throughout the area of the display, and Beaumier describes that any of the displayed objects "may be directly selectable in certain exemplary embodiments." *See* Appx-D, FIG. 6, [0075]; Appx-C, ¶404. And other displays included in Beaumier illustrate user interface objects through the entirety of the display, including on or near the edges. *See, e.g.*, Appx-D, FIGS. 8b, 20a, 21, 24. Similarly, Chaudhri describes that the display may be "full" of selectable image objects. *See* Appx-E, [0069], [0110]; Appx-C, ¶404. Moreover, a POSITA would have found it obvious that the position of the selectable image objects on the display is a simple rearrangement of the parts shown in the figures of Beaumier and Chaudhri and an obvious aesthetic design choice. Appx-C, ¶404; *see* MPEP §§ 2144.04(I), 2144.04(V)(C). Thus, where the object being selected (*e.g.*, an album or application) would have been displayed along or on an edge of the touch screen, the gesture for selecting the object would have also been detected on the edge. Appx-C, ¶404.



Appx-D, FIG. 24 (Annotated)

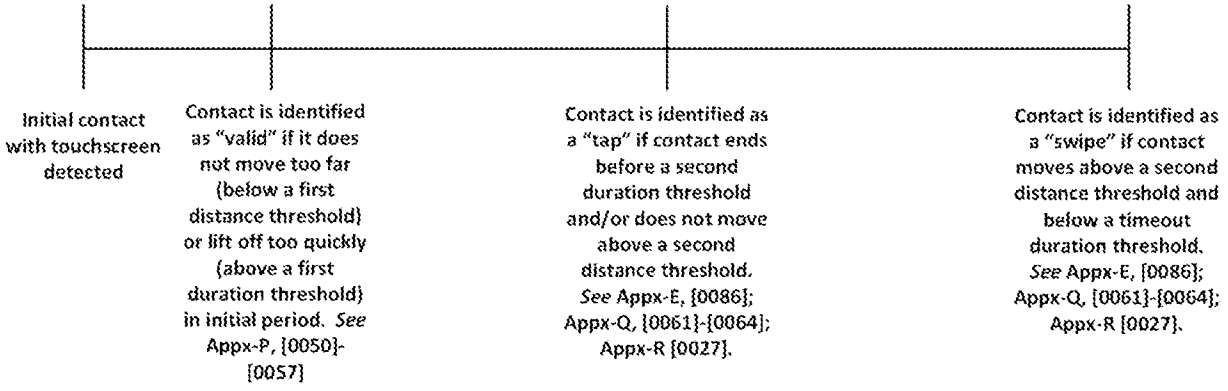
Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that: the at least part of the gesture is detected on the touch screen on an edge of the touch screen***, as recited in [186.a]. Appx-C, ¶405.

[186.b] the magnitude of the gesture includes a distance magnitude;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [186.b].

As discussed with respect to Claim [83], *supra*, in implementations where, for example, a swipe gesture opens more information about the object (*e.g.*, the tags shown in FIG. 8a or the pop-up screen of FIG. 22c), Wang teaches that, in order to accurately determine whether a detected gesture is a valid tap or swipe

gesture, the device of the Beaumier-Chaudhri-Wang combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA would have found obvious that the device of the Beaumier-Chaudhri-Wang combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶407. One example of this classification is shown in the following diagram. Appx-C, ¶407.



Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***the magnitude of the gesture includes a distance magnitude***, as recited in [186.b]. Appx-C, ¶408.

[186.c] the gesture includes a swipe gesture;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [186.c].

As discussed above with respect to Claim [83], *supra*, in addition to the press-and-hold gesture to open more information about an object (*e.g.*, an album), Beaumier also describes that a user may select an object (*e.g.*, an album cover) by "swiping" the object or "dragging a particular object to a blank area." *See* Appx-D, [0058] (describing objects as being selected either "by a swipe to the left or right" or "by holding a touch for a period of time greater than some threshold"), [0102] ("Pressing and holding or dragging a particular object to a blank area may indicate a selection."), [0127]; Appx-C, ¶410. Indeed, it was well-known that different gestures can be assigned to different responsive actions associated with the user interface. *See, e.g.*, Appx-E, [0086] (describing various gestures—including "swipes or slides" and "pressing, tapping or holding"—associated with different actions); Appx-Q, [0053]-[0055] (teaching that "an interface can be provided to permits user to customize the activity that will be performed in response to various swipe gestures"). In these implementations, a POSITA would have understood and found obvious that a dragging gesture would have been utilized in place of or in addition to the press-and-hold gesture to display more information about the selected object. Appx-C, ¶410. An example of this process is illustrated below. Appx-C, ¶410.

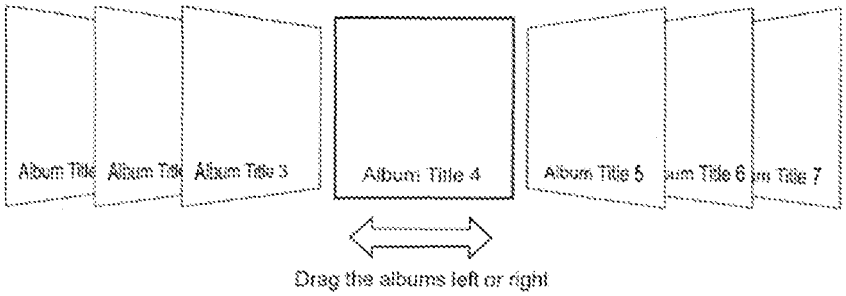
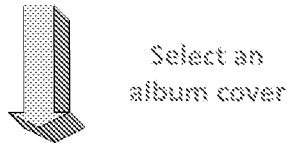


Fig. 6



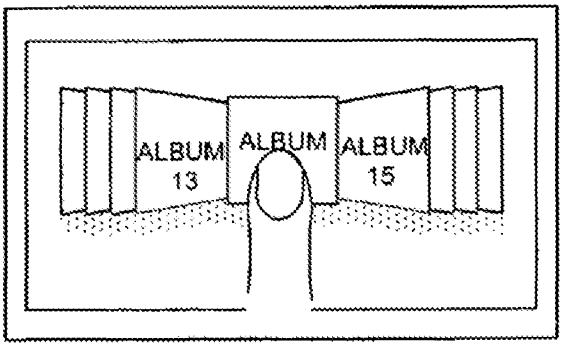


FIG. 23D

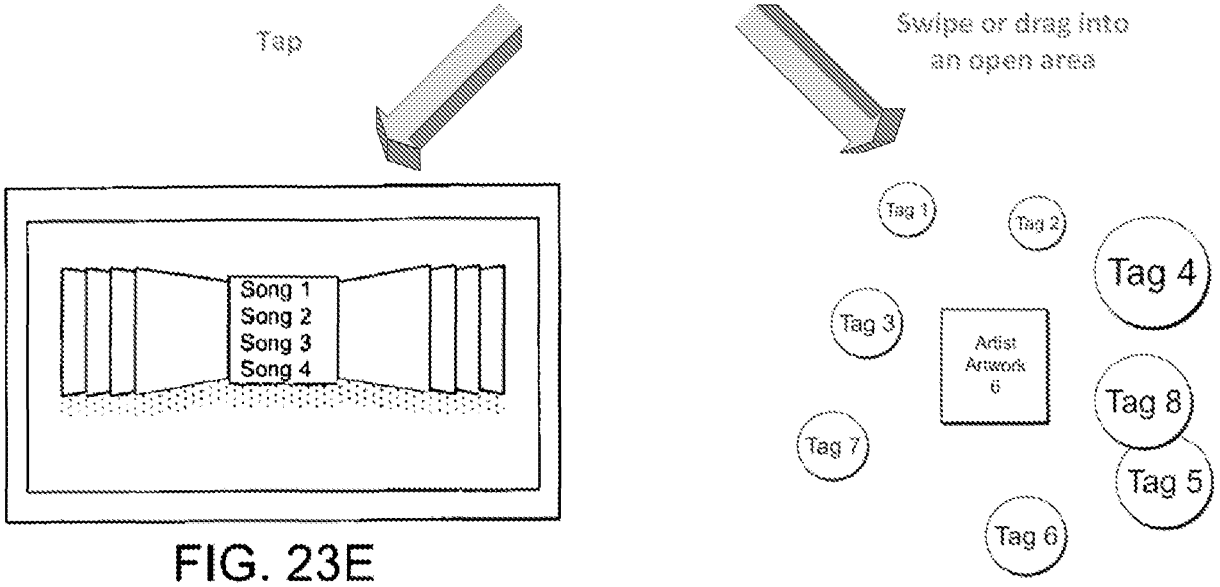


FIG. 23E

Amalgamation of FIGS. 6, 8a of Appx-D and FIGS. 23D, 23E of Appx-E

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***the gesture includes a swipe gesture***, as recited in [186.c]. Appx-C, ¶411.

[186.d] a magnitude of the blurring is continuously increased as a continuous function of an increase in the magnitude of the gesture being detected on the touch screen;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [186.d].

As discussed with respect to Claim [2.d], *supra*, as part of the transition in user interface display resulting from a selection of an album (*e.g.*, between that shown in FIG. 6 or and that shown in FIG. 8a or 22c), Beaumier describes that other user interface objects are blurred. Appx-C, ¶413. As discussed in Section VII.A.1, *supra*, Beaumier teaches that, "[b]ecause the user interfaces of certain exemplary embodiments may be perceived by some users to be complicated, various techniques may be implemented to help bring focus to patron-selectable elements, e.g., song selection navigation." Appx-D, [0127]. "Blurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful." Appx-D, [0127]. For example, "FIG. 22c shows the enlargement of an album jacket to highlight its selection, and further blurs background UI elements to help bring focus to the selected album, in accordance with certain exemplary

embodiments." Appx-D, [0127]. And these focus/highlighting techniques "may be applied to other aspects of the UI experience." Appx-D, [0127].

As discussed with respect to Claim [83] and Element [186.c], *supra*, the gesture that indicates a selection may be a swipe gesture on one of the objects. Appx-C, ¶414. Beaumier does not limit the timing at which the blurring or fading of the other user interface elements occurs with respect to the gesture, and a POSITA would have found it an obvious design choice to perform the blurring continuously during the swiping gesture. Appx-C, ¶414. For example, it was known to continuously vary the optical intensity of user interface elements as a function of the amount of a gesture that has been completed when transitioning between different user interface states. *See, e.g.*, Appx-H, FIG. 6, [0080]-[0090]; Appx-C, ¶414. For example, Chaudhri '842 describes "a process 600 for indicating progress towards satisfaction of a user input condition." Appx-H, [0080]. "While an electronic device is in a first user-interface state, progress is detected (602) towards satisfaction of a user input condition needed to transition to a second user-interface state." Appx-H, [0081]. "While the device is in the first user-interface state, progress is indicated (604) towards satisfaction of the condition by transitioning an optical intensity of one or more user interface objects associated with the second user-interface state." Appx-H, [0082]. With respect to FIGS. 8A-8C, Chaudhri '842 provides "graphs illustrating optical intensity as a

function of the completion of the user input condition," and each of these graphs illustrate that the variation in optical intensity (*e.g.*, blurring or fading) continuously increases as a gesture increases toward completion. *See* Appx-H, FIGS. 8A-8C, [0095]; Appx-C, ¶414.

Based on these teachings a POSITA would have understood and found obvious that, as a user is performing a predefined gesture, for example, the changes in optical intensity provide the user a visual indication that they are performing a particular operation (*e.g.*, the optical intensity changes help the user see more clearly that the user interface state is changing), what the operation is doing (*e.g.*, the optical intensity changes help the user visualize what is changing as a result of the gesture), and how far the user is in completing the gesture that will effectuate the change in user interface states. *See* Appx-H, [0006], [0082], [0088]-[0089], [0108]; Appx-C, ¶415.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***a magnitude of the blurring is continuously increased as a continuous function of an increase in the magnitude of the gesture being detected on the touch screen***, as recited in [186.d]. Appx-C, ¶416.

[186.e] a magnitude of the blurring is continuously decreased as a continuous function of another change; and

The Beaumier-Chaudhri-Wang combination renders obvious Claim [186.e].

As discussed with respect to Element [186.d], *supra*, Beaumier does not limit the timing at which the blurring or fading of the other user interface elements occurs with respect to the gesture, and a POSITA would have found it an obvious design choice to perform the blurring continuously during the swiping gesture. *See, e.g.*, Appx-H, FIG. 6, [0080]-[0090]; Appx-C, ¶418. As discussed with respect to Element [186.d], *supra*, with respect to FIGS. 8A-8C, Chaudhri '842 provides "graphs illustrating optical intensity as a function of the completion of the user input condition." *See* Appx-H, FIGS. 8A-8C, [0095]; Appx-C, ¶418. These graphs show that optical intensity continuously changes in both directions, depending on the state of completion of the gesture, and a POSITA would have understood and found obvious that reversing the gesture such that it is less complete would reverse the changes in optical intensity (*e.g.*, reversing the blurring or fading). *See* Appx-H, FIGS. 8A-8C, [0095]; Appx-C, ¶418.

More specifically, Beaumier does not specify or limit what happens if a user reverses a swipe gesture before it is complete. Appx-C, ¶419. However, it was known in swipe-based gesture user interfaces that reversing a dragging gesture would reverse or undo the action associated with the gesture. *See, e.g.*, Appx-S, [0077] ("The user may close the bezel menu by sliding it back off of the screen (an on-screen-to-offscreen gesture)"); Appx-T, [0053] ("FIGS. 13 and 14 are the flow charts which show the processing procedures for closing the displayed pull-out

menu."), [0054]-[0063] ("after the menu pull-out amount x became smaller than the predetermined definition amount, if it became OFF, it will be regarded as that the user intends to turn off the display of the pull-out menu, and the pull-out menu display will be stopped (S209)."); Appx-C, ¶419.

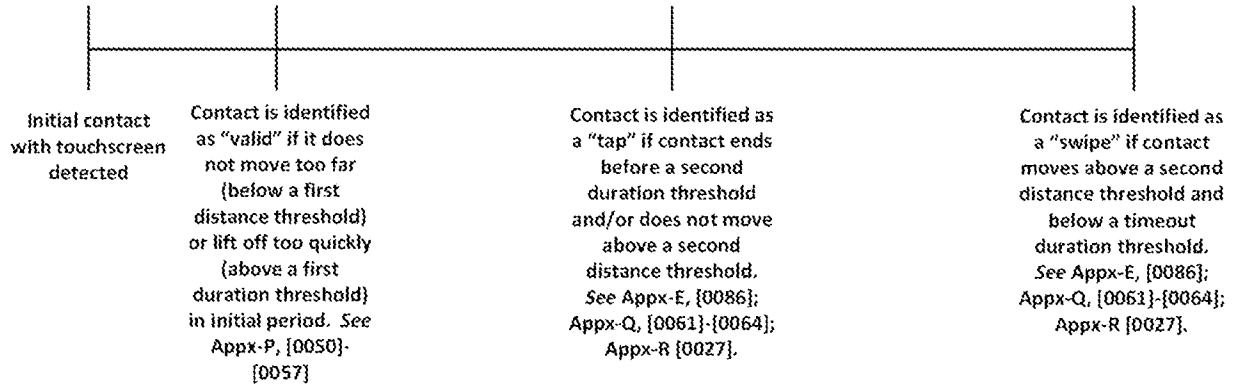
As part of reversing the dragging gesture, it further would have been obvious that the blurring would also be reversed in the same manner as it was initially presented. Appx-C, ¶420. For example, Chaudhri '842 describes that "[c]ontrolling the optical intensity may include increasing or decreasing the optical intensity of a graphical object," and that "the increase or decrease may follow predefined functions." EX1005, [0042]. Furthermore, a POSITA would have recognized and found obvious that transitioning from display for a selected object in Beaumier's interface to a display where the object is not selected is a transition in user interface state in the same manner that transitioning from a closed menu to an open menu, so Chaudhri '842's teachings with respect to varying optical intensity would be equally as applicable for closing the menu as opening the menu. *See* EX1005, [0080]-[0087]; Appx-C, ¶420.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***a magnitude of the blurring is continuously decreased as a continuous function of another change***, as recited in [186.e]. Appx-C, ¶421.

[186.f.i] when the magnitude of the gesture detected on the touch screen is detected to increase above a distance threshold, a menu is displayed with at least one option

The Beaumier-Chaudhri-Wang combination renders obvious Claim [186.f.i].

As discussed with respect to Claim [83], *supra*, in implementations where, for example, a swipe gesture opens more information about the object (*e.g.*, the tags shown in FIG. 8a or the pop-up screen of FIG. 22c), Wang teaches that, in order to accurately determine whether a detected gesture is a valid tap or swipe gesture, the device of the Beaumier-Chaudhri-Wang combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA would have found obvious that the device of the Beaumier-Chaudhri-Wang combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶423. One example of this classification is shown in the following diagram. Appx-C, ¶423.



As shown above, if a gesture is determined as valid (*i.e.*, the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold) and the distance of the gesture is determined to increase above the distance threshold, the gesture is determined to be a valid swipe. Appx-C, ¶424. As discussed with respect to Claim [83], *supra*, Beaumier teaches that a swipe may open more information about the object (*e.g.*, the tags shown in FIG. 8a or the pop-up screen of FIG. 22c). *See* Appx-D, [0058]; [0102]; [0127]; Appx-C, ¶424. And, as discussed with respect to Claim [101], *supra*, a POSITA would have understood and found obvious that the tags of Beaumier's FIG. 8a and pop-up screen of Beaumier's FIG. 22c are menus. Appx-C, ¶424. Thus, when a user swipes an object in FIG. 6, a menu is displayed. Appx-C, ¶424.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***when the magnitude of the gesture detected on the touch screen is detected to increase above a distance threshold, a menu is displayed with at least one option***, as recited in [186.f.i]. Appx-C, ¶425.

[186.f.ii] such that: the at least one other object is displayed via a first virtual display layer, the menu is displayed in a second virtual display layer that appears above the first virtual display layer,

Element [186.f.ii] is substantially the same as Element [125.b]. Appx-C, ¶426. The Beaumier-Chaudhri combination renders obvious Element [186.f.ii] for at least the same reasons described above with respect to Element [125.b]. *See* Element [125.b], *supra*; Appx-C, ¶426.

[186.f.iii] and the menu remains displayed after a completion of the gesture.

The Beaumier-Chaudhri combination renders obvious Element [2.d].

Beaumier describes that the tags are displayed as illustrated in FIG. 8a, "[c]licking on one floating object may in certain exemplary embodiments display more music objects sharing the same tag." Appx-D, [0084]-[0086]. A POSITA would have understood and found obvious that this "clicking" would have been a distinct and subsequent gesture to the one that selected the object (e.g., an album) to open the tags (*e.g.*, the press-and-hold or swipe gesture). Appx-C, ¶428. In order to be able to accept this distinct and subsequent "click," the tags would need to remain open and displayed after completion of the press-and-hold or swipe gesture that caused the tags to be displayed. Appx-C, ¶428.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***when the magnitude of the gesture***

detected on the touch screen is detected to increase above a distance threshold, a menu is displayed with at least one option, as recited in [186.f.iii]. Appx-C, ¶429.

7. Claim 188 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 188 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶430-432.

[188] The apparatus of claim 186, wherein the apparatus is configured such that the object and the at least one other object are displayed via a particular application interface of a particular application when the at least part of the gesture is detected on the touch screen.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [188].

As discussed with respect to Element [123.b], *supra*, Beaumier describes numerous different "content sources" that may be displayed in the object browser illustrated, for example, in FIG. 6. Appx-C, ¶431. For example, Beaumier describes that "[o]bjects generally refer to songs, artists, playlists, games, or media sources," but goes on to explain that "playlists, favorite games, interrupted games, chat sessions, records of media consumption, high scores, etc., may become available as new possible collections to be presented as objects in the object viewer." Appx-D, [0059]. Beaumier also describes that an object may be "a link to the artist's homepage, Facebook or other social networking or other site also may be provided." *See* Appx-D, [0114]. A POSITA would have understood and found obvious that these various functionalities would have been associated with a

plurality of applications. Appx-C, ¶431. As discussed in Element [2.a], *supra*, Beaumier describes that "the jukebox devices have similar structure and operation described in U.S. Pat. No. 6,308,204" (i.e., Nathan). Appx-D, [0053]. Nathan describes that the jukebox includes a "multitask operating system comprises the essential component for allowing simultaneous execution of multiple code fragments and for managing priorities between the various tasks." Appx-F, 8:22-25. The operating system includes a number of modules that communicate with a number of application programming interfaces. Appx-F, 6:17-38; 8:26-32. "There are as many programming interfaces as there are applications." Appx-F, 8:32-33. In other words, like most computer systems, different tasks and functions are performed by different applications, which are managed by the multitasking operating system. Appx-C, ¶431. However, Beaumier leaves the implementation details of the applications that perform the various described tasks and functions to a POSITA. Appx-C, ¶431. Thus, a POSITA would have naturally turned to other references related to similar tasks and interfaces to provide examples of implementation details, including, for example, Chaudhri. Appx-C, ¶431.

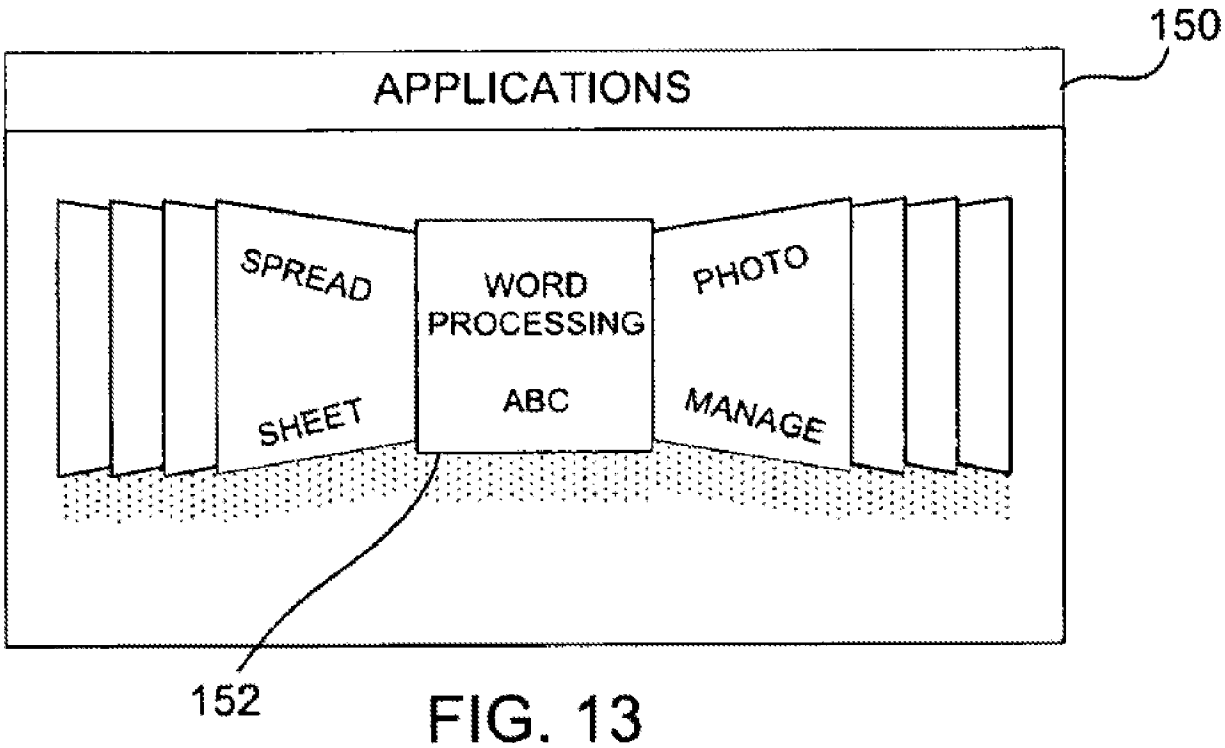


FIG. 13

Appx-E, FIG. 13

Chaudhri describes various applications for carrying out the tasks and functions described by Beaumier, as well as other typical tasks and functions associated with touchscreen electronic devices. Appx-C, ¶432. FIG. 13 of Chaudhri illustrates an image-based browser 150 (nearly identical in form and function to the browsers illustrated in FIGS. 6 of Beaumier) that is "associated with applications." Appx-E, [0143]. Chaudhri describes that "the images 152 are icons that represent applications that can be launched on the electronic device." Appx-E, [0143]. "By way of example, the application may be a photo management program, a music management program, a video management program, word processing program, spreadsheet program, drawing program, and

the like." Appx-E, [0143]. Because Chaudhri describes the image-based browser 150 shown in FIG. 13 as able to launch applications, a POSITA would have at least found it obvious that the image-based browser 150 is an interface for "an application launcher software application, sometimes called a springboard," which was a common application on electronic devices for launching applications. *See, e.g.* Appx-AA, 38:52-58 ("In some embodiments, home screen 708 is displayed by an application launcher software application, sometimes called a springboard"); 42:15-23 ("the application launcher displays a plurality of application icons 5002 that correspond to a plurality of applications," "receives a user-selection of an application icon 5002 (e.g., based on a finger gesture on touchscreen 156), and in response to receiving the user-selection, launches an application corresponding to the selected application icon 5002"); Appx-C, ¶432. A POSITA would have understood that an application launcher application, such as the one shown in Chaudhri's FIG. 13, is an interface that itself includes interfaces (e.g., icons) associated with each of the applications that it is configured to launch. Appx-C, ¶432. In this regard, a POSITA would have understood and found obvious that each of the applications icons is both an interface of the application launcher application, as well as an interface of the application that it represents, because selection of the icon results in the application being launched. Appx-C, ¶432. Accordingly, a POSITA would have understood and found obvious that the

apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that the object and the at least one other object are displayed via a particular application interface of a particular application when the at least part of the gesture is detected on the touch screen***, as recited in [188]. Appx-C, ¶432.

8. Claim 193 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 186 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶433-449.

[193.a] The apparatus of claim 186, wherein the apparatus is configured such that: the at least part of the gesture is detected on the touch screen adjacent to the object;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [193.a].

As discussed with respect to Claim [83], *supra*, Beaumier describes that a user may select an object (*e.g.*, an album cover) by "swiping" the object or "dragging a particular object to a blank area." *See* Appx-D, [0058] (describing objects as being selected either "by a swipe to the left or right" or "by holding a touch for a period of time greater than some threshold"), [0102] ("Pressing and holding or dragging a particular object to a blank area may indicate a selection."), [0127]; Appx-C, ¶434. Beaumier does not dictate that these "swipe" or "dragging" gestures must originate or remain directly on the object. *See id.* It was well known

that touches and gestures that begin within the proximity of a user interface object would be interpreted as intended to be with respect to that user interface object. *See, e.g.*, Appx-H, [0074] ("The contact, either overlapping with the unlock image 402 or in proximity to the unlock image 402, is detected by the device 400 and is determined to be an attempt to unlock the touch screen, based on the fact that the user 502 is interacting with the unlock image 402."); Appx-K, [0884] ("In some embodiments, the first user interface object includes a control icon . . . and the finger-down event occurs at or near the control icon."), [0136] ("the gesture on the month column is a substantially vertical gesture on or near the month column"); Appx-C, ¶434. Accordingly, in order to provide some leeway for a user, a POSITA would have at least found it obvious to configure the apparatus of the Beaumier-Chaudhri-Wang combination such that a user could begin a gesture either on or near (*e.g.*, adjacent) to an object. Appx-C, ¶434.

Furthermore, it was also well known that touches and gestures that began within an object could move beyond the boundaries of the object, and thereby have at least a part of the gesture detected adjacent to the location of the initial object, including at or near the display edge. Beaumier's embodiments in its Figures 11-14 disclose to a POSITA this form of swiping gesture that begins on an object and moves beyond its boundaries. Appx-D, [0102]-[0104]; Appx-C, ¶434.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that: the at least part of the gesture is detected on the touch screen adjacent to the object***, as recited in [193.a]. Appx-C, ¶435.

[193.b] the object is displayed to move with at least some of the gesture;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [193.b].

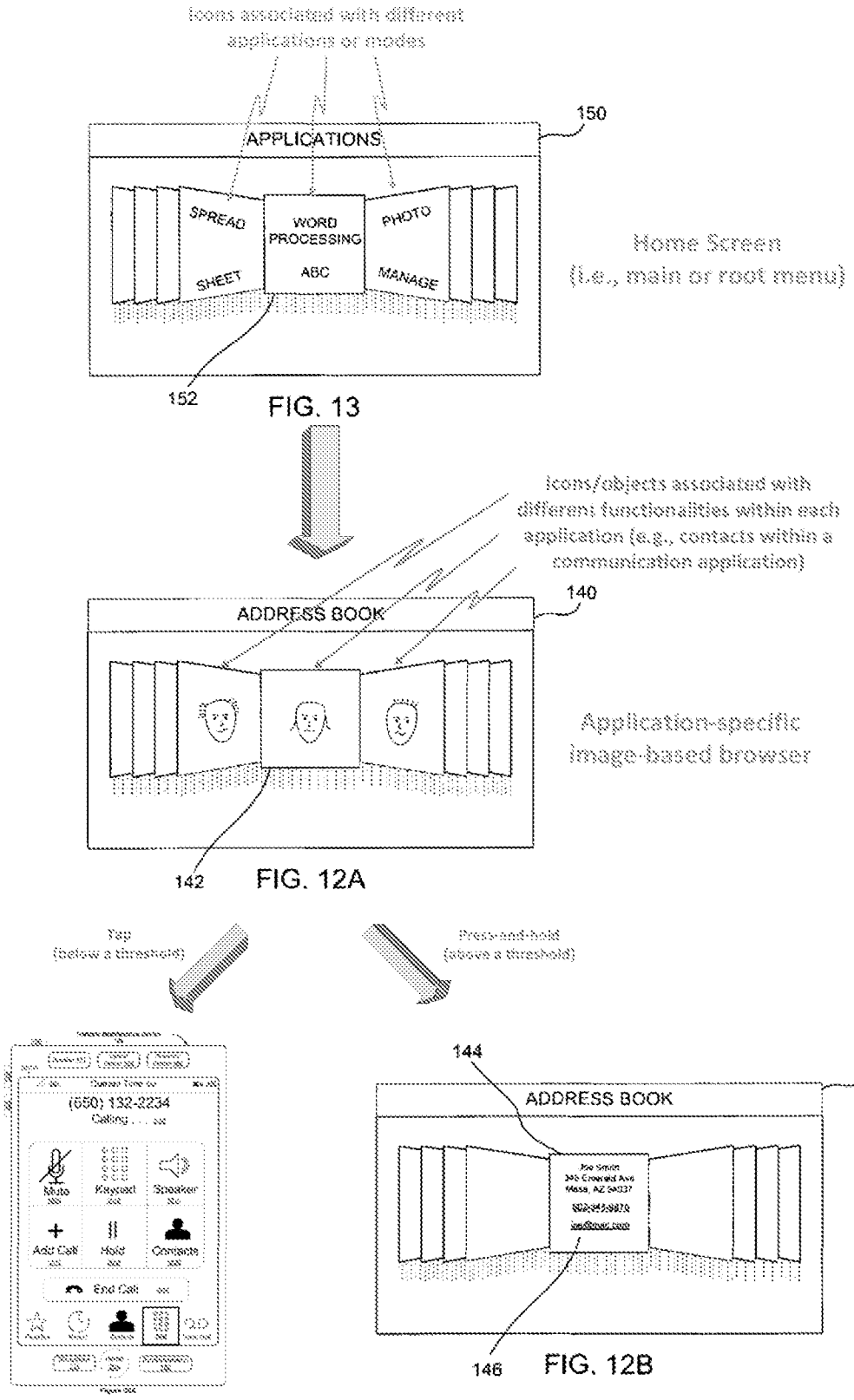
As discussed with respect to Claim [83], *supra*, Beaumier describes that a user may select an object (*e.g.*, an album cover) by "swiping" the object or "dragging a particular object to a blank area." *See* Appx-D, [0058] (describing objects as being selected either "by a swipe to the left or right" or "by holding a touch for a period of time greater than some threshold"), [0102] ("Pressing and holding or dragging a particular object to a blank area may indicate a selection."), [0127]; Appx-C, ¶437. A POSITA would have understood and found obvious that "dragging a particular object to a blank area" would have included displaying the object to move with at least some of the gesture. Appx-C, ¶437.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***the object is displayed to move with at least some of the gesture***, as recited in [193.b]. Appx-C, ¶438.

[193.c] the object includes a battery-related icon;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [193.c].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIG. 6 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶440. To navigate through these functionalities, a POSITA would have understood and found obvious using the image-based browser displays, like the one illustrated in FIG. 13 of Chaudhri, such that the user could browse between multiple applications. *See* Appx-D, [0074], [0076]-[0079]; Appx-C, ¶440.



Amalgamation of Appx-E FIGS. 13, 12A, and 12B and Appx-K FIG. 30A

A POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri-Wang combination would have been a battery-related application. Appx-C, ¶441. Beaumier describes that its interfaces are also applicable to "handheld devices," an apparatus form factor that commonly utilized a battery. Appx-D, [0206]; Appx-C, ¶441. And Chaudhri employs a very similar image-based browsing interface on a "portable media player that is powered by a battery." Appx-E, [0234]. It was well known in the art that at least one of the applications commonly installed on handheld electronic devices were battery management applications. *See e.g.*, Appx-U, 2:38-43 ("a user of a mobile device can manage battery power consumption of the mobile device, through various battery management functions provided by a mobile device battery management program (or application) which includes a dynamic battery use estimator, a battery threshold manager, and/or a profile based battery manager."); Appx-C, ¶441. These battery management applications were known to be launched by selecting a battery icon on the user interface. *See* Appx-U, 8:2-7 ("Of note, the Battery Saver icon 17 is an icon for launching a dynamic mobile device battery management program (or the 'Battery Saver' program) installed on the mobile device 1b.").

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***the object includes a battery-related icon***, as recited in [193.c]. Appx-C, ¶442.

[193.d] when a first duration of touch being applied to the touch screen on at least one option of the menu and a subsequent cessation of the first duration of touch being applied to the touch screen on the at least one option are detected: an action associated with the at least one option is performed;

The Beaumier-Chaudhri-Wang combination renders obvious Claim [193.d].

As discussed with respect to Element [151.b], *supra*, Chaudhri describes several actions associated with a selection of an object associated with an application (e.g., a contact object associated with a communication application). *See* Appx-E, [0142]. For example, one action is that, "when the user selects the image 142 at the primary position, then contact information 144 associated with the image 142 is opened." Appx-E, [0142]. Another action is that "when the user selects the image 142 at the primary position, a default phone number associated with the image may be used to immediately initiate a phone call." Appx-E, [0142]. A POSITA would have understood and found obvious that the device would have been configured to perform these different actions in response to selections based on different gestures. *See* Appx-E [0086] (describing that the device is capable of detecting and distinguishing between multiple types of input), [0171] (describing different gestures that may be interpreted as a selection); Appx-C, ¶444. Thus, one gesture (*e.g.*, a tap) may "immediately initiate a phone call" and another gesture

(*e.g.*, a press and hold or a swipe gesture) may open "contact information 144 associated with the image 142." *See* Appx-E, [0142], [0171]; Appx-C, ¶444.

A POSITA would have understood and found obvious to apply Chaudhri's technique of associating different gestures with the displayed objects such that some gestures perform an action (*e.g.*, a tap initiating a telephone call) and other gestures open further menu-like interfaces (*e.g.*, a press and hold or a swipe gesture opens a contact menu) would have been applied to any and all of the applications available in the apparatus of the Beaumier-Chaudhri-Wang combination. Appx-C, ¶445. In the example of the battery management application, one gesture (*e.g.*, a tap) may "select[] a pre-configured operational profile for battery power management," whereas a second gesture (*e.g.*, a press and hold or a swipe gesture opens a menu for configuring the profile). *See, e.g.*, Appx-U, 8:49-51, 14:59-15:51 (describing the ability to select "pre-configured operational profiles" or "user-defined operational profiles 133"); Appx-C, ¶445.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***when a first duration of touch being applied to the touch screen on at least one option of the menu and a subsequent cessation of the first duration of touch being applied to the touch screen on the at least one option are detected*** (*e.g.*, a user taps on an object associated with a menu item)***: an action associated with the at least one option is performed*** (*e.g.*, a

pre-configured operational profile for battery power management is selected), as recited in [193.d]. Appx-C, ¶446.

[193.e] when a second duration of touch, that is greater than the first duration, being applied to the touch screen on the at least one option is detected: another menu including at least one other option is displayed

The Beaumier-Chaudhri-Wang combination renders obvious Claim [193.e].

A POSITA would have understood and found obvious to apply Chaudhri's technique of associating different gestures with the displayed objects such that some gestures perform an action (*e.g.*, a tap initiating a telephone call) and other gestures open further menu-like interfaces (*e.g.*, a press and hold or a swipe gesture opens a contact menu) would have been applied to any and all of the application available in the apparatus of the Beaumier-Chaudhri-Wang combination. Appx-C, ¶448. In the example of the battery management application, one gesture (*e.g.*, a tap) may "select[] a pre-configured operational profile for battery power management," whereas a second gesture (*e.g.*, a press and hold or a swipe gesture) opens a menu for configuring the profile. *See, e.g.*, Appx-U, 8:49-51, 14:59-15:51 (describing the ability to select "pre-configured operational profiles" or "user-defined operational profiles 133"); Appx-C, ¶448.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***when a second duration of touch, that is greater than the first duration, being applied to the touch screen on the at***

least one option is detected: (*e.g.*, a user presses and holds on an object associated with a menu item)***: another menu including at least one other option is displayed*** (*e.g.*, another menu for configuring a user-defined operational profile for battery power management is opened), as recited in [193.e]. Appx-C, ¶449.

9. Claim 195 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 195 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶450-454.

[195] The apparatus of claim 193, wherein the apparatus is configured such that the blurring indicates a movement of the object from a first virtual display layer to a second virtual display layer.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [195].

As discussed with respect to Element [125.b], *supra*, when a user selects an object and additional information associated with the object is displayed (*e.g.*, a set of tags shown in Beaumier's FIG. 8a of the pop-up screen shown in Beaumier's FIG. 22c), the other objects being displayed that were not selected (*e.g.*, in Beaumier's FIG. 6) would have been blurred to help bring focus to the selected object and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶451. In this case, the additional information (*e.g.*, tags, pop-up screen, or other menu) would be shown to be "above" or "on top of" the other objects below that have been blurred. Appx-C, ¶451. Thus, as discussed with respect to Elements [124.b], and [125.b],

supra, a POSITA would have understood and found obvious that the additional information is being displayed in one or more "virtual layers" "above" the one or more "virtual layers" in which the other objects that were not selected are displayed in. Appx-C, ¶451. Indeed, it was known that, "[w]hen several 2D layers of information are put on top of each other, it is possible to provide the user with an intuitive way of choosing how much and which information to display crisply." Appx-G, 3-4. For example, there were user interface systems going back as early as 1991 where "up to 26 layers of information can be displayed at the same time" and where "[e]ach layer has an interest level associated with it that the user can change," and "[t]he interest level is [visualized as] a combination of blur and transparency." Appx-G, 2, 8.

Furthermore, at least one known technique for determining which objects to blur and which objects to display sharply—known as Semantic Depth of Field (SDOF)—was to assign each object a semantic depth (*e.g.*, related to the virtual layer in which the object is associated) and a relevance value that depends on the level of display on which the user is currently focused, such that objects within the current layer of focus are assigned the highest relevance and displayed sharply, and objects within layers at progressively different layers of depth are assigned progressively lower relevance and displayed with greater blur. *See* Appx-G, 2-7; Appx-C, ¶452. The relevance of any object or set of objects (and thus the extent to which each object

or set of objects is blurred or displayed sharply in focus) was a known design choice, and relevance value was known to be settable by the system in accordance with a designer's programming or even by the user. *See* Appx-G, 3-4; Appx-C, ¶452. This is illustrated in the following figure, in which the red objects are assigned to the layer on which a user is currently focused and the light blue objects are assigned to "lower" or "higher" layers of semantic depth from the focus layer, and are therefore assigned a lower relevance value based on their semantic distance from focus layer and blurred based on this lower relevance value. *See* Appx-G, 3-4; Appx-C, ¶452.

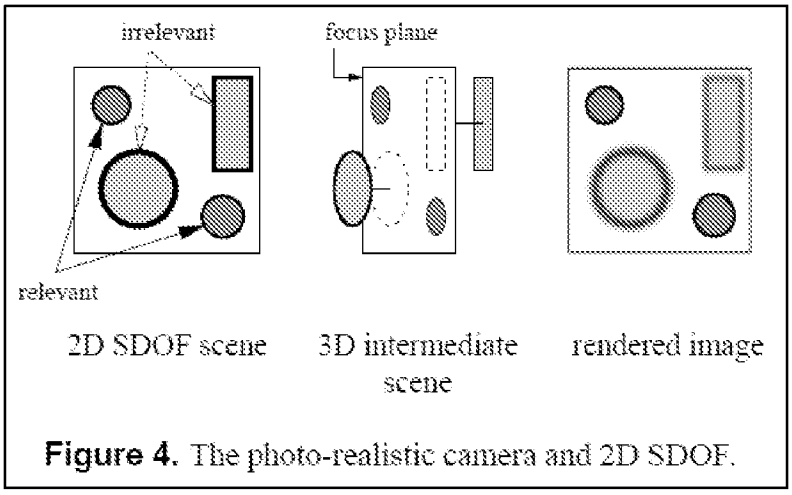


Figure 4. The photo-realistic camera and 2D SDOF.

Appx-G, FIG. 4

Applying this known technique for determining the degree of blur utilized in displaying user interface objects to the teachings of Beaumier, a POSITA would have found it obvious that where in the Beaumier-Chaudhri-Wang combination objects are displayed with the same apparent depth, they are assigned the same semantic depth (*e.g.*, virtual display layer) and the same associated relevance and

blur values. *See* Appx-G, 2-7; Appx-C, ¶453. Thus, in FIG. 6, for example, it would have at least been obvious to a POSITA that all objects that appear at the same apparent depth are part of a virtual layer at the same semantic level of depth and assigned the same relevance and sharpness/blur level (*e.g.*, the various object icons). *See* Appx-D, FIG. 6; Appx-C, ¶453. On the other hand, once the tags are opened (as in FIG. 8a), the other, blurred objects would have appeared to have been reassigned (or moved) to a different apparent depth than the selected object in response to user input as compared to the same depth in FIG. 6. *See* Appx-D, FIGS. 6, 8a, 22c; Appx-C, ¶453.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that the blurring indicates a movement of the object from a first virtual display layer to a second virtual display layer***, as recited in [195]. Appx-C, ¶454.

10. Claim 196 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 196 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶455-457.

[196] The apparatus of claim 193, wherein the apparatus is configured such that the at least one option includes a wide area network option, a local area network option, and a volume option.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [196].

As discussed with respect to Element [193.c], *supra*, a POSITA would at least have found it obvious that one of the applications included in the apparatus of the Beaumier-Chaudhri combination would have been a battery management applications. *See e.g.*, Appx-U, 2:38-43; Appx-C, ¶456. It was known that at least one of the options available in battery management applications were options related to WiFi and Bluetooth, which are types of local area networks. *See e.g.*, Appx-U, FIG. 6B, 5:32-46, 11:51-12:19 (describing that a user may select WiFi and Bluetooth triggers that disable these components when certain thresholds are crossed); Appx-C, ¶456. Further, it would have at least been obvious to include a "volume adjustment" option, as explicitly disclosed by Chaudhri's media player. *See* Appx-E, [0240]; Appx-C, ¶456.

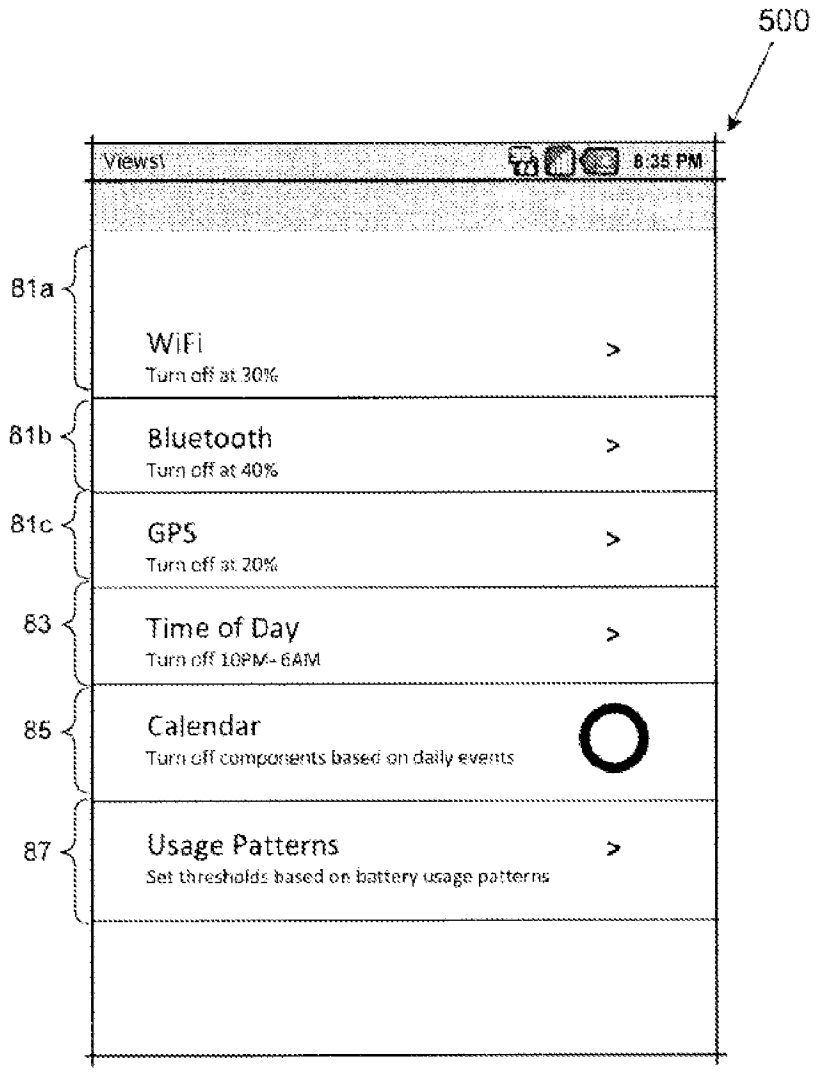


FIG. 6B

Appx-U, FIG. 6B

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that the at least one option includes a wide area network option, a local area network option, and a volume option***, as recited in [196]. Appx-C, ¶457.

11. Claim 198 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 198 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶458-461.

[198] The apparatus of claim 186, wherein the apparatus is configured such that the blurring indicates a movement through a third virtual display layer that appears between the first virtual display layer and the second virtual display layer.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [198].

As discussed with respect to Claim [195], *supra*, at least one known technique for determining which objects to blur and which objects to display sharply—known as Semantic Depth of Field (SDOF)—was to assign each object a semantic depth (*e.g.*, related to the virtual layer in which the object is associated) and a relevance value that depends on the level of display on which the user is currently focused, such that objects within the current layer of focus are assigned the highest relevance and displayed sharply, and objects within layers at progressively different layers of depth are assigned progressively lower relevance and displayed with greater blur. *See* Appx-G, 2-7; Appx-C, ¶459. The relevance of any object or set of objects (and thus the extent to which each object or set of objects is blurred or displayed sharply in focus) was a known design choice, and relevance value was known to be settable by the system in accordance with a designer's programming or even by the user. *See* Appx-G, 3-4; Appx-C, ¶459. This is illustrated in the following figure, in which the

red objects are assigned to the layer on which a user is currently focused and the light blue objects are assigned to "lower" or "higher" layers of semantic depth from the focus layer, and are therefore assigned a lower relevance value based on their semantic distance from focus layer and blurred based on this lower relevance value. *See* Appx-G, 3-4; Appx-C, ¶459.

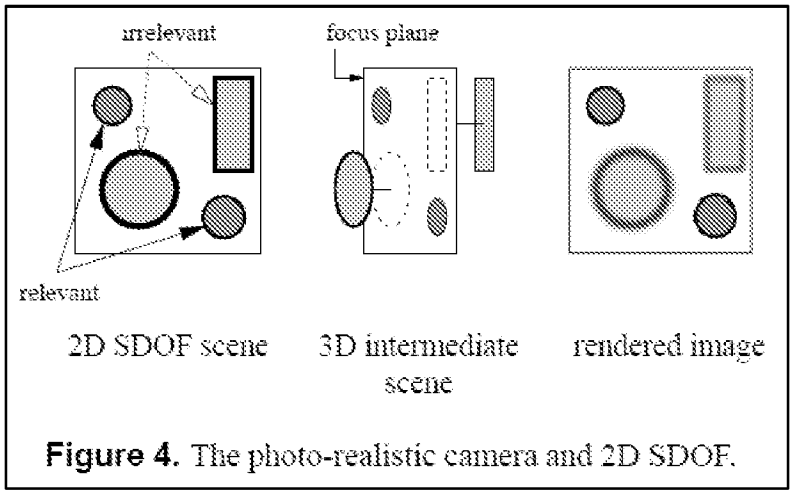


Figure 4. The photo-realistic camera and 2D SDOF.

Appx-G, FIG. 4

Applying this known technique for determining the degree of blur utilized in displaying user interface objects to the teachings of Beaumier and Chaudhri, a POSITA would have found it obvious that where in the Beaumier-Chaudhri-Wang combination objects are displayed with the same apparent depth, they are assigned the same semantic depth (*e.g.*, virtual display layer) and the same associated relevance and blur values. *See* Appx-G, 2-7; Appx-C, ¶460. Thus, in FIG. 6, for example, it would have at least been obvious to a POSITA that all objects that appear at the same apparent depth are part of a virtual layer at the same semantic

level of depth and assigned the same relevance and sharpness/blur level (*e.g.*, the various object icons). *See* Appx-D, FIG. 6; Appx-C, ¶460. On the other hand, once the tags are opened (as in FIG. 8a), the other, blurred objects would have appeared to have been reassigned to a different apparent depth than the selected object in response to user input as compared to the same depth in FIG. 6. *See* Appx-D, FIGS. 6, 8a, 22c; Appx-C, ¶460.

Because there can be any number of virtual layers available on the display, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that the blurring indicates a movement through a third virtual display layer that appears between the first virtual display layer and the second virtual display layer***, as recited in [198]. Appx-C, ¶461.

12. Claim 205 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 205 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶462-468.

[205.a] The apparatus of claim 186, wherein the apparatus is configured such that: when the at least part of the gesture is detected on the touch screen on the object, that includes a battery-related icon, adjacent to a first position on the

edge of the touch screen: the object is displayed to move with at least some of the gesture,

Element [205.a] is substantially the same as Element [193.b]. Appx-C, ¶462. The Beaumier-Chaudhri-Wang combination renders obvious Element [205.a] for at least the same reasons described above with respect to Element [193.b]. *See* Element [193.b], *supra*; Appx-C, ¶462.

[205.b] the at least one option includes a wide area network option, a local area network option, and a volume option

Element [205.b] is substantially the same as Claim [196]. Appx-C, ¶463. The Beaumier-Chaudhri-Wang combination renders obvious Element [205.b] for at least the same reasons described above with respect to Claim [196]. *See* Claim [196], *supra*; Appx-C, ¶463.

[205.c] when a first duration of touch being applied to the touch screen on at least one option of the menu and a subsequent cessation of the first duration of touch being applied to the touch screen on the at least one option are detected: an action associated with the at least one option is performed, and

Element [205.c] is substantially the same as Element [193.d]. Appx-C, ¶464. The Beaumier-Chaudhri-Wang combination renders obvious Element [205.c] for at least the same reasons described above with respect to Element [193.d]. *See* Element [193.d], *supra*; Appx-C, ¶464.

[205.d] when a second duration of touch, that is greater than the first duration, being applied to the touch screen on the at least one option is detected: another menu including at least one other option is displayed; and

Element [205.d] is substantially the same as Element [193.e]. Appx-C, ¶465. The Beaumier-Chaudhri-Wang combination renders obvious Element [205.d] for at least the same reasons described above with respect to Element [193.e]. *See* Element [193.e], *supra*; Appx-C, ¶465.

[205.e] when the at least part of the gesture is detected on the touch screen at a second position on the edge of the touch screen: the at least one option includes a message option for displaying an associated message in response to a selection thereof.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [205.e].

As discussed with respect to Element [151.b] and [151.c], *supra*, together, Beaumier and Chaudhri describe scrollable image-based browsers, like those illustrated in FIG. 6 of Beaumier and FIGS. 13 and 16 of Chaudhri that provide access to various types of functions (*e.g.*, (1) playing audio, (2) playing video, (3) browsing websites and social networking sites, (4) connecting to and sending messages via an Internet-based messaging system and/or a social networking site, (4) e-mailing, and/or (5) initiating a voice or VoIP call), each of which is associated with one of a plurality of applications and would have naturally been accomplished through the launching of an interface with an associated application or program. Appx-C, ¶467. As discussed with respect to Claim [178], *supra*, a POSITA would at least have found it obvious that one of the applications included

in the apparatus of the Beaumier-Chaudhri combination would have been an instant messaging application. Appx-C, ¶467. Indeed, Beaumier describes displaying "chat sessions" in the object viewer. Appx-D, [0059]. It was well known in the art that at least one of the applications commonly installed on electronic devices were instant messaging applications. *See, e.g.*, Appx-I, [0095] (describing an electronic device with a "an instant messaging (IM) module"), [0120] (describing that the instant messaging module "may be used to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages and to view received instant message"); Appx-K, [0215]-[0328] (generally describing the operation of an instant messaging application on an electronic device); Appx-C, ¶467. Further, it was well known in the art that menus associated with instant messaging applications include a message option for displaying an associated message in response to a selection thereof. *See, e.g.*, Appx-K, FIG. 7 (illustrating a menu of available instant message conversations, where selection of a conversation displays the messages in the conversation), [0215]; Appx-C, ¶467.

Accordingly, a POSITA would have found obvious that, in the apparatus of the Beaumier-Chaudhri-Wang combination, ***when the at least part of the gesture is detected on the touch screen at a second position on the edge of the touch screen*** (*e.g.*, when the user select another object on the display of FIG. 6 that is on the edge)***: the at least one option includes a message option for displaying an associated message in response to a selection thereof*** (e.g., a menu associated with a messaging application is opened, which would in a message option for displaying an associated message in response to a selection thereof), as recited in [205.e]. Appx-C, ¶468.

13. Claim 206 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 206 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶469.

[206] The apparatus of claim 193, wherein the apparatus is configured such that the blurring indicates a movement of the object from a first virtual display layer to a second virtual display layer.

Claim [206] is substantially the same as Claim [195]. Appx-C, ¶469. The Beaumier-Chaudhri-Wang combination renders obvious Claim [206] for at least the same reasons described above with respect to Claim [195]. *See* Claim [195], *supra*; Appx-C, ¶469.

14. Claim 207 Analysis

Beaumier, Chaudhri, and Wang render obvious claim 207 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶470.

[207] The apparatus of claim 205, wherein the apparatus is configured such that, when the at least part of the gesture is detected on the touch screen at the second position on the edge of the touch screen: an overlaying virtual display layer moves in response to the change in the magnitude of the gesture being detected on the touch screen, so as to appear as a window shade.

The Beaumier-Chaudhri-Wang combination renders obvious Claim [207].

As discussed with respect to Element [125.b], *supra*, when a user selects an object and a set of tags associated with the object are displayed, the other objects being displayed (*e.g.*, in FIG. 6) would have been blurred to help bring focus to the selected object and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶471. In this case, the tags would be shown to be "above" or "on top of" the other objects below that have been blurred. Appx-C, ¶471. Thus, a POSITA would have understood and found obvious that the tags and selected object are being displayed in one or more "virtual layers" "above" or "overlaying" the one or more "virtual layers" in which the other objects that were not selected are displayed in. Appx-C, ¶471. Indeed, it was known that, "[w]hen several 2D layers of information are put on top of each other, it is possible to provide the user with an intuitive way of choosing how much and which information to display crisply." Appx-G, 3-4. For example, there were user interface systems going back as early as 1991 where "up to 26 layers of information can be displayed at the same time" and where "[e]ach layer has an interest level associated with it that the user can

change," and "[t]he interest level is [visualized as] a combination of blur and transparency." Appx-G, 2, 8.

With respect to FIGS. 26A-26E, Chaudhri describes that one way to transition a selected object is with a "a flipping sequence." Appx-E, [0208]. "As shown in FIG. 26B, the edge of the image at the beginning of the slide follows the finger as it moves vertically." Appx-E, [0209]. In other words, in response to the change in the magnitude of the gesture being detected on the touch screen, the object flips to reveal additional content associated with the selected object. *See* Appx-E, [0208]-[0213]; Appx-C, ¶472. However, Chaudhri also describes other possible transitions, such as "fade in/out, slide in/out, etc." *See* Appx-E, [0138]. A POSITA would have understood and found obvious that these other transitions (*e.g.*, the slide in/out) would have also proceeded in response to the change in the magnitude of the gesture being detected on the touch screen, just like with the flip described with respect to FIGS. 26A-26E. Appx-C, ¶472. A POSITA also would understood and found obvious that at least one to implement a "slide in/out" is for one or more objects to "appear as a window shade." Appx-C, ¶472.

Based on at least these teachings, a POSITA would have at least found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that, when the at least part of the gesture is detected on the touch screen at the second position on the edge of the touch screen: an***

overlaying virtual display layer moves in response to the change in the magnitude of the gesture being detected on the touch screen, so as to appear as a window shade, as recited in [207]. Appx-C, ¶473.

C. [GROUND 3] – Obviousness of Claims 208 and 217-221 Based on Beaumier, Chaudhri, Wang, and Shiplacoff

1. Shiplacoff

Like the '754 Patent, Beaumier, and Chaudhri, Shiplacoff relates to a device 100 with a touch-sensitive screen 101 that accepts "gesture-based commands" so that "a user can activate an application or function." EX1013, [0064]. Shiplacoff teaches that "[m]any currently available computing devices run operating systems that offer users the opportunity to run several applications at the same time, and even to perform several activities simultaneously, within a single application and/or among two or more applications." Appx-V, [0005]. These computing devices include "[m]obile devices such as smartphones, personal digital assistants, music players, handheld computers, and the like." Appx-V, [0010]. Managing and navigating between multiple active applications was "accomplished by the use of multiple overlapping windows within a graphical user interface," but the conventional windows-based techniques did "not function very well on mobile devices" due to "insufficient screen space to display multiple overlapping windows." *See* Appx-V, [0006]-[0010]; Appx-C, ¶474. To solve this problem, Shiplacoff teaches user interface structures called "cards" that provide a visualization of active

applications and that allow a user to better "navigate among activities" on a mobile device. Appx-V, [0010], [0012]-[0013], [0060]; Appx-C, ¶474.

Like the home menu of Chaudhri (*see* Appx-E, FIG. 13, [0143]), Shiplacoff teaches a launch screen (illustrated in FIG. 1, which is reproduced below), which includes "several icons 104 representing applications that can be opened by the user." Appx-V, [0063], [0099]. "[S]creen 101 is touch-sensitive, so that a user can activate an application or function by touching a displayed icon 104, 106." Appx-V, [0064]. For example, by selecting the calendar icon 106, a card corresponding to a calendar application can be displayed in full screen, as shown in FIG. 2. Appx-V, [0077]-[0078]; Appx-C, ¶475.

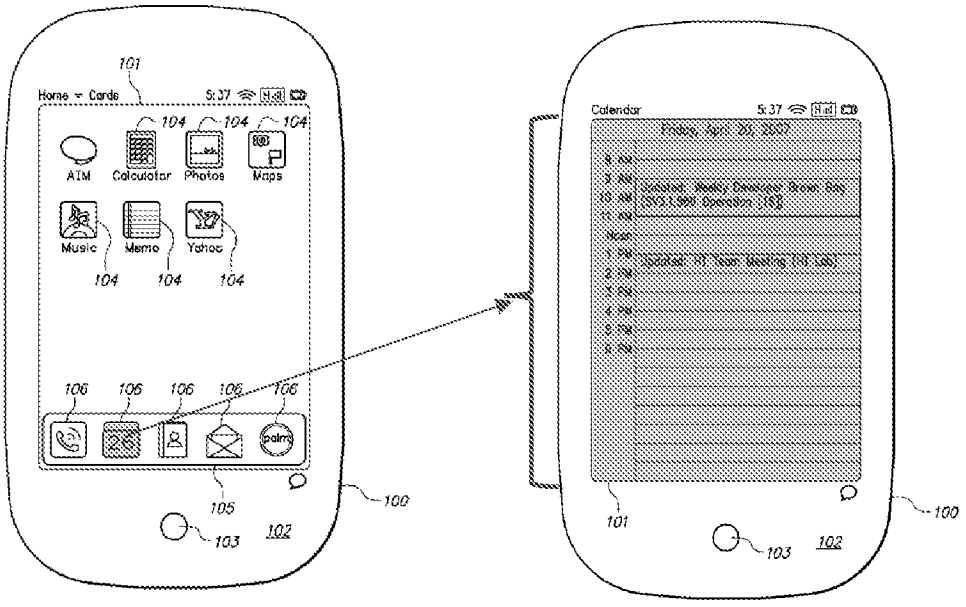


FIG. 1

FIG. 2

Appx-V, FIGS. 1 (left), 2 (right)

Shiplacoff "provides techniques for displaying and manipulating representations of activities on an electronic device using a card metaphor." EX1013, [0060]. "Cards" refer to "areas of the screen that can be moved and manipulated by the user." Appx-V, [0060]. "Users interact with cards to launch, terminate, and reorder activities, as well as to navigate among activities and perform other operations." Appx-V, [0060]; Appx-C, ¶476.

Shiplacoff also implements several display modes for navigating among the cards including a full-screen mode, a card mode and a shuffle mode, and a grid mode. Appx-V, [0068]-[0073]. Examples of a full-screen mode are shown in FIG. 2, a card mode in FIG. 3 and a shuffle mode in FIG. 10B. Appx-C, ¶477.

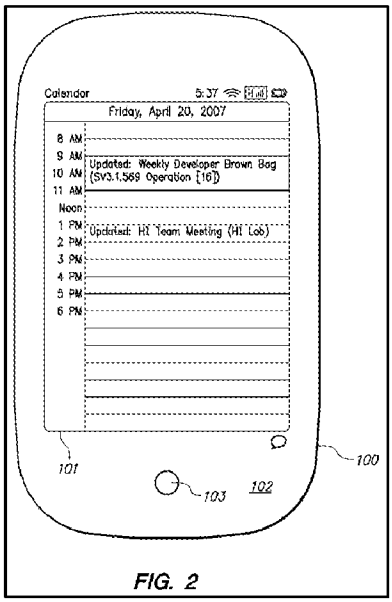


FIG. 2

Full screen mode

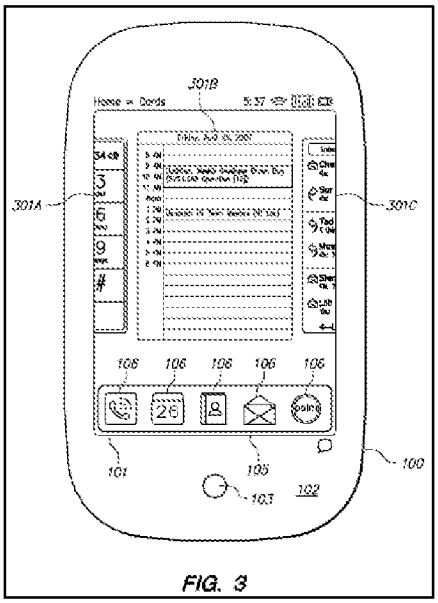


FIG. 3

Card Mode

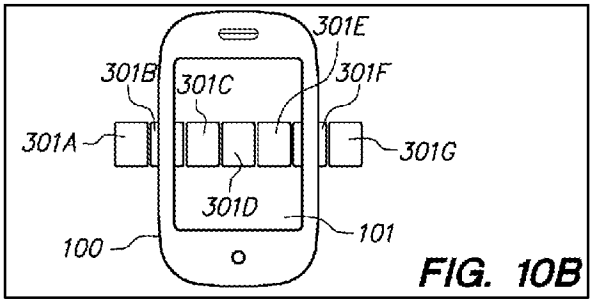


FIG. 10B

Shuffle Mode

Appx-V, FIGS. 2 (top left), 3 (top right), 10B (bottom left)

The "full-screen mode is optimized for maximum use of screen space for interacting with a single activity; [and the] card mode is optimized for easily switching focus from one activity to another and for easily initiating and terminating activities." Appx-V, [0074]; Appx-C, ¶478. In other words, the card mode is a multitasking interface, as it allows a user to navigate between multiple activities. Appx-C, ¶478.

In one or more of the modes (*e.g.*, the card mode), the device "can receive input from the user … to switch from one display mode to another, and/or to reposition displayed cards in response to user input specifying a switch to another card." Appx-V, [0073], [0077]. In one example, a user can perform a "swipe up" gesture to "switch[] from full-screen mode to card mode, or from card mode to a launcher screen." Appx-V, [0127]. This allows the user to easily use gestures to navigate between different interfaces. Appx-C, ¶479. For example, "the user can

launch additional activities by returning to the launch screen as shown in FIG. 1." Appx-V, [0099]; Appx-C, ¶479.

2. The Combination of Beaumier, Chaudhri, Wang, and Shiplacoff Reasons to Combine, & Expectation of Success

As discussed in Sections VII.A.1-3, *supra*, Beaumier and Chaudhri both relate to electronic devices with touchscreens and utilize image-based browsers—like the cards described by Shiplacoff—for navigating through different user interfaces and options. *See* Appx-E, [0006] (describing "an imaged based browser window for navigating through and selecting images that are related to data"), [0063] (describing that "the image based browser provides a scrolling type action that permits a user to flip through images in an efficient and user friendly manner"). The cards of Shiplacoff preform a very similar purpose to the image object in Beaumier and Chaudhri. *See* Appx-V [0060] ("Users interact with cards to launch, terminate, and reorder activities, as well as to navigate among activities and perform other operations."); Appx-C, ¶480. Moreover, the card navigation interfaces of Shiplacoff are very similar in nature and presentation to the image-based browser interfaces of Beaumier and Chaudhri, as shown below. *See, e.g.*, Appx-D, FIG. 6; Appx-E, FIGS. 5-6; Appx-V, FIGS. 10C-10G; Appx-C, ¶480.

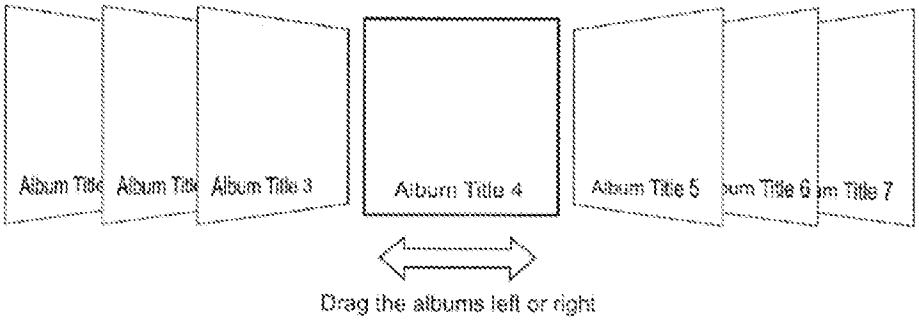


Fig. 6

Appx-D, FIG. 6

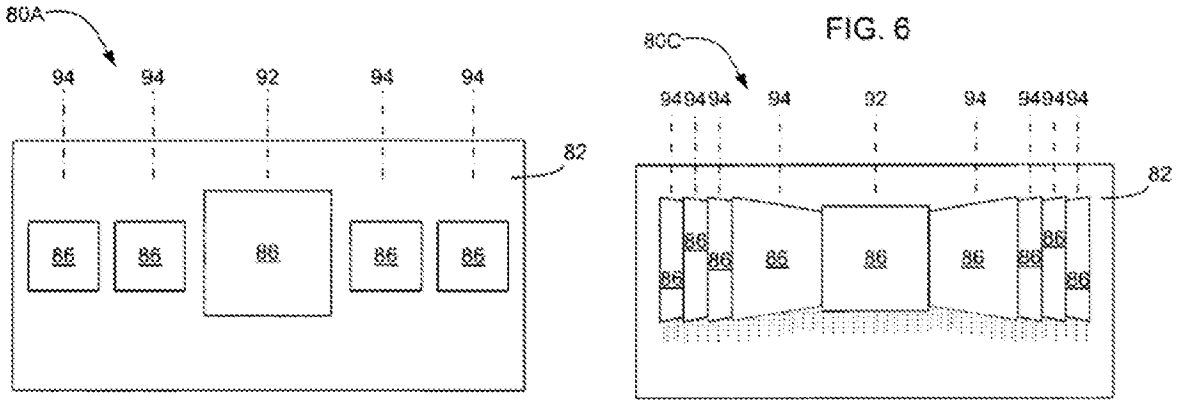


FIG. 5

Appx-E, FIGS. 5 and 6

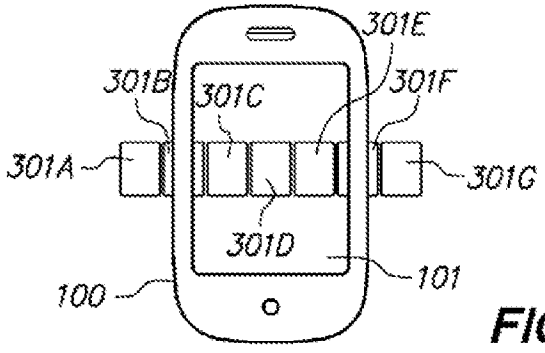


FIG. 10B

Appx-V, FIGS. 10C-10G

Chaudhri describes that "[t]he images contained in the browser may be widely varied," including "icons that represent applications stored on the portable electronic device." Appx-E, [0064], [0143]. Thus, Chaudhri already contemplates associating the image objects of its browser with different applications. Appx-C, ¶481. A POSITA would have found it a natural and obvious extension to utilize Shiplacoff's multitasking card display as at least one of the scrollable image-based browser interfaces available in the apparatus of the Beaumier-Chaudhri-Wang combination. Appx-C, ¶481. For example, in addition to the "image based browser 150 associated with applications" shown in FIG. 13 of Chaudhri, there would be an additional image based browser like the card mode described by Chaudhri that allows the user to navigate through active applications. Appx-C, ¶481.

A POSITA would have understood and found obvious that implementing Shiplacoff's card mode in the context of the apparatus of the Beaumier-Chaudhri-Wang combination would have provided a user interface that would have allowed the apparatus of the Beaumier-Chaudhri-Wang combination to more easily and efficiently "offer users the opportunity to run several applications at the same time, and even to perform several activities simultaneously," as was common in mobile devices available before the Critical Date. *See* Appx-V, [0005]-[0010], [0060]; Appx-C, ¶482. A POSITA would have been motivated to make the Beaumier-

Chaudhri-Wang-Shiplacoff combination based on these express benefits. Appx-C, ¶482. Given the similarity between the interfaces of Beaumier, Chaudhri, and Shiplacoff, the fundamental aspects of the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would remain intact, as described in Sections VII.A.1-3 and VII.B.1-2, *supra*. Appx-C, ¶482.

A POSITA would have found it obvious that at least one way to implement the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been to associate one of the application image objects in Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13 with Shiplacoff's card mode, such that selection of this image object (*e.g.*, through a press-and-hold or swipe gesture) would have launched Shiplacoff's card viewer to browse between active applications. *See* Appx-E, [0143]; Appx-V, [0127]-[0128] (describing swiping to open the card mode); Appx-C, ¶483.

3. Claim 208 Analysis

Beaumier, Chaudhri, Wang, and Shiplacoff render obvious claim 208 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶484-515.

[208.a] The apparatus of claim 2, wherein the apparatus is configured such that: the at least part of the gesture on the touch screen is detected when the object is displayed;

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [208.a].

As discussed in in Section VII.C.2, *supra*, a POSITA would have found it obvious that at least one way to implement the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been to associate one of the application image objects in Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13 with Shiplacoff's card mode, such that selection of this image object (*e.g.*, through a press-and-hold or swipe gesture) would have launched Shiplacoff's card viewer to browse between active applications. *See* Appx-E, [0143]; Appx-V, [0127]-[0128] (describing swiping to open the card mode); Appx-C, ¶485. An example of this implementation is illustrated below.

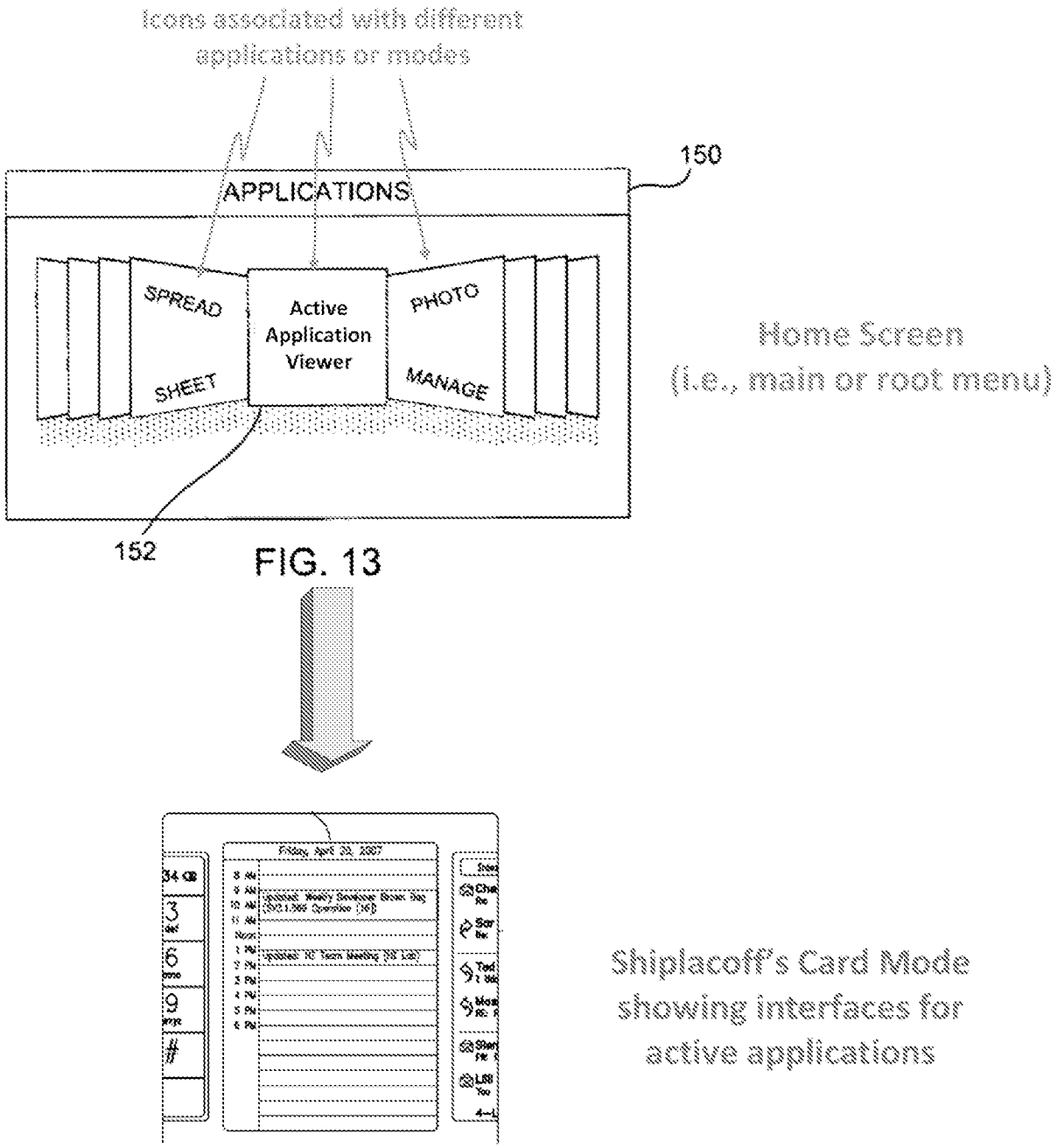


FIG. 13

Amalgamation of a Modified FIG. 13 of Appx-E and FIG. 3 of Appx-V

In this example implementation, the object is the icon in Chaudhri's "image based browser 150 associated with applications" that corresponds to the active application view described by Shiplacoff. Appx-C, ¶486. As described by

Chaudhri, "the images 152 are icons that represent applications that can be launched on the electronic device." Appx-E, [0143]. "In one embodiment, when the user selects the icon 152 at the primary position, the application is launched." Appx-E, [0143]. Chaudhri describes that selections may be made through various gestures, including a tap or a "substantially vertical swipe." Appx-E, [0171]. Thus, in order to select the icon associated with Shiplacoff's active application view (*i.e.*, card mode), the user would have either tapped or swiped on or near the displayed icon associated with Shiplacoff's active application view. *See* Appx-E, [0143], [0171]; Appx-C, ¶486.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been ***configured such that: the at least part of the gesture on the touch screen is detected when the object is displayed***, as recited in [208.a]. Appx-C, ¶487.

[208.b] the at least part of the gesture on the touch screen is detected when a particular application interface of a particular application is displayed;

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [208.b].

As discussed with respect to Element [123.b] and Claim [188], *supra*, from the teachings of Beaumier and Nathan, a POSITA would have understood that an application launcher application, such as the one shown in Chaudhri's FIG. 13, is an interface that itself includes interfaces (e.g., icons) associated with each of the

applications that it is configured to launch. *See, e.g.* Appx-AA, 38:52-58, 42:15-23; Appx-C, ¶489. In this regard, a POSITA would have understood and found obvious that each of the applications icons is both an interface of the application launcher application, as well as an interface of the application that it represents, because selection of the icon results in the application being launched. Appx-C, ¶489. Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been configured such that ***the at least part of the gesture on the touch screen is detected when a particular application interface of a particular application is displayed*** (*e.g.*, the image-browsing interface of the application responsible for browsing the images), as recited in [208.b]. Appx-C, ¶489.

[208.c] the gesture includes a swipe gesture;

Element [208.c] is substantially the same as Element [186.c]. Appx-C, ¶490. The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Element [208.c] for at least the same reasons described above with respect to Element [186.c]. *See* Element [186.c], *supra*; Appx-C, ¶490.

[208.d] the at least part of the gesture on the touch screen is detected on the object;

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [208.d].

As discussed with respect to Element [208.a], *supra*, a POSITA would have found it obvious that at least one way to implement the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been to associate one of the application image objects in Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13 with Shiplacoff's card mode, such that selection of this image object (*e.g.*, through a press-and-hold or swipe gesture) would have launched Shiplacoff's card viewer to browse between active applications. *See* Appx-E, [0143]; Appx-V, [0127]-[0128] (describing swiping to open the card mode); Appx-C, ¶492. An example of this implementation is illustrated below.

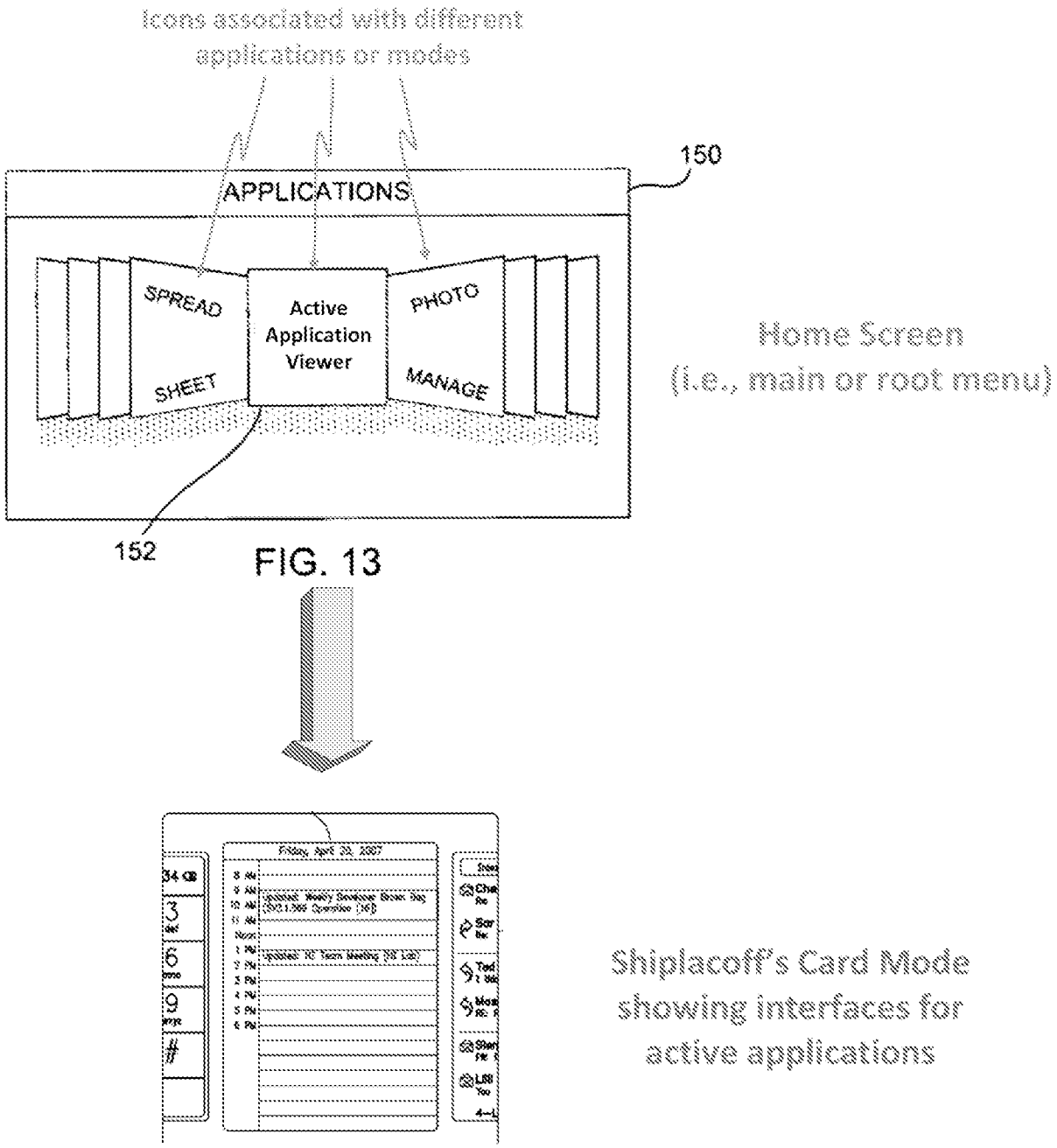


FIG. 13

Amalgamation of a Modified FIG. 13 of Appx-E and FIG. 3 of Appx-V

In this example implementation, the object is the icon in Chaudhri's "image based browser 150 associated with applications" that corresponds to the active application view described by Shiplacoff. Appx-C, ¶493. As described by

Chaudhri, "the images 152 are icons that represent applications that can be launched on the electronic device." Appx-E, [0143]. "In one embodiment, when the user selects the icon 152 at the primary position, the application is launched." Appx-E, [0143]. Chaudhri describes that selections may be made through various gestures, including a tap or a "substantially vertical swipe." Appx-E, [0171]. Thus, in order to select the icon associated with Shiplacoff's active application view (*i.e.*, card mode), the user would have either tapped or swiped on or near the displayed icon associated with Shiplacoff's active application view. *See* Appx-E, [0143], [0171]; Appx-C, ¶493.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been configured such that ***the at least part of the gesture on the touch screen is detected on the object*** (*e.g.*, the vertical swipe gesture to select the active application viewer icon would have been on the icon), as recited in [208.d]. Appx-C, ¶494.

[208.e] the at least part of the gesture on the touch screen is detected at or adjacent to an edge of the touch screen;

Element [208.e] is substantially the same as Element [186.a]. Appx-C, ¶495. The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Element [208.e] for at least the same reasons described above with respect to Element [186.a]. *See* Element [186.a], *supra*; Appx-C, ¶495.

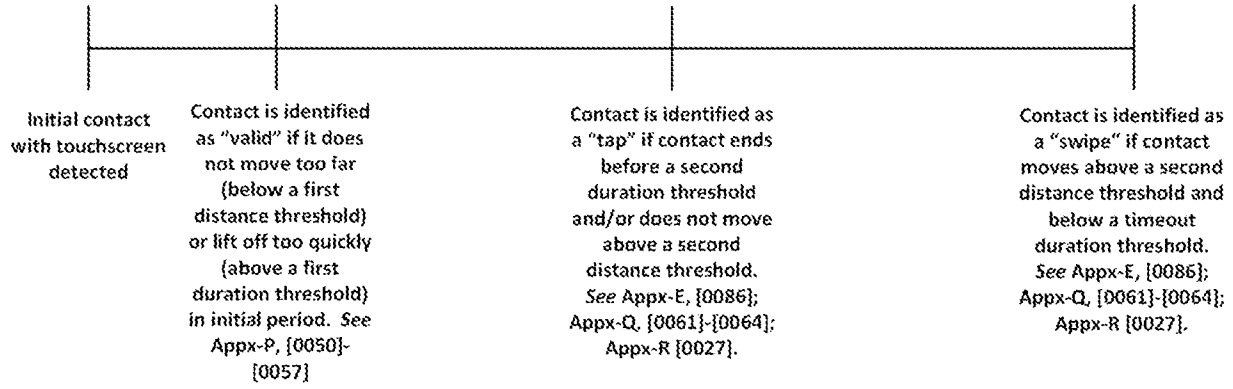
[208.f] when the magnitude, including a distance magnitude, of the gesture detected on the touch screen is not detected to increase above a distance threshold, a home screen for choosing among a plurality of application is displayed; and

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [208.f].

As discussed with respect to Element [151.b], *supra*, a POSITA would have understood from at least the above teachings of Beaumier and Chaudhri that a user would be presented with a "home screen" (*e.g.*, a root or main browser or menu, like those illustrated in FIG. 6 of Beaumier and FIGS. 13 and 16 of Chaudhri) that provides a user an ability to navigate and access the various functionalities available on the jukebox. Appx-C, ¶497.

As discussed with respect to Claim [83] and Element [208.d], *supra*, in implementations where, for example, a swipe gesture selects the object (*e.g.*, a vertical swipe selects the active application viewer icon associated with Shiplacoff's card mode), Wang teaches that, in order to accurately determine whether a detected gesture is a valid swipe gesture, the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA would have found obvious

that the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶498. One example of this classification is shown in the following diagram. Appx-C, ¶498.



As shown above, if a gesture detected on an object displayed as part of a screen (*e.g.*, the home screen described with respect to Element [151.b]) does not exceed the distance threshold associated with the swipe gesture, a swipe is not detected. Appx-C, ¶499. In this case, the home screen will continue to be displayed, because a swipe selection gesture to select one of the displayed objects of the home screen will not have been detected. Appx-C, ¶499.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been configured such that ***when the magnitude, including a distance magnitude,***

of the gesture detected on the touch screen is not detected to increase above a distance threshold, a home screen for choosing among a plurality of application is displayed, as recited in [208.f]. Appx-C, ¶500.

[208.g] when the magnitude, including the distance magnitude, of the gesture detected on the touch screen is detected to increase above the distance threshold, a multitasking interface for choosing among a plurality of active applications is displayed,

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [208.g].

As discussed with respect to Element [208.a], *supra*, a POSITA would have found it obvious that at least one way to implement the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been to associate one of the application image objects in Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13 with Shiplacoff's card mode, such that selection of this image object (*e.g.*, through a press-and-hold or swipe gesture) would have launched Shiplacoff's card viewer to browse between active applications. *See* Appx-E, [0143]; Appx-V, [0127]-[0128] (describing swiping to open the card mode); Appx-C, ¶502. An example of this implementation is illustrated below.

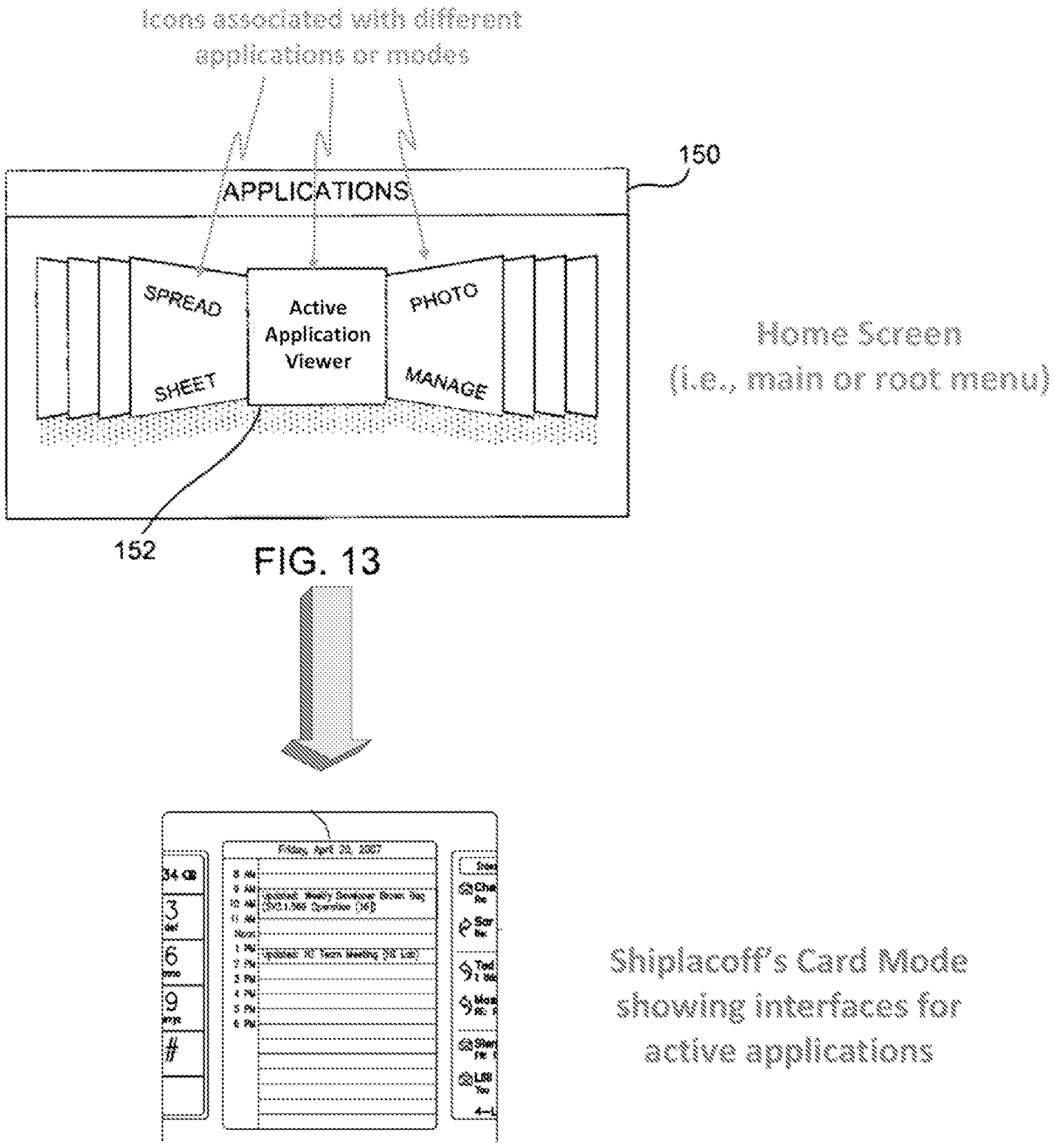


FIG. 13

Amalgamation of a Modified FIG. 13 of Appx-E and FIG. 3 of Appx-V

In this example implementation, the object is the icon in Chaudhri's "image based browser 150 associated with applications" that corresponds to the active application view described by Shiplacoff. Appx-C, ¶503. As described by

Chaudhri, "the images 152 are icons that represent applications that can be launched on the electronic device." Appx-E, [0143]. "In one embodiment, when the user selects the icon 152 at the primary position, the application is launched." Appx-E, [0143]. Chaudhri describes that selections may be made through various gestures, including a tap or a "substantially vertical swipe." Appx-E, [0171]. Thus, in order to select the icon associated with Shiplacoff's active application view (*i.e.*, card mode), the user would have either tapped or swiped on or near the displayed icon associated with Shiplacoff's active application view. *See* Appx-E, [0143], [0171]; Appx-C, ¶503. In other words, when the distance magnitude of the gesture is detected to exceed a threshold to be identified as a "substantially vertical swipe," Shiplacoff's active application view (*i.e.*, card mode) will be displayed. Appx-C, ¶503. As described in Section VII.c.1, *supra*, Shiplacoff's active application view (*i.e.*, card mode) is a multitasking interface for choosing among a plurality of active applications is displayed. *See* Appx-V, [0074]; Appx-C, ¶503.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been configured such that ***when the magnitude, including the distance magnitude, of the gesture detected on the touch screen is detected to increase above the distance threshold, a multitasking interface for choosing among a plurality of active applications is displayed***, as recited in [208.g]. Appx-C, ¶504.

[208.h] the multitasking interface is displayed in at least one first virtual display layer that appears above a second virtual display layer including the at least portion of the at least one other object that is blurred,

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [208.h].

A POSITA would have understood and found obvious that Shiplacoff's card mode is a type of menu, because it provides the user with a list of options (*e.g.*, various active applications/activities) from which they may select. Appx-C, ¶506; *see* Appx-A, 31:46-49, 33:34-37, 35:20-23, 55:57-61 (describing various menus that as lists of options from which a user may select).

As discussed with respect to Element [125.b], *supra*, Beaumier describes that menus and other information that are opened through selection of an image in the browser (*e.g.*, the tags illustrated in FIG. 8a or the pop-up screen illustrated in FIG. 22c) are displayed "on" the image browser. *See* Appx-D, [0084], [0127]; Appx-C, ¶507. And Chaudhri describes that "the electronic device 2 is not limited to image based browsers and often includes both menu driven lists and image based browsers" and that, "[i]n some cases, the electronic device 2 may even operate both menu driven lists and image based browsers at the same time," suggesting that multiple displays may be presented at once. *See* Appx-E, [0062]; Appx-C, ¶507.

Further, as discussed with respect to Elements [2.d], [124.b], and [125.b], *supra*, when a user selects an object and additional information associated with the

object is displayed (*e.g.*, a set of tags shown in Beaumier's FIG. 8a of the pop-up screen shown in Beaumier's FIG. 22c), the other objects being displayed that were not selected (*e.g.*, in Beaumier's FIG. 6) would have been blurred to help bring focus to the selected object and the associated tags. *See* Appx-D, [0084], [0127]; Appx-C, ¶508. In this case, the additional information (*e.g.*, tags, pop-up screen, or other menu) would be shown to be "above" or "on top of" the other objects below that have been blurred. Appx-C, ¶508.

Implemented in the manner of Beaumier's tag display (*see* Appx-D, FIG. 8a) or pop-up screen (*see* Appx-D, FIG. 22c), as described above, a POSITA would have at least found it obvious that Shiplacoff's card mode would be displayed "on" the underlying image browser (*e.g.*, as shown in Beaumier's FIG. 22c), such that the area between the displayed cards would show a blurred image browser (*e.g.*, "image based browser 150 associated with applications" shown in FIG. 13 from which Shiplacoff's card mode is launched). Appx-C, ¶509.

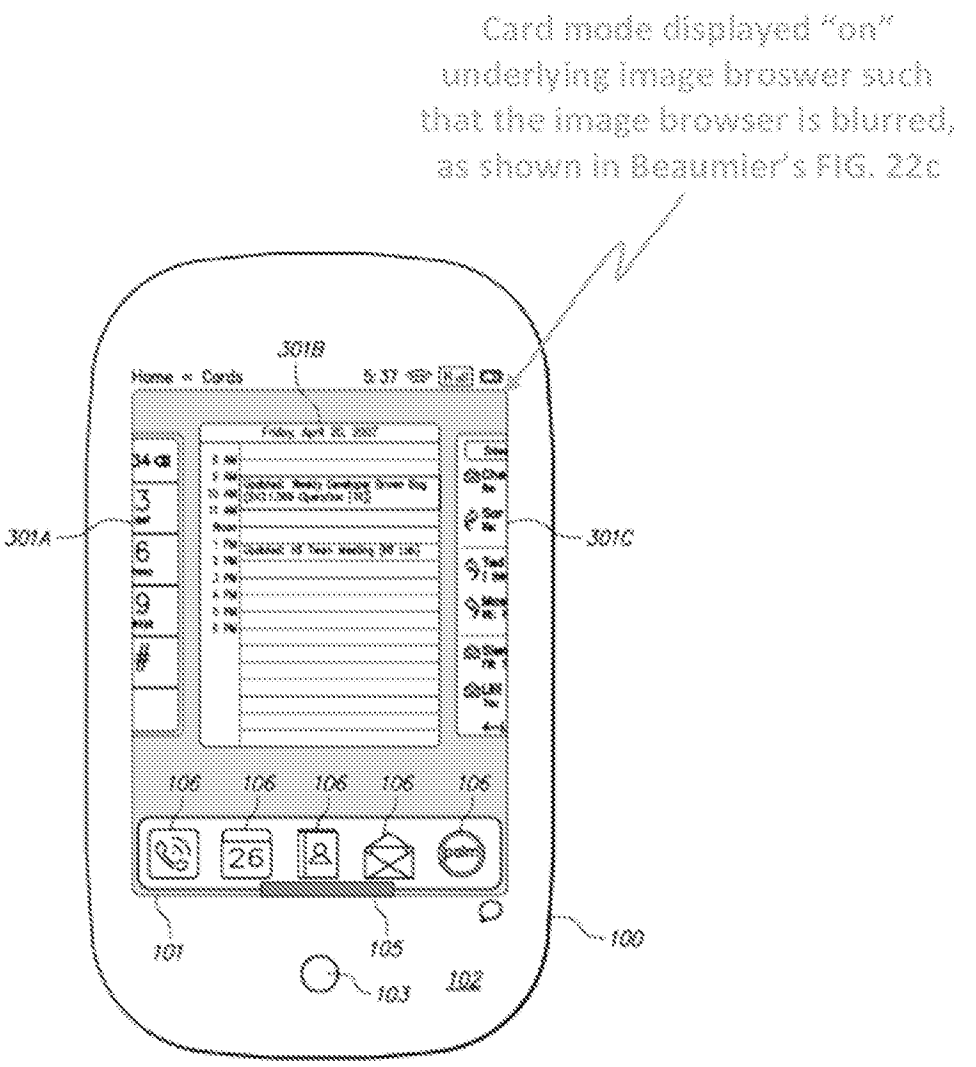


FIG. 3

Appx-V, FIG. 1 (annotated and modified)

Thus, as discussed with respect to Elements [124.b], and [125.b], *supra*, a POSITA would have understood and found obvious that the additional information is being displayed in one or more "virtual layers" "above" the one or more "virtual layers" in which the other objects that were not selected are displayed in. Appx-C, ¶510. Indeed, it was known that, "[w]hen several 2D layers of information are put

on top of each other, it is possible to provide the user with an intuitive way of choosing how much and which information to display crisply." Appx-G, 3-4. For example, there were user interface systems going back as early as 1991 where "up to 26 layers of information can be displayed at the same time" and where "[e]ach layer has an interest level associated with it that the user can change," and "[t]he interest level is [visualized as] a combination of blur and transparency." Appx-G, 2, 8. Applied to the above-discussed implementation of Shiplacoff's card mode, a POSITA would have understood and found obvious that the menu (*e.g.*, Shiplacoff's card mode objects) would be displayed in at least one "virtual display layer," as that term is broadly used in the '754 Patent, and that the virtual display layer containing the menu is displayed "on" one or more other virtual display layers that contain elements of the elements of the image browser that were not selected. *See* Appx-D, FIG. 22c, [0127]; Appx-C, ¶510.

Based at least on the above teachings of Beaumier, Chaudhri, and Shiplacoff, a POSITA would have at least found it obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been configured such that ***the multitasking interface is displayed in at least one first virtual display layer*** (*e.g.*, a virtual display layer containing the card mode interface) ***that appears above a second virtual display layer including the at least portion of the at least one other object that is blurred*** (*e.g.*, a virtual display layer

containing one or more elements of the underlying image browser that were not selected), as recited in Element [208.h]. Appx-C, ¶511.

[208.i] the multitasking interface remains displayed after the completion of the gesture.

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [208.i].

Both Beaumier and Chaudhri describe that once an image object is selected and additional information associated with that image object is displayed, the user provides separate and distinct gestures in order to interface with the information displayed (*e.g.*, a click of displayed tags or a tap of a displayed menu item). *See* Appx-D, [0084]-[0086]; Appx-E, FIG. 22, [0180]-[0181] (describing, with respect to block 314, selection of a data item subsequent to and distinct from selection of an image in the image browser), [0190]-[0194] (describing a selection event by pressing or tapping on a displayed song after the album was previously selected through a vertical swipe).

Similarly, Shiplacoff describes that "the user can switch among the various modes by performing a gesture," such as a "swipe-up" gesture, that "switches from full-screen mode to card mode, or from card mode to a launcher screen." Appx-V, [0127]. In order to navigate through the card mode interface that is displayed as a result of this "swipe-up" gesture, Shiplacoff describes additional independent gestures (e.g., "rearrang[ing] cards 301 while in card mode, by tapping and holding

a card 301 for a period of time (such as, for example, 500 milliseconds), and then dragging a card 301 from one position to another"). *See* Appx-V, [0104]; *see also id.* [0077]-[0106]; Appx-C, ¶514.

Based on these teachings, a POSITA would have understood and found obvious that, in the Beaumier-Chaudhri-Wang-Shiplacoff combination, ***the multitasking interface remains displayed after the completion of the gesture*** (*e.g.*, the substantially vertical swipe gesture that opens Shiplacoff's card mode), as recited in Claim [208.i]. Appx-C, ¶515.

4. Claim 217 Analysis

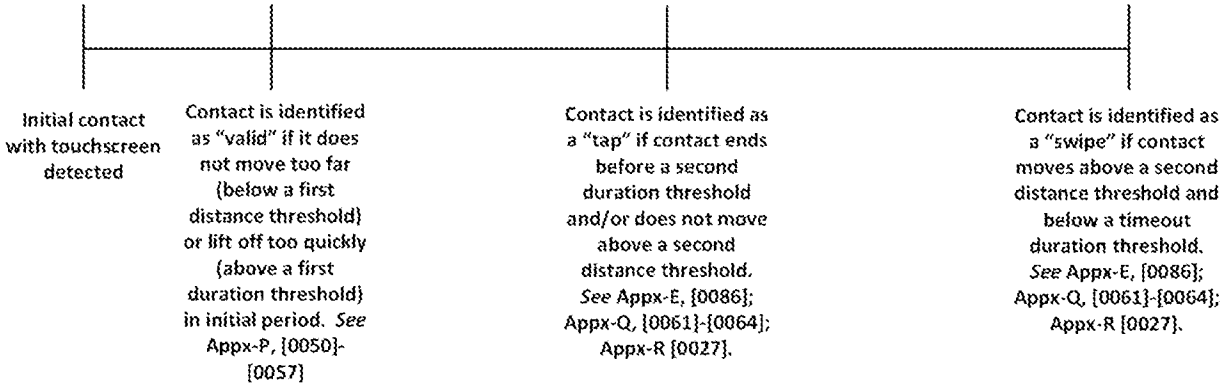
Beaumier, Chaudhri, Wang, and Shiplacoff render obvious claim 217 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶516-519.

[217] The apparatus of claim 208, wherein the apparatus is configured such that the multitasking interface is displayed when a duration magnitude of the gesture detected on the touch screen is detected to increase above a duration threshold.

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [217].

As discussed with respect to Claim [83] and Element [208.d], *supra*, in implementations where, for example, a swipe gesture selects the object (*e.g.*, a vertical swipe selects the active application viewer icon associated with Shiplacoff's card mode), Wang teaches that, in order to accurately determine

whether a detected gesture is a valid swipe gesture, the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA would have found obvious that the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶517. One example of this classification is shown in the following diagram. Appx-C, ¶517.



As shown above, for either a tap or a swipe gesture, the touch must last at least on initial "validity" threshold, as taught in Wang. *See* Appx-P, [0050]-[0057]. Then a POSITA would have understood and found obvious that the tap or

a swipe gestures would have been differentiated based on duration and distance magnitude thresholds (*e.g.*, a tap would be below a distance threshold and a swipe would be above a distance threshold). *See, e.g.*, Appx-E, [0086]; Appx-Q, [0061]-[0064]; Appx-R, [0027]; Appx-C, ¶518.

Accordingly, a POSITA would have found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been ***configured such that the multitasking interface is displayed when a duration magnitude of the gesture detected on the touch screen is detected to increase above a duration threshold***. Appx-C, ¶519.

5. Claim 218 Analysis

Beaumier, Chaudhri, Wang, and Shiplacoff render obvious claim 218 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶520-537.

[218.a] The apparatus of claim 2, wherein the apparatus is configured such that: the at least part of the gesture on the touch screen is detected when a home screen for choosing among a plurality of applications is displayed, the home screen including the at least one other object;

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [218.a].

As discussed in in Section VII.C.2, *supra*, a POSITA would have found it obvious that at least one way to implement the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been to associate one of the application image

objects in Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13 with Shiplacoff's card mode, such that selection of this image object (*e.g.*, through a press-and-hold or swipe gesture) would have launched Shiplacoff's card viewer to browse between active applications. *See* Appx-E, [0143]; Appx-V, [0127]-[0128] (describing swiping to open the card mode); Appx-C, ¶521. An example of this implementation is illustrated below.

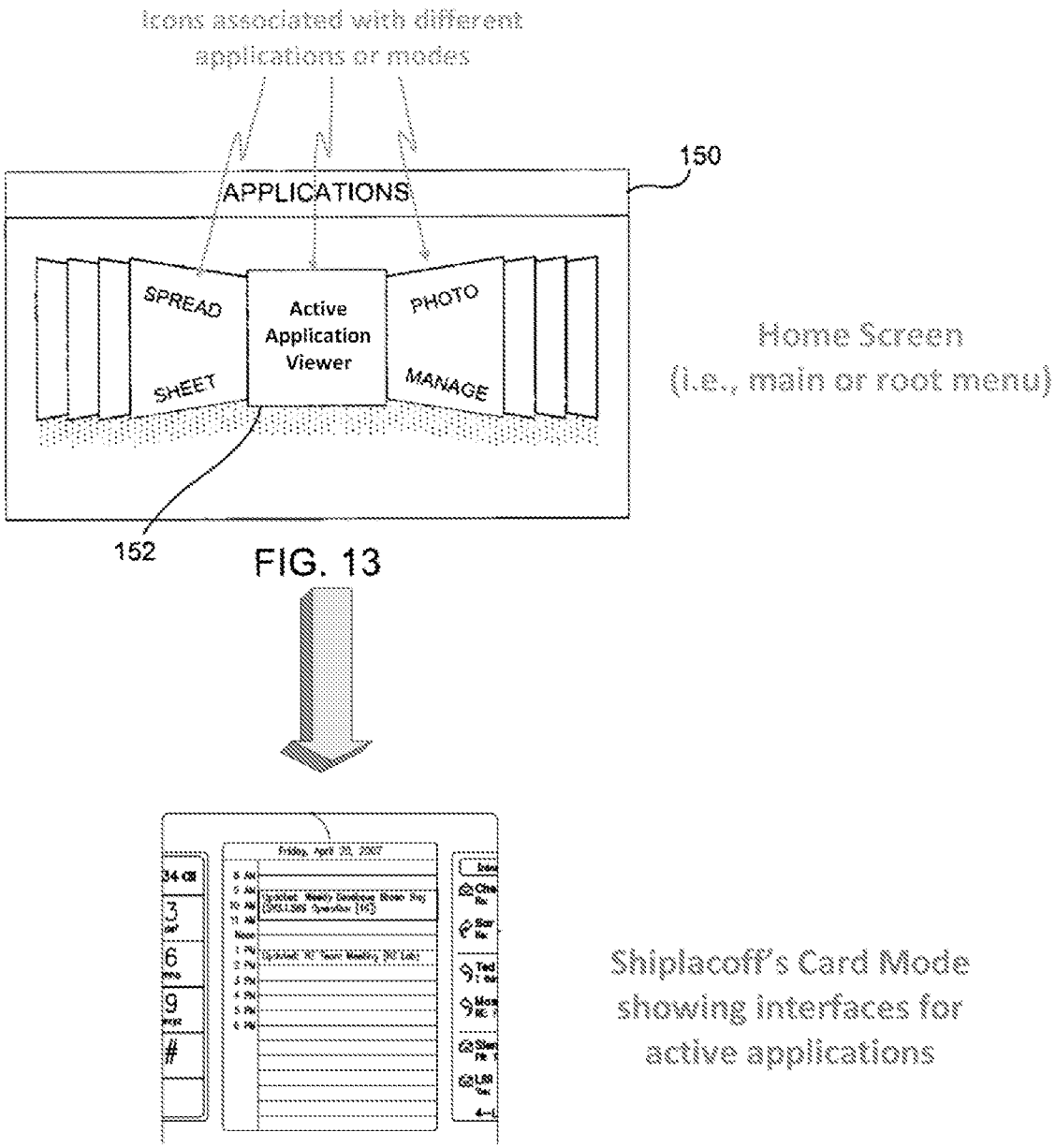


FIG. 13

Amalgamation of a Modified FIG. 13 of Appx-E and FIG. 3 of Appx-V

As discussed with respect to Element [151.b], *supra*, a POSITA would have understood from at least the above teachings of Beaumier and Chaudhri that a user would be presented with a "home screen" (*e.g.*, a root or main browser or menu, like the one illustrated in FIGS. 13 Chaudhri) that provides a user an ability to

navigate and access the various applications and functionalities available on the apparatus. *See* Appx-E, [0146], Appx-H, [0047]; Appx-K [0163], [0165]; Appx-C, ¶522.

Accordingly, a POSITA would have found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that: the at least part of the gesture on the touch screen*** (*e.g.*, the substantially vertical swipe gesture to select an application icon associated with Shiplacoff's card mode) ***is detected when a home screen for choosing among a plurality of applications is displayed*** (*e.g.*, Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13)***, the home screen including the at least one other object*** (*e.g.*, the non-selected application icons in the image browser), as recited in [218.a]. Appx-C, ¶523.

[218.b] the gesture includes a swipe gesture;

Element [218.b] is substantially the same as Element [186.c]. Appx-C, ¶524. The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Element [218.b] for at least the same reasons described above with respect to Element [186.c]. *See* Element [186.c], *supra*; Appx-C, ¶524.

[218.c] the at least part of the gesture on the touch screen is detected at or adjacent to an edge of the touch screen;

Element [218.c] is substantially the same as Element [186.a]. Appx-C, ¶525. The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious

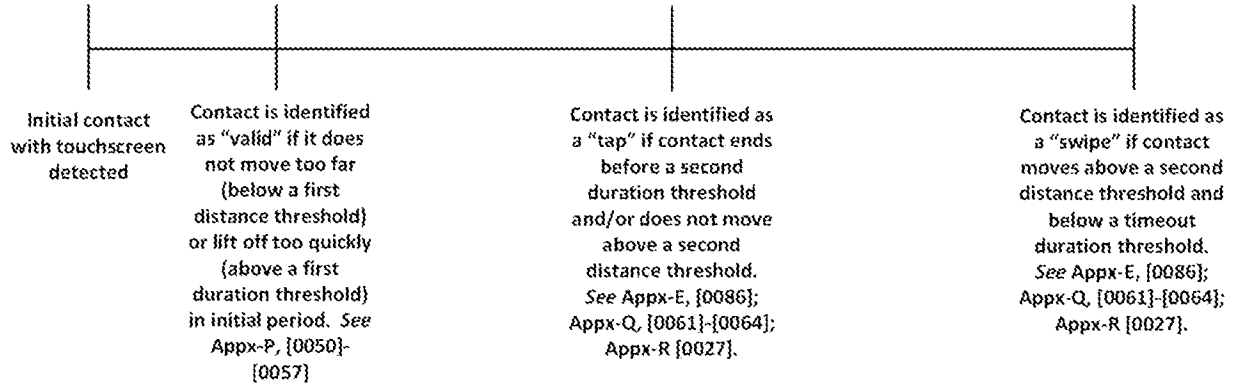
Element [218.c] for at least the same reasons described above with respect to Element [186.a]. *See* Element [186.a], *supra*; Appx-C, ¶525.

[218.d] when the magnitude, including a distance magnitude, of the gesture detected on the touch screen is not detected to increase above a distance threshold or a duration magnitude of the gesture detected on the touch screen is not detected to increase above a duration threshold, the home screen for choosing among the plurality of applications remains displayed;

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [218.d].

As discussed with respect to Claim [83] and Element [208.d], *supra*, in implementations where, for example, a swipe gesture selects the object (*e.g.*, a vertical swipe selects the active application viewer icon associated with Shiplacoff's card mode), Wang teaches that, in order to accurately determine whether a detected gesture is a valid swipe gesture, the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related teachings of Saponas and/or Westerman), a POSITA would have found obvious that the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and

the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶527. One example of this classification is shown in the following diagram. Appx-C, ¶527.



As shown above, if a gesture detected on an object displayed as part of a screen (*e.g.*, the home screen described with respect to Element [151.b]) does not exceed the validity duration threshold described by Wang, the gesture will be determined to be invalid and discarded, regardless of whether it exceeds a distance magnitude. Appx-C, ¶528. Similarly, if a gesture detected on an object displayed as part of a screen (*e.g.*, the home screen described with respect to Element [151.b]) does not exceed the distance threshold associated with the swipe gesture, a swipe is not detected. Appx-C, ¶528. In either case, the home screen will continue to be displayed, because a swipe selection gesture to select one of the displayed objects of the home screen will not have been detected. Appx-C, ¶528.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have

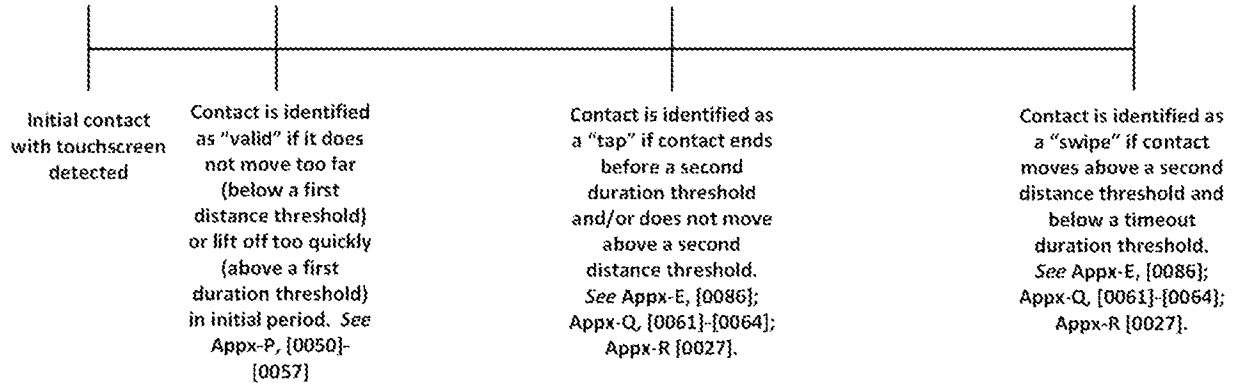
been configured such that, ***when the magnitude, including a distance magnitude, of the gesture detected on the touch screen is not detected to increase above a distance threshold or a duration magnitude of the gesture detected on the touch screen is not detected to increase above a duration threshold, the home screen for choosing among the plurality of applications remains displayed***, as recited in [218.d]. Appx-C, ¶529.

[218.e] when the magnitude, including the distance magnitude, of the gesture detected on the touch screen is detected to increase above the distance threshold and the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold: a multitasking interface for choosing among a plurality of active applications is displayed,

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [218.e].

As discussed with respect to Claim [83] and Element [208.d], *supra*, in implementations where, for example, a swipe gesture selects the object (*e.g.*, a vertical swipe selects the active application viewer icon associated with Shiplacoff's card mode), Wang teaches that, in order to accurately determine whether a detected gesture is a valid swipe gesture, the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have considered both the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See* Section VII.B.1, *supra*; Appx-P, [0039]-[0058]. Further, based on the combined teachings of Beaumier, Chaudhri, and Wang (as well as the similar and related

teachings of Saponas and/or Westerman), a POSITA would have found obvious that the device of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have classified the various possible valid gestures (*e.g.*, taps and swipes on objects) received by the electronic device based at least on the distance a touch travels and the amount of time it remains in contact with a touchscreen. *See, e.g.*, Appx-Q, [0018]-[0019], [0060]-[0064]; Appx-R [0044]-[0049]; Appx-C, ¶531. One example of this classification is shown in the following diagram. Appx-C, ¶531.



As shown above, for a swipe gesture, the touch must last at least on initial "validity" threshold, as taught in Wang. *See* Appx-P, [0050]-[0057]. Then a POSITA would have understood and found obvious that the swipe gesture would have been differentiated based on duration and distance magnitude thresholds (*e.g.*, a swipe would be above a distance threshold). *See, e.g.*, Appx-E, [0086]; Appx-Q, [0061]-[0064]; Appx-R, [0027]; Appx-C, ¶532. Accordingly, in the Beaumier-Chaudhri-Wang-Shiplacoff combination, a valid swipe gesture is detected ***when the magnitude, including the distance magnitude, of the gesture detected on the***

touch screen is detected to increase above the distance threshold and the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold, as recited in [218.e]. Appx-C, ¶532.

As discussed with respect to Element [208.a], *supra*, a POSITA would have found it obvious that at least one way to implement the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been to associate one of the application image objects in Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13 with Shiplacoff's card mode, such that selection of this image object (*e.g.*, through a press-and-hold or swipe gesture) would have launched Shiplacoff's card viewer to browse between active applications. *See* Appx-E, [0143]; Appx-V, [0127]-[0128] (describing swiping to open the card mode); Appx-C, ¶533. An example of this implementation is illustrated below.

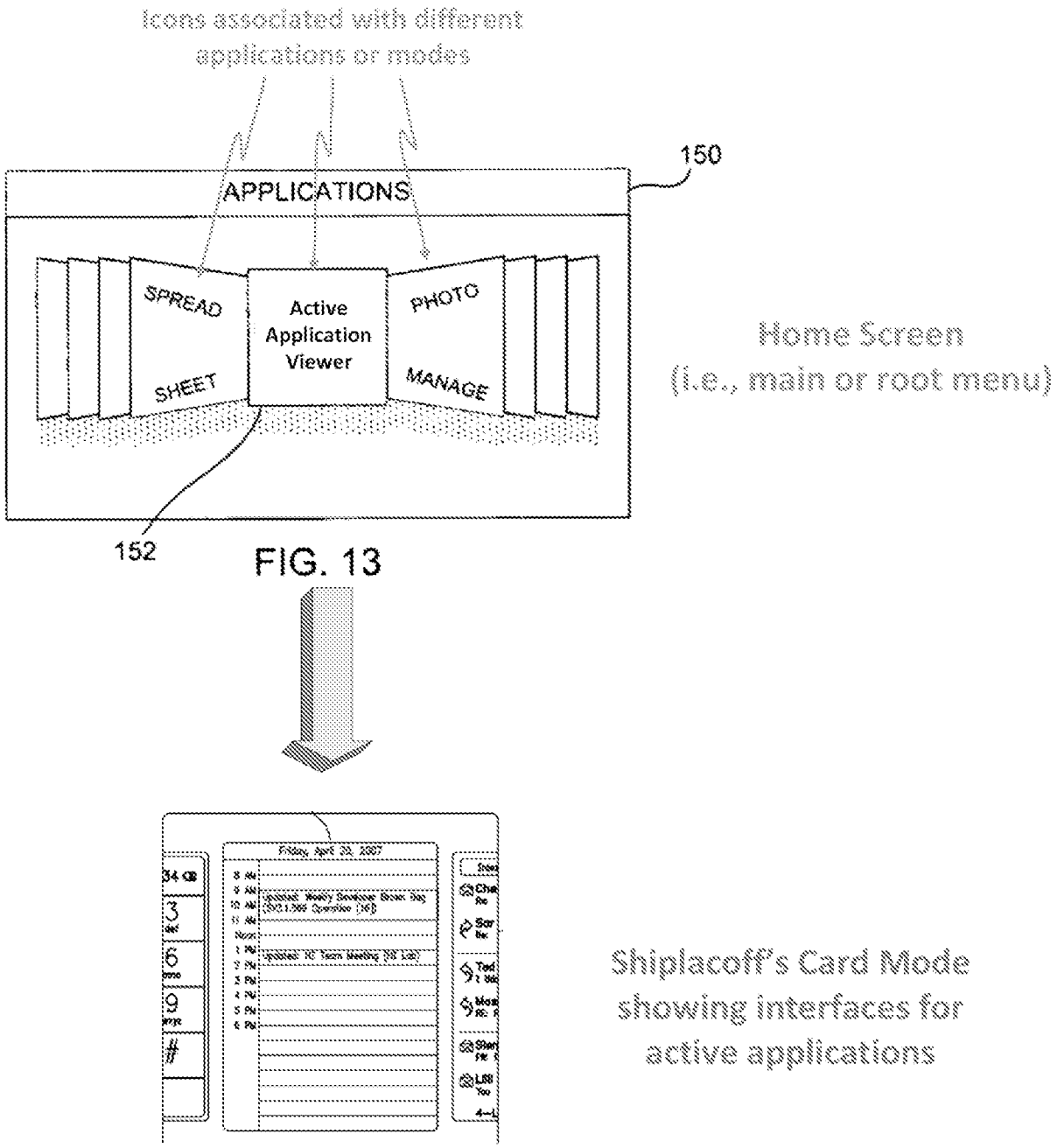


FIG. 13

Amalgamation of a Modified FIG. 13 of Appx-E and FIG. 3 of Appx-V

In this example implementation, the object is the icon in Chaudhri's "image based browser 150 associated with applications" that corresponds to the active application view described by Shiplacoff. Appx-C, ¶534. As described by

Chaudhri, "the images 152 are icons that represent applications that can be launched on the electronic device." Appx-E, [0143]. "In one embodiment, when the user selects the icon 152 at the primary position, the application is launched." Appx-E, [0143]. Chaudhri describes that selections may be made through various gestures, including a tap or a "substantially vertical swipe." Appx-E, [0171]. Thus, in order to select the icon associated with Shiplacoff's active application view (*i.e.*, card mode), the user would have either tapped or swiped on or near the displayed icon associated with Shiplacoff's active application view. *See* Appx-E, [0143], [0171]; Appx-C, ¶534.

Accordingly, a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been configured such that ***when the magnitude, including the distance magnitude, of the gesture detected on the touch screen is detected to increase above the distance threshold and the duration magnitude of the gesture detected on the touch screen is detected to increase above the duration threshold: a multitasking interface for choosing among a plurality of active applications is displayed***, as recited in [218.e]. Appx-C, ¶535.

[218.f] the multitasking interface is displayed in at least one first virtual display layer that appears above a second virtual display layer including the at least portion of the at least one other object that is blurred, and

Element [218.f] is substantially the same as Element [208.h]. Appx-C, ¶536. The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Element [218.f] for at least the same reasons described above with respect to Element [208.h]. *See* Element [208.h], *supra*; Appx-C, ¶536.

[218.g] the multitasking interface remains displayed after the completion of the gesture.

Element [218.g] is substantially the same as Element [208.i]. Appx-C, ¶537. The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Element [218.h] for at least the same reasons described above with respect to Element [208.i]. *See* Element [208.i], *supra*; Appx-C, ¶537.

6. Claim 219 Analysis

Beaumier, Chaudhri, Wang, and Shiplacoff render obvious claim 219 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶538-541.

[219] The apparatus of claim 218, wherein the apparatus is configured such that the second virtual display layer includes the home screen for choosing among the plurality of applications.

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [219].

As discussed above with respect to Element [208.h], *supra*, implemented in the manner of Beaumier's tag display (*see* Appx-D, FIG. 8a) or pop-up screen (*see* Appx-D, FIG. 22c), a POSITA would have at least found it obvious that Shiplacoff's card mode would be displayed "on" the underlying image browser (*e.g.*, as shown in Beaumier's FIG. 22c), such that the area between the displayed cards would show a blurred image browser (*e.g.*, "image based browser 150 associated with applications" shown in FIG. 13 from which Shiplacoff's card mode is launched). Appx-C, ¶539.

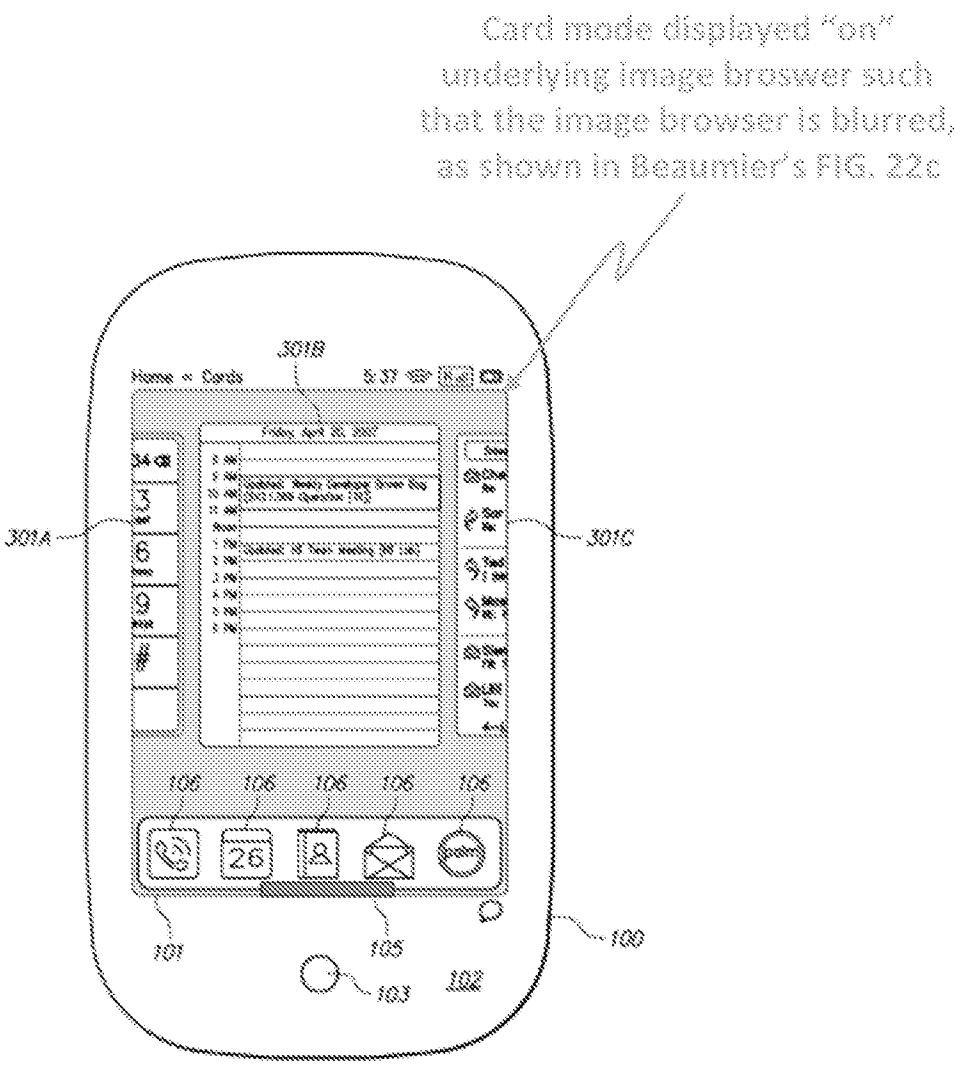


FIG. 3

Appx-V, FIG. 1 (annotated and modified)

Thus, as discussed with respect to Elements [124.b], and [125.b], *supra*, a POSITA would have understood and found obvious that the additional information is being displayed in one or more "virtual layers" "above" the one or more "virtual layers" in which the other objects that were not selected are displayed in. Appx-C, ¶540. Indeed, it was known that, "[w]hen several 2D layers of information are put

on top of each other, it is possible to provide the user with an intuitive way of choosing how much and which information to display crisply." Appx-G, 3-4. For example, there were user interface systems going back as early as 1991 where "up to 26 layers of information can be displayed at the same time" and where "[e]ach layer has an interest level associated with it that the user can change," and "[t]he interest level is [visualized as] a combination of blur and transparency." Appx-G, 2, 8. Applied to the above-discussed implementation of Shiplacoff's card mode, a POSITA would have understood and found obvious that the menu (*e.g.*, Shiplacoff's card mode objects) would be displayed in at least one "virtual display layer," as that term is broadly used in the '754 Patent, and that the virtual display layer containing the menu is displayed "on" one or more other virtual display layers that contain elements of the elements of the image browser that were not selected. *See* Appx-D, FIG. 22c, [0127]; Appx-C, ¶540.

Accordingly, a POSITA would have found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been ***configured such that the second virtual display layer includes the home screen for choosing among the plurality of applications***, as recited in [219]. Appx-C, ¶541.

7. Claim 220 Analysis

Beaumier, Chaudhri, Wang, and Shiplacoff render obvious claim 220 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶542-545.

[220] The apparatus of claim 219, wherein the apparatus is configured such that a third virtual display layer is displayed between the first virtual display layer and the second virtual display layer.

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [220].

As discussed with respect to Claim [195], *supra*, at least one known technique for determining which objects to blur and which objects to display sharply—known as Semantic Depth of Field (SDOF)—was to assign each object a semantic depth (*e.g.*, related to the virtual layer in which the object is associated) and a relevance value that depends on the level of display on which the user is currently focused, such that objects within the current layer of focus are assigned the highest relevance and displayed sharply, and objects within layers at progressively different layers of depth are assigned progressively lower relevance and displayed with greater blur. *See* Appx-G, 2-7; Appx-C, ¶543. The relevance of any object or set of objects (and thus the extent to which each object or set of objects is blurred or displayed sharply in focus) was a known design choice, and relevance value was known to be settable by the system in accordance with a designer's programming or even by the user. *See*

Appx-G, 3-4; Appx-C, ¶543. This is illustrated in the following figure, in which the red objects are assigned to the layer on which a user is currently focused and the light blue objects are assigned to "lower" or "higher" layers of semantic depth from the focus layer, and are therefore assigned a lower relevance value based on their semantic distance from focus layer and blurred based on this lower relevance value. *See* Appx-G, 3-4; Appx-C, ¶543.

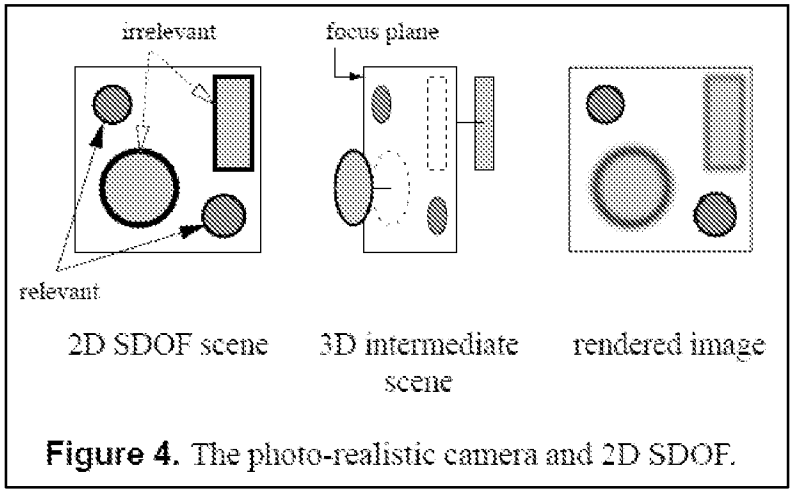


Figure 4. The photo-realistic camera and 2D SDOF.

Appx-G, FIG. 4

Applying this known technique for determining the degree of blur utilized in displaying user interface objects to the teachings of Beaumier and Chaudhri, a POSITA would have found it obvious that where in the Beaumier-Chaudhri-Wang-Shiplacoff combination objects are displayed with the same apparent depth, they are assigned the same semantic depth (*e.g.*, virtual display layer) and the same associated relevance and blur values. *See* Appx-G, 2-7; Appx-C, ¶544. Thus, in FIG. 6, for example, it would have at least been obvious to a POSITA that all

objects that appear at the same apparent depth are part of a virtual layer at the same semantic level of depth and assigned the same relevance and sharpness/blur level (*e.g.*, the various object icons). *See* Appx-D, FIG. 6; Appx-C, ¶544. On the other hand, once the pop-up screen is opened (as in Beaumier's FIG. 22c), the other, blurred objects would have appeared to have been reassigned to a different apparent depth than the selected object in response to user input as compared to the same depth in FIG. 6. *See* Appx-D, FIGS. 6, 8a, 22c; Appx-C, ¶544.

Because there can be any number of virtual layers available on the display (*e.g.*, each of the cards in Shiplacoff's card mode and/or other user interface objects in Beaumier's image viewer may be at several different "virtual layers," as that term is broadly used in the '754 Patent, because they may appear at several different depths), a POSITA would have understood and found obvious that the apparatus of the Beaumier-Chaudhri-Wang-Shiplacoff combination would have been the apparatus is configured such that ***a third virtual display layer is displayed between the first virtual display layer and the second virtual display layer***, as recited in [220]. Appx-C, ¶545.

8. Claim 221 Analysis

Beaumier, Chaudhri, Wang, and Shiplacoff render obvious claim 221 of the '754 patent, and each of its claim elements, for the reasons explained below. Appx-C, ¶¶546-548.

[221] The apparatus of claim 219, wherein the apparatus is configured such that at least a portion of the home screen, including the at least portion of the at least one other object, is blurred, when the magnitude, including the distance magnitude, of the gesture detected on the touch screen is detected to increase above the distance threshold.

The Beaumier-Chaudhri-Wang-Shiplacoff combination renders obvious Claim [221].

As discussed above with respect to Element [208.h], *supra*, implemented in the manner of Beaumier's tag display (*see* Appx-D, FIG. 8a) or pop-up screen (*see* Appx-D, FIG. 22c), a POSITA would have at least found it obvious that Shiplacoff's card mode would be displayed "on" the underlying image browser (*e.g.*, as shown in Beaumier's FIG. 22c), such that the area between the displayed cards would show a blurred image browser (*e.g.*, "image based browser 150 associated with applications" shown in FIG. 13 from which Shiplacoff's card mode is launched). *See* Appx-E, [0127] (describing that "[b]lurring, fading, enlarging, and/or other techniques may be used to manage the user's focus in different embodiments, and thus may help simplify the experience, even though there are many more features available and those features are more powerful" and an example where the apparatus "blurs background UI elements to help bring focus to the selected" object); Appx-C, ¶547. As discussed with respect to Element [218.a], *supra*, Chaudhri's "image based browser 150 associated with applications" shown in FIG. 13 from which Shiplacoff's card mode is launched is a home screen. *See* Appx-E, [0146], Appx-H,

[0047]; Appx-K [0163], [0165]; Appx-C, ¶547. Thus, the image browser that is blurred would have been the home screen. Appx-C, ¶547.

Accordingly, a POSITA would have found obvious that the apparatus of the Beaumier-Chaudhri-Wang combination would have been ***configured such that at least a portion of the home screen, including the at least portion of the at least one other object, is blurred, when the magnitude, including the distance magnitude, of the gesture detected on the touch screen is detected to increase above the distance threshold***, as recited in [221]. Appx-C, ¶548.

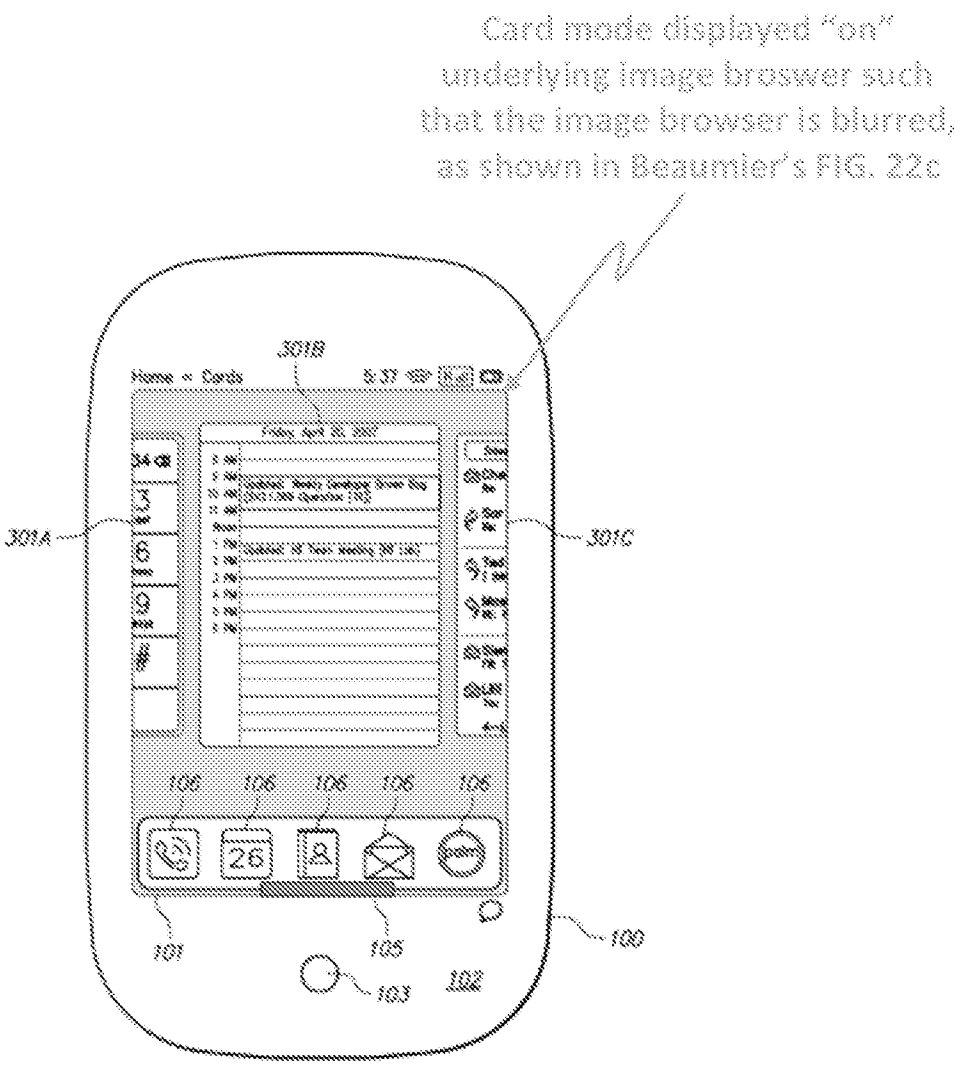


FIG. 3

Appx-V, FIG. 1 (annotated and modified)

VIII. CONCLUSION

For the forgoing reasons, the prior art references discussed herein raise substantial and new questions of patentability with respect to the Challenged Claims of the '754 patent. These references, all of which were published or filed before the Critical Date, constitute prior art to the '754 Patent, and the combinations based on these references in Grounds 1-3 render the Challenged Claims obvious and unpatentable for the reasons described in detail in this Request.

Respectfully submitted,

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