IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MAINE

SURFCAST, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Case No. 2:12-cv-00333-DBH
	)	
MICROSOFT CORPORATION,	)	
	)	
Defendant.	)	
	)	

PLAINTIFF SURFCAST'S RESPONSES TO DEFENDANT MICROSOFT CORPORATION'S FIRST SET OF INTERROGATORIES

Plaintiff SurfCast, Inc. ("SurfCast") answers Microsoft Corporation's ("Microsoft") first set of interrogatories as follows:

GENERAL STATEMENT AND OBJECTIONS

The following general objections are incorporated by reference in SurfCast's responses to each and every Interrogatory.

1. SurfCast objects to each and every Interrogatory the extent it purports to impose requirements beyond those authorized or permitted by the Federal Rules of Civil Procedure and the Local Rules.

2. The following responses are given without prejudice to SurfCast's right to produce evidence of any subsequently discovered fact or facts that SurfCast may later develop. The responses contained herein are made in a good faith effort to supply as much factual information as is presently known, but should in no way prejudice SurfCast with regard to further discovery, research or analysis.

3. SurfCast has not completed its investigation of this case, has not completed discovery, and has not completed preparation for trial. All of the responses contained herein are

based only on such information that is presently available to and specifically known to SurfCast. It is anticipated that further discovery, independent investigation, legal research and analysis will supply additional facts, add additional meaning to the known facts, as well as establish entirely new factual conclusions and legal contentions, all of which may lead to substantial additions to, changes in, and variations from the responses herein set forth.

4. SurfCast objects generally to each and every Interrogatory insofar as it seeks documents protected by the attorney-client privilege, the work product doctrine, and/or any other applicable privilege or protection. Inadvertent disclosure by SurfCast of any information that is confidential, privileged, that was prepared in anticipation of litigation or for trial, or is otherwise immune from discovery, shall not constitute a waiver of any privilege or any ground for objection to discovery with respect to such information, or of SurfCast's right to object to the use of any such information during this or any subsequent proceeding.

5. SurfCast objects generally to each and every Interrogatory insofar as it seeks information that is neither relevant to a claim or defense of any party nor reasonably calculated to lead to the discovery of admissible evidence.

6. SurfCast objects generally to each and every Interrogatory insofar as it seeks proprietary information or trade secrets of SurfCast. Further, to the extent any relevant and responsive trade secret or confidential documents exist, and are subject to production, SurfCast reserves its right to seek authorization for disclosure from any third party, where applicable, and further will designate any such documents under the Consent Confidentiality Order governing this case, and SurfCast may need to seek further protection for any such documents.

7. SurfCast objects generally to the Interrogatories insofar as the Interrogatories seek information that is confidential and proprietary belonging to third parties with whom SurfCast

might have entered into non-disclosure or confidentiality agreements or agreements having non-disclosure or confidentiality provisions that prohibit the disclosure by SurfCast of the third party's confidential or proprietary information. Pursuant to the Consent Confidentiality Order in this case, and pursuant to any further protection that may be necessary and/or appropriate, and contingent upon the requisite consent being obtained from any affected third parties, SurfCast will produce relevant and responsive documents in its possession, custody, or control, provided such documents do not contain legal contentions, beliefs, assertions, or other confidential or proprietary information protected by the attorney-client privilege, the work product doctrine, and/or any other applicable privilege or protection.

8. SurfCast objects to each and every Interrogatory to the extent it purports to call for the production of documents or information that SurfCast is prohibited from disclosing by contract, order, statute, rule, regulation, or law.

9. SurfCast objects to each and every Interrogatory to the extent that compliance with an Interrogatory would be unduly burdensome, expensive, or oppressive, as prohibited by the Federal Rules.

10. SurfCast objects to each and every Interrogatory on grounds set forth in Federal Rule of Civil Procedure 26(b)(2)(C) to the extent the discovery sought is unreasonably cumulative or duplicative, or is obtainable from some other source that is more convenient, less burdensome or less expensive, or the burden or expense of the proposed discovery outweighs its likely benefit, taking into account the needs of the case, the amount in controversy, the parties' resources, the importance of the issues at stake in the litigation, and the importance of the proposed discovery in resolving the issues.

11. SurfCast objects to each and every Interrogatory to the extent any Interrogatory is

cumulative or duplicative.

12. SurfCast objects to each and every Interrogatory to the extent it calls for a legal conclusion.

13. SurfCast objects to each and every Interrogatory to the extent it is vague, ambiguous or not otherwise understood. Subject to its remaining objections, SurfCast will respond only to the extent that SurfCast understands the request.

14. SurfCast objects to each and every Interrogatory to the extent it seeks information already in Microsoft's possession or that is equally available to Microsoft from public sources. SurfCast provides these responses with the understanding that Microsoft is in possession of or has access to such sources.

15. SurfCast objects to each and every Interrogatory to the extent it is overly broad and unduly burdensome as to the time period for which information is requested. SurfCast is willing to meet and confer regarding a reasonable time period for discoverable information.

16. Whenever, in response to an Interrogatory, SurfCast agrees to produce documents, this does not represent that such documents exist, but only that such documents will be produced if they exist, are relevant, can be located with reasonable diligence, are in SurfCast's possession, custody, or control, and are not otherwise protected from disclosure. SurfCast reserves the right to supplement any production if and when it becomes aware of additional responsive documents.

17. SurfCast objects to the definitions of "document" and "communication" to the extent they attempt to exceed the requirements of the Federal Rules of Civil Procedure or the Local Rules of this Court.

18. SurfCast objects to the definition of the term "Surfcast" as overly broad and unduly burdensome to the extent it includes "all of its corporate locations; all predecessors,

predecessors-in-interest, and successors; and all past or present parents, divisions, subsidiaries, affiliates, directors, officers, agents, employees, consultants, attorneys, entities acting in joint venture, licensing agreements, or partnership relationships with Surfcast and others acting on behalf of Surfcast, anywhere in the world." SurfCast will construe this term to mean SurfCast, Inc.

19. SurfCast expressly incorporates every general objection set forth above into each specific objection set forth below. A specific objection may repeat a general objection for emphasis or otherwise. The failure to include a general objection in any specific objection does not waive any general objection to that Interrogatory. SurfCast reserves the right to amend these objections and responses.

RESPONSES TO INTERROGATORIES

INTERROGATORY NO. 1:

State the legal and factual basis for Your contention that Microsoft has infringed or is infringing the Asserted Claims, including, separately for each Asserted Claim, specific identification of each product, apparatus, or method that You assert is infringing, whether You contend that Microsoft's alleged infringement is direct infringement, induced infringement, and/or contributory infringement; whether the alleged infringement is literal, under the doctrine of equivalents, or both; and for each element, limitation, or step of each claim, specifically identify the entity that you contend performs that claim element, limitation or step and describe in detail where such claim element, limitation or step is found, i.e., read each Asserted Claim on each accused product, apparatus, and method by providing, separately for each claim element and product or activity, a claim-element by claim-element comparison of each claim to the corresponding structure or function of the accused product or activity.

RESPONSE TO INTERROGATORY NO. 1:

SurfCast objects to this Interrogatory as premature on the grounds that it seeks SurfCast's contentions and analysis before SurfCast has completed discovery relating to these issues. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other

applicable privileges, protections, or immunities. SurfCast further objects to this Interrogatory as containing distinct subparts that each comprise a separate Interrogatory.

Subject to the foregoing General and Specific Objections, SurfCast responds that

Exemplary claim charts and evidence identifying where each element of each asserted claim is found within the accused Microsoft products are included in Exhibits A and B.

The references and citations contained in these claim charts are merely exemplary and not meant to be limiting in any way. Based on current information and belief, at least the claims of the ’403 patent identified in Exhibits A-B are infringed literally by the accused Microsoft products identified in Exhibits A-B. To the extent that Microsoft argues that a limitation is not literally infringed, that limitation would be met under the doctrine of equivalents since the accused Microsoft products and their relevant features, if not literally meeting the language of the asserted claims, certainly perform substantially the same function in substantially the same way to achieve substantially the same result. Should Microsoft dispute literal infringement of any asserted claim limitation, SurfCast reserves the right to assert that the claim limitation is met under the doctrine of equivalents.

As shown in Exhibits A-B, based on current information and belief, the apparatus claims of the ’403 patent are directly infringed by Microsoft’s making, using, selling, and/or offering to sell the accused Microsoft products as identified in Exhibits A-B. The asserted method claims are also directly and indirectly infringed by Microsoft. Upon information and belief, Microsoft directly infringes these method claims by using in the United States the accused Microsoft products identified in Exhibits A-B in an infringing manner. For example, Microsoft, or those acting on its behalf, directly infringes the method claims of the ’403 patent by demonstrating the

accused functionalities on the accused Microsoft products in the United States in its stores and in videos provided on its websites in a manner that practices the claimed methods.

Microsoft also indirectly infringes the method claims of the ’403 patent under theories of inducement and contributory infringement. As shown in Exhibits A-B, and based on current information and belief, consumers will use the accused Microsoft products in a manner that practices the methods claimed, thereby directly infringing them. This direct infringement results from Microsoft’s indirect infringement. For example, Microsoft provides, promotes, markets, and advertises the features of the accused Microsoft products that practice these method claims. Further, Microsoft provides user guides, manuals, instructional videos, instructional classes at its Microsoft stores, and other information to users of the accused Microsoft products, with instructions on how to use the accused Microsoft products in a manner that practices these method claims. Microsoft also instructs developers how to write applications that, when approved by Microsoft, downloaded through Microsoft’s Windows Store, and used on an accused product, directly infringe one or more claims of the ’403 patent. For example, as identified in Exhibits A-B, Microsoft provides extensive developer documentation and instruction, including sample applications and source code, through its Microsoft Developer Network and developer blogs, and guides developers to include features and functions that, when used on the accused Microsoft products, practice the method claims of the ’403 patent. Moreover, Microsoft instructs users of the accused Microsoft products to download applications from the Microsoft Windows Store and use them in a manner that practices the methods claimed in the ’403 patent. Moreover, with respect to the features of the accused Microsoft products that practice the method claims of the ’403 patent, they are not capable of substantial non-infringing use. Documents responsive to this request can be found in SurfCast’s document production

bearing Bates numbers SC0018159 – SC0020381. Discovery is on-going and SurfCast reserves the right to supplement this response in accordance with Fed. R. Civ. Proc. 26.

INTERROGATORY NO. 2:

Describe in detail all facts and circumstances that support or otherwise relate to Your claim for damages for alleged infringement of the Asserted Claims, including the demand for the patented product, the absence or presence of any and all allegedly non-infringing substitutes, the manufacturing and marketing capacity to exploit the demand, and the amount of profit You would have made and, if You contend that You are entitled to recover damages under the entire market value rule, state the economic connection between the invented feature and the accused products and all facts, documents, and/or witnesses You rely upon in support of Your contention, and all facts, documents and/or witnesses that You intend to rely upon to show that the patent-related feature is the basis for customer demand.

RESPONSE TO INTERROGATORY NO. 2:

SurfCast objects to this Interrogatory as premature on the grounds that it seeks SurfCast's contentions and analysis before SurfCast has completed discovery relating to these issues. SurfCast objects to this Interrogatory as premature to the extent that it seeks expert opinion. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities. SurfCast further objects to this Interrogatory as containing distinct subparts that each comprise a separate Interrogatory.

Subject to the foregoing General and Specific Objections, SurfCast responds that it will provide the requested information in accordance with the Court's Scheduling Order pertaining to expert discovery.

INTERROGATORY NO. 3:

Identify all of the factual bases for Your contention that Microsoft has willfully infringed the '403 Patent and identify all documents You relied upon for such contentions and the person(s) most knowledgeable about these bases and documents.

RESPONSE TO INTERROGATORY NO. 3:

SurfCast objects to this Interrogatory as premature on the grounds that it seeks SurfCast's contentions and analysis before SurfCast has completed discovery relating to these issues. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities.

Subject to the foregoing General and Specific Objections, SurfCast responds that Microsoft had at least constructive knowledge of the '403 Patent since at least the issuance of the '403 Patent on April 20, 2004. Microsoft had actual knowledge of the '403 Patent no later than on or about January 25, 2005, when the United States Patent and Trademark Office (USPTO) Examiner cited the '403 Patent in an Office Action concerning Microsoft's U.S. Patent Application No. 10/184,374. Microsoft also cited the '403 Patent in Information Disclosure Statements to USPTO in connection with its filing of patent applications on its Live Tiles and user interface technologies. Microsoft provided written submissions to the USPTO concerning the '403 Patent in connection with the prosecution of its patent applications, including applications concerning Live Tiles and user interface technology. Microsoft made, used, sold and offered to sell products with Live Tiles without licensing rights to the '403 Patent, despite its knowledge of the patent. Microsoft acted despite an objectively high likelihood that its actions constituted infringement of the '403 Patent. This risk was either known to Microsoft or so obvious that Microsoft should have known about it. Upon information and belief, SurfCast identifies Microsoft's inventors, patent attorneys and agents involved with the filing and prosecution of Microsoft's patents and patent applications citing the '403 Patent as the persons likely to be most knowledgeable of the documents containing this information. SurfCast

identifies at least the following issued Microsoft U.S. Patents that identify the '403 Patent: 7,209,915, 7,506,265, 7,152,040, D546,344, D545,838, D545,837, D545,836, 7,340,681, 7,673,255, 7,458,020, 7,543,235, 7,480,868, 7,451,402, 7,426,692, 7,426,691, D545,839, 7,451,399, 7,657,842, 7,669,140, 7,996,783, 7,783,990, 7,933,914, 7,831,585, 7,822,699, 7,606,700, 7,992,085, 7,788,590, 7,558,841, 7,539,950, 7,689,937, 7,933,632, 8,225,231, 7,873,356, 8,253,914, 7,973,807, 8,296,671, 8,249,388. Because these documents are Microsoft patents, it is believed that these patents and their associated file histories are in the custody, control or possession of Microsoft to the extent they are not publicly available. It is believed that the inventors, prosecuting attorneys, Microsoft's in-house and outside counsel and Microsoft's decision makers are individuals with knowledge of the information relevant to this response. Documents responsive to this request can be found in SurfCast's document production bearing Bates numbers SC0001111 – SC0018158. Discovery is on-going and SurfCast reserves the right to supplement this response in accordance with Fed. R. Civ. Proc. 26.

INTERROGATORY NO. 4:

Provide Your construction of each element and limitation of each Asserted Claim, including without limitation, any citations to the claim language, any plain or ordinary meanings of words or phrases, any special or uncommon meanings of words or phrases, and any terms You assert to be interpreted under 35 U.S.C. § 112, ¶ 6, along with a chart specifically identifying and describing, in detail, all references from the corresponding patent specification, the corresponding prosecution history, and all extrinsic evidence, including, without limitation, anticipated expert testimony, anticipated inventor testimony, dictionary definitions, and citations to learned treatises, that support Your construction.

RESPONSE TO INTERROGATORY NO. 4:

SurfCast objects to this Interrogatory as premature on the grounds that it seeks SurfCast's contentions and analysis before SurfCast has completed discovery relating to these issues. SurfCast objects to this Interrogatory on the ground is premature in light of the timetable provided in the Court's Scheduling Order. SurfCast objects to this Interrogatory to the extent it

seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities.

Subject to the foregoing General and Specific Objections, SurfCast responds that it will respond to this Interrogatory at the time indicated in the Court's Scheduling Order.

INTERROGATORY NO. 5:

Describe with particularity when You first became aware of and/or first had knowledge of Microsoft's allegedly infringing activity, including, but not limited to, the identification of each person who had such knowledge and the description of the circumstances under which the person first became aware of and/or acquired such knowledge.

RESPONSE TO INTERROGATORY NO. 5:

SurfCast objects to this Interrogatory to the extent it seeks information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities. SurfCast objects to the phrase "first became aware" as vague and ambiguous.

Subject to the foregoing General and Specific Objections, SurfCast responds that on October 22, 2010 Ovid Santoro reviewed a news article by Chris Nuttall entitled "Microsoft squares that look hip" that described Windows Phone 7 and its use of "live tiles." Discovery is on-going and SurfCast reserves the right to supplement this response in accordance with Fed. R. Civ. Proc. 26.

INTERROGATORY NO. 6:

Identify the date You allege is the priority date of each Asserted Claim and describe in detail all facts and circumstances relating to the conception and reduction to practice of each such claim, including identifying the date on which the claimed invention was conceived, the date on which the claimed invention was reduced to practice, any alleged diligence between the

asserted conception and reduction to practice dates, each person with knowledge of such conception, reduction to practice or diligence, including the nature of each person's participation, involvement, and/or contribution to such conception, reduction to practice and/or diligence, and the Bates Number of all documents on which You intend to rely to support Your allegation of such conception, reduction to practice and/or diligence.

RESPONSE TO INTERROGATORY NO. 6:

SurfCast objects to this Interrogatory as overbroad, unduly burdensome, vague and ambiguous, and not reasonably calculated to lead to the discovery of admissible evidence to the extent that it seeks "all" of the described information. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities. SurfCast objects to this Interrogatory as premature on the grounds that it seeks SurfCast's contentions and analysis before SurfCast has completed discovery relating to these issues. SurfCast also objects to this Interrogatory to the extent that it calls for a legal conclusion.

Subject to the foregoing General and Specific Objections, SurfCast responds that Ovid Santoro and Klaus Lagermann discussed the subject matter described and claimed in the '403 Patent at least as early as December 1998. The two inventors met shortly thereafter in January 1999, along with Dixon Chan Dick, and further discussed and elaborated the details of their ideas on a series of whiteboard "flip charts." Consistently throughout 1999, the inventors drafted written summaries of the inventive subject matter and continued to collaborate on the technology to diligently reduce the inventions to practice. Written communications and summaries from this period of 1998 to 1999 reflect at least the claimed subject matter of independent claims 1, 22 and 46.

The inventors consulted with their attorneys at Pennie and Edmonds in preparation for filing a patent application on the inventive subject matter in 1999. The provisional application to

which the ’403 Patent claims priority was filed on October 29, 1999. At least claims 1-9, 12-41, 44-48 and 50-52 are entitled to a priority claim to the provisional application filed October 29, 1999. At least claims 1-9, 12-41, 44-48 and 50-52 were constructively reduced to practice no later than October 29, 1999. At least claims 10, 11, 42, 43, and 49 were constructively reduced to practice no later than October 30, 2000. Documents responsive to this request can be found in SurfCast’s document production bearing Bates numbers SC0000001 – SC0001110. Discovery is on-going and SurfCast reserves the right to supplement this response in accordance with Fed. R. Civ. Proc. 26.

INTERROGATORY NO. 7:

Separately for each Asserted Claim, describe in detail all facts and circumstances relating to the first manufacture of the claimed invention, the first use of the claimed invention, the first public use of the claimed invention, the first offer for sale of the claimed invention, the first sale of the claimed invention, and the first offer for sale of the claimed invention for inclusion in a product to be sold in the United States, including, without limitation, the date on which each such event occurred, the identity of the customer, the identity of each person with knowledge of any of the foregoing, the price of any such offers for sale or sales, and identify by Bates number(s) all documents that disclose, reveal or otherwise suggest any of the foregoing.

RESPONSE TO INTERROGATORY NO. 7:

SurfCast objects to this Interrogatory as overbroad, unduly burdensome, vague and ambiguous, and not reasonably calculated to lead to the discovery of admissible evidence to the extent that it seeks “all” the described information. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities. SurfCast also objects to this Interrogatory to the extent it seeks documents that do not exist or are not in SurfCast’s possession, custody or control. SurfCast also objects to the extent this Interrogatory seeks information other than as kept in the ordinary course of business.

Subject to the foregoing General and Specific Objections, SurfCast responds that SurfCast worked on prototypes of the technology claimed in the '403 Patent in 2000-2001. As least as early as September 2000, SurfCast tested a working prototype. SurfCast began discussions regarding the SurfCast technology with TeleDanmark (TDC) in early 2001, and these discussions included demonstration of a working prototype of the SurfCast technology to TDC representatives. During the course of these interactions, which continued throughout 2001, SurfCast and TDC discussed terms for signing TDC as a customer for the SurfCast technology. The parties did not ultimately enter into such agreement.

On or about March-April 2001, SurfCast presented a written description of its technology to Time Warner Cable and to E*Trade in the United States. In or about February 2003, SurfCast made an implementation of the technology claimed in the '403 Patent available for trial use through a link sent to friends, family, shareholders and colleagues. SurfCast has not consummated a sale of its implementation of the claimed inventions of the '403 Patent. Persons with knowledge of the above described information include Ovid Santoro, Tom Dechaene and Klaus Lagermann. Discovery is on-going and SurfCast reserves the right to supplement this response in accordance with Fed. R. Civ. Proc. 26.

INTERROGATORY NO. 8:

Explain in detail all facts and circumstances that support or otherwise relate to any secondary considerations of non-obviousness of each Asserted Claim, including without limitation, that the subject matter of any such claim satisfied a long-felt need, solved problems the industry failed to solve, was the subject of skepticism expressed in the industry, has been a commercial success, has had its significance recognized by the industry, has been copied by others, and/or has achieved unexpected results and describe the nexus between the alleged invention of the Asserted Claim and any such factor.

RESPONSE TO INTERROGATORY NO. 8:

SurfCast objects to this Interrogatory as overbroad, unduly burdensome, vague and ambiguous, and not reasonably calculated to lead to the discovery of admissible evidence to the extent that it seeks "all" the described information. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities. SurfCast objects to this Interrogatory as prematurely seeking expert opinion not in accordance with the Court's Scheduling Order.

Subject to the foregoing General and Specific Objections, SurfCast responds that facts and circumstances related secondary considerations of non-obviousness may be found, for example, in the '403 Patent specification. SurfCast further responds that fact discovery is on-going and expert discovery has not yet commenced and accordingly, it will provide additional information as discovery proceeds and in accordance with the Court's Scheduling Order pertaining to expert discovery.

INTERROGATORY NO. 9:

Describe in detail, each and every fact concerning any efforts taken, with respect to the '403 Patent, to comply with 35 U.S.C. § 287, including, but not limited to, complying with the marking provisions of 35 U.S.C. § 287, including stating the date on which You allege You first gave notice to Microsoft that Microsoft was allegedly infringing the patent.

RESPONSE TO INTERROGATORY NO. 9:

SurfCast objects to this Interrogatory as overbroad, unduly burdensome, vague and ambiguous, and not reasonably calculated to lead to the discovery of admissible evidence to the extent that it seeks "each and every" fact concerning the described information. SurfCast objects to this Interrogatory to the extent it seeks to elicit information subject to and protected by the

attorney-client privilege, the attorney work product doctrine and/or any other applicable privileges, protections, or immunities.

Subject to the foregoing General and Specific Objections, SurfCast responds that it does not make and has not made a product which it could mark in accordance with 35 U.S.C. § 287. Microsoft had notice of the ’403 Patent, its claimed subject matter, and how the ’403 patent applied to Microsoft technology, including technology described and claimed in Microsoft patents, no later than on or about January 25, 2005 and thereafter as set forth in SurfCast’s Response to Interrogatory No. 3. SurfCast incorporates by reference herein its Response to Interrogatory No. 3. Discovery is on-going and SurfCast reserves the right to supplement this response in accordance with Fed. R. Civ. Proc. 26.

Respectfully submitted,

Dated: February 14, 2013

By: */s/ Erica Pascal*

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ATTORNEYS FOR PLAINTIFF

EXHIBIT A

Infringement Chart for U.S. Patent No. 6,724,403

The infringement evidence cited below is exemplary and not exhaustive. The cited examples are taken from the following documents along with additional materials describing Microsoft's technology:

1) Microsoft Store, Buy ASUS VivoBook X202E Touchscreen, (http://www.microsoftstore.com/store/msstore/pd/ASUS-VivoBook-X202E-Touchscreen/productID.257339400) ("Buy ASUS VivoBook X202E")
2) Windows 8 Product Guide, available at windows.microsoft.com (http://go.microsoft.com/fwlink/?LinkId=251529) ("W8 Product Guide")
3) Windows 8 Product Guide for Developers, available at windows.microsoft.com (http://go.microsoft.com/fwlink/?LinkId=266205) ("W8 Guide for Developers")
4) Windows 8 and Windows RT Product Guide, available at windows.microsoft.com (http://www.microsoft.com/en-us/download/details.aspx?id=35406) ("W8 and WRT Product Guide")
5) Lance Whitney, "Microsoft's Best Windows 8 Apps," CNET (Aug. 30, 2012), available at http://reviews.cnet.com/8301-33642_7-57503535-292/microsofts-best-windows-8-apps/ ("Microsoft's Best Apps")
6) Tile and Tile Notification Overview, available at http://msdn.microsoft.com/en-US/library/windows/apps/hh779724, ("Tile Overview")
7) Quickstart: Sending a tile update (Windows Store apps using JavaScript and HTML), available at http://msdn.microsoft.com/en-US/library/windows/apps/hh465439 ("Quickstart: Sending a tile update")
8) Tile Schema, available at http://msdn.microsoft.com/en-US/library/windows/apps/br212859, ("Tile Schema")
9) Windows.UI.Notifications namespace, available at http://msdn.microsoft.com/en-us/library/windows/apps/br208661.aspx, ("Windows UI Notifications")
10) TileUpdater.StartPeriodicUpdate, available at http://msdn.microsoft.com/en-us/library/windows/apps/hh701688.aspx, ("TileUpdater.StartPeriodicUpdate")
11) PeriodicUpdateRecurrence Enumeration, available at http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.notifications.periodicupdaterecurrence.aspx ("Periodic Update Recurrence")
12) Quickstart: Setting up periodic notifications, available at http://msdn.microsoft.com/en-us/library/windows/apps/hh761476.aspx, ("Quickstart: Setting up periodic notifications")

13) Guidelines and checklist for periodic notifications (Windows Store apps), available at http://msdn.microsoft.com/en-us/library/windows/apps/hh761461.aspx ("Guidelines and Checklist for Periodic Notifications")

14) Choosing a notification delivery method (Windows Store apps), available at http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh779721.aspx ("Choosing a Notification Delivery Method")

15) "Creating a great tile experience (part 1)" (Apr. 16, 2012), available at http://blogs.msdn.com/b/windowsappdev/archive/2012/04/16/creating-a-great-tile-experience-part-1.aspx

16) "Creating a great tile experience (part 2)" (Apr. 18, 2012), available at http://blogs.msdn.com/b/windowsappdev/archive/2012/04/16/creating-a-great-tile-experience-part-2.aspx

17) Guidelines and Checklist for Tiles and Badges, available at http://msdn.microsoft.com/en-us/library/windows/apps/hh465403.aspx ("Guidelines for Tiles")

18) "How to schedule a tile notification," available at http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh868223(v=win.10).aspx

19) AppConfiguration.xml for Finance

20) AppConfiguration.xml for Weather

21) AppConfiguration.xml for News

22) AppConfiguration.xml for Sports

23) tileManager.js for Music

24) NewsUtilities.js for News

25) "Change the Default Number of Rows of Tiles on the Windows 8 UI (Metro) Screen," How-To Geek, available at http://www.howtogeek.com/123375/change-the-default-number-of-rows-of-tiles-on-the-windows-8-ui-metro-screen/ ("Change the Default Number of Rows of Tiles")

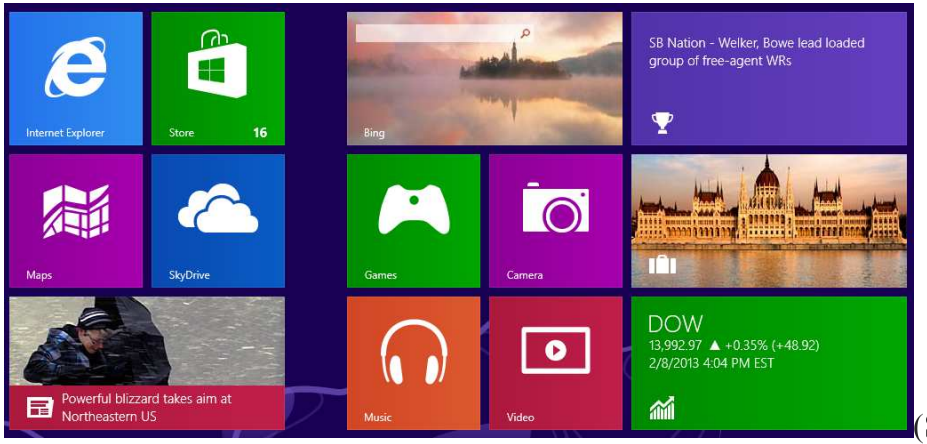
26) "Customize the Start Screen," available at http://windows.microsoft.com/en-US/windows-8/start-screen#1TC=t1

The Accused Instrumentalities include, but are not limited to the Microsoft Surface with Windows RT, Microsoft Surface with Windows 8 Pro (also referred to as the "Surface Pro"), all versions of the Microsoft Windows 8 Operating System for personal computers and tablets, including but not limited to Windows RT, Windows 8, Windows 8 Pro, and Windows 8 Enterprise (collectively "Windows 8"),

and personal computers and tablets incorporating Windows 8 and other products having similar or nearly identical features or documentation, including past and expected future releases (collectively "the Accused Instrumentalities"). According to SurfCast's investigation to date, any differences between Windows RT, Windows 8, Windows 8 Pro, and Windows 8 Enterprise do not affect the infringement analysis below. *See, e.g.,* W8 and WRT Product Guide. Discovery in this case is ongoing and SurfCast reserves the right to supplement its contentions accordingly.

Limitation	Accused Instrumentality
[1 pre] A method executed by a device under the control of a program, said device including a memory for storing said program, said method comprising:	Microsoft makes, uses, sells, and/or offers to sell Accused Instrumentalities comprising the following limitations. To the extent this preamble is found to be a limitation, the Accused Instrumentalities practice a method executed by a device under the control of a program, wherein the device includes a memory for storing the program. For example, Microsoft makes, uses, sells, and/or offers to sell computing devices, such as a tablet or personal computer, with the Windows 8 operating system that executes the claimed method. Such devices include memory for storing Windows 8. As an example, Microsoft sells the ASUSTeK X202E laptop with the Windows 8 Operating System stored in memory. (Buy ASUS VivoBook X202E).

Limitation	Accused Instrumentality
	System Information Item / Value OS Name: Microsoft Windows 8 Version: 6.2.9200 Build 9200 Other OS Description: Not Available OS Manufacturer: Microsoft Corporation System Name: Alpha System Manufacturer: ASUSTeK COMPUTER INC. System Model: X202E System Type: x64-based PC System SKU: ASUS-NotebookSKU Processor: Intel(R) Core(TM) i3-3217U CPU @ 1.80GHz, 1801 Mhz, 2 Core(s), 4 Logical Pr... BIOS Version/Date: American Megatrends Inc. X202E.204, 9/19/2012 SMBIOS Version: 2.7 Embedded Controller Version: 255.255 BIOS Mode: UEFI BaseBoard Manufacturer: ASUSTeK COMPUTER INC. BaseBoard Model: Not Available BaseBoard Name: Base Board Platform Role: Mobile Secure Boot State: On PCR7 Configuration: Binding Not Possible Windows Directory: C:\Windows System Directory: C:\Windows\system32 Boot Device: \Device\HarddiskVolume1 Locale: United States Hardware Abstraction Layer: Version = "6.2.9200.16420" User Name: Alpha\John Time Zone: Pacific Standard Time Installed Physical Memory (RAM): 4.00 GB (Screenshot of ASUSTeK X202E, System Information). The ASUSTeK X202E executes the claimed method under the control of the stored Windows 8 Operating

Limitation	Accused Instrumentality
	System.  (Screenshot of ASUSTeK X202E Windows 8 Start Screen). With Windows 8, you don't have to choose between a fun touch device and a hard-working PC because you can have it both ways. Prefer a mouse and keyboard? Great. Prefer touch? Enjoy the convenience. Windows 8 runs on amazing hardware, from tablets to laptops to all-in-ones with large, high-definition screens. Whether you like to stay put or work on the go, you can enjoy the power, convenience, and versatility of Windows. (W8 Product Guide, p. 27).

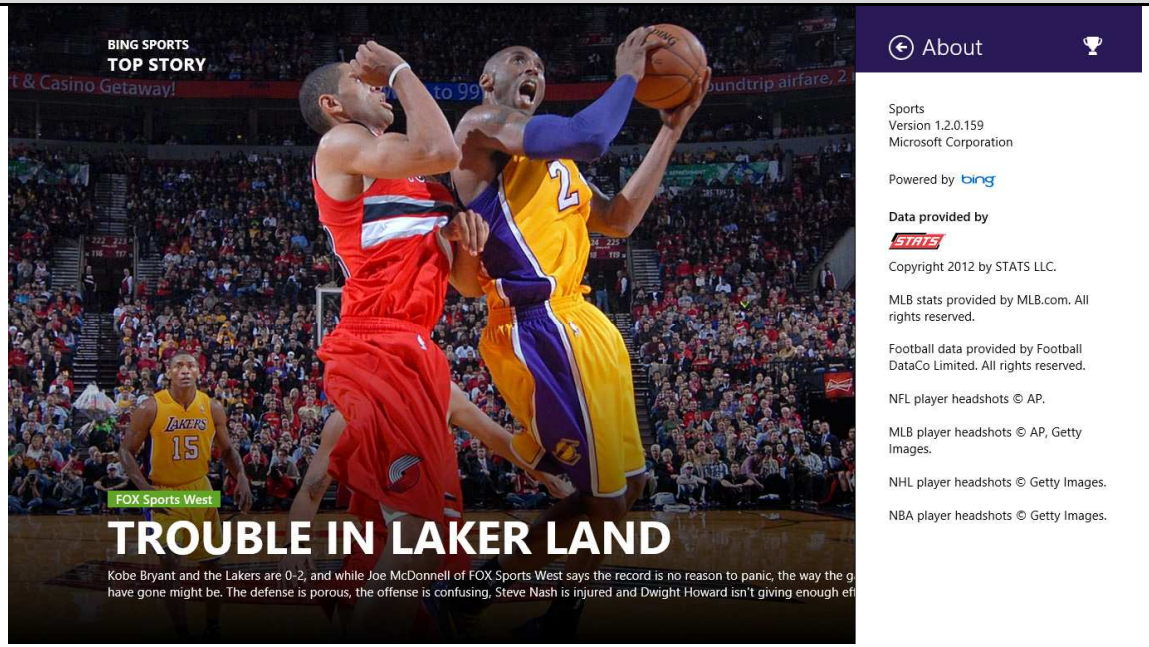
Limitation	Accused Instrumentality
	 (W8 Product Guide, p. 28).

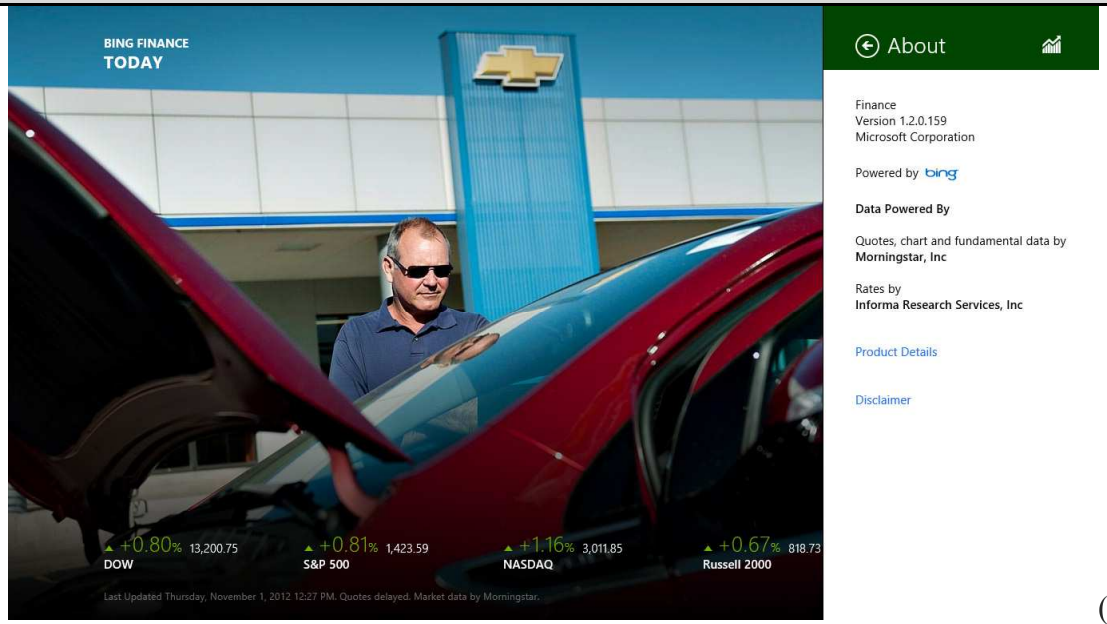
Limitation	Accused Instrumentality
	AT A GLANCE BEFORE YOU BUY SYSTEM REQUIREMENTS **Required Processor** 1GHz or faster processor **Required Memory** 2 GB RAM **Required Hard Disk Space** 20 GB available disk space (Windows 8 System Requirements, http://www.microsoftstore.com/store/msstore/html/pbpage.Windows_8_Pro (10/21/2012)). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1a] selecting a plurality of information sources;	The Accused Instrumentalities select a plurality of information sources. For example, Microsoft describes that "[e]ach tile on the start screen is connected to a person, app, website, playlist, and everything else that's important to you." (W8 and WRT Product Guide, p. 6). Windows 8 includes Mail, Photos, Music, Sports, Finance, News, Weather, Travel tiles on the start menu along with built-in applications including Mail, Music, Photos, Sports, Finance, News, Weather, and Travel applications:

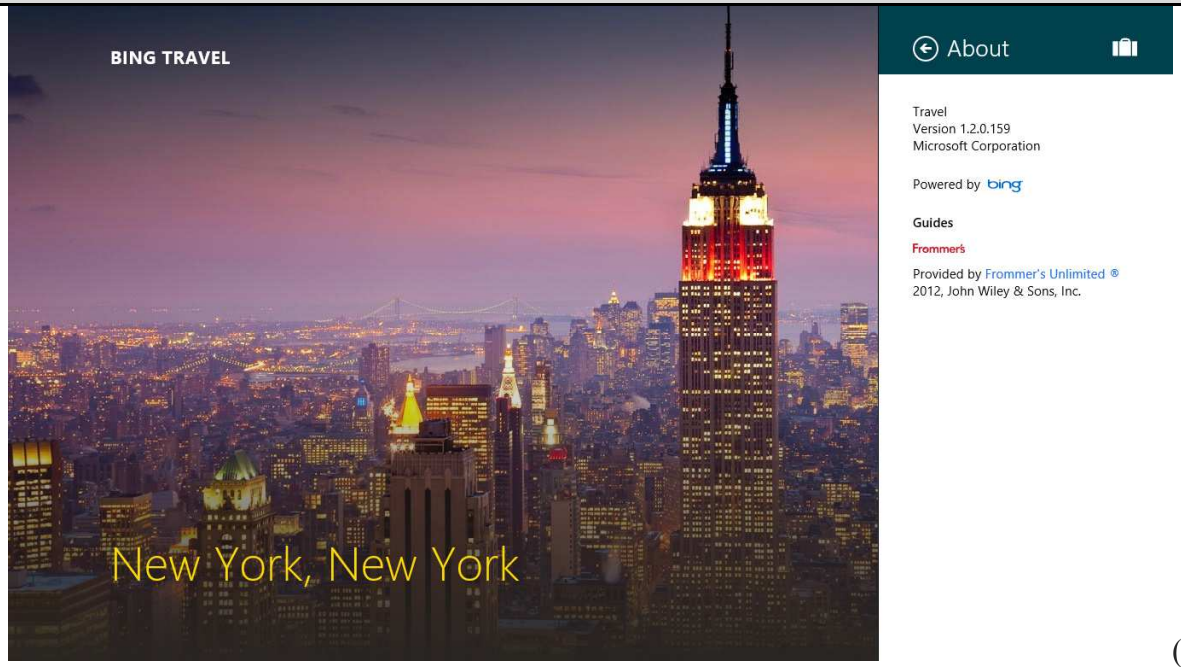
Limitation	Accused Instrumentality
	Built-in apps With Windows 8, your entire PC is cloud-connected. You'll have new Microsoft Mail, Calendar, SkyDrive, Photos, People, and Messaging apps that are connected to services like Facebook, LinkedIn, and Twitter just by adding them to your Microsoft account. Use built-in apps for the things you do the most (W8 Product Guide, p. 20).

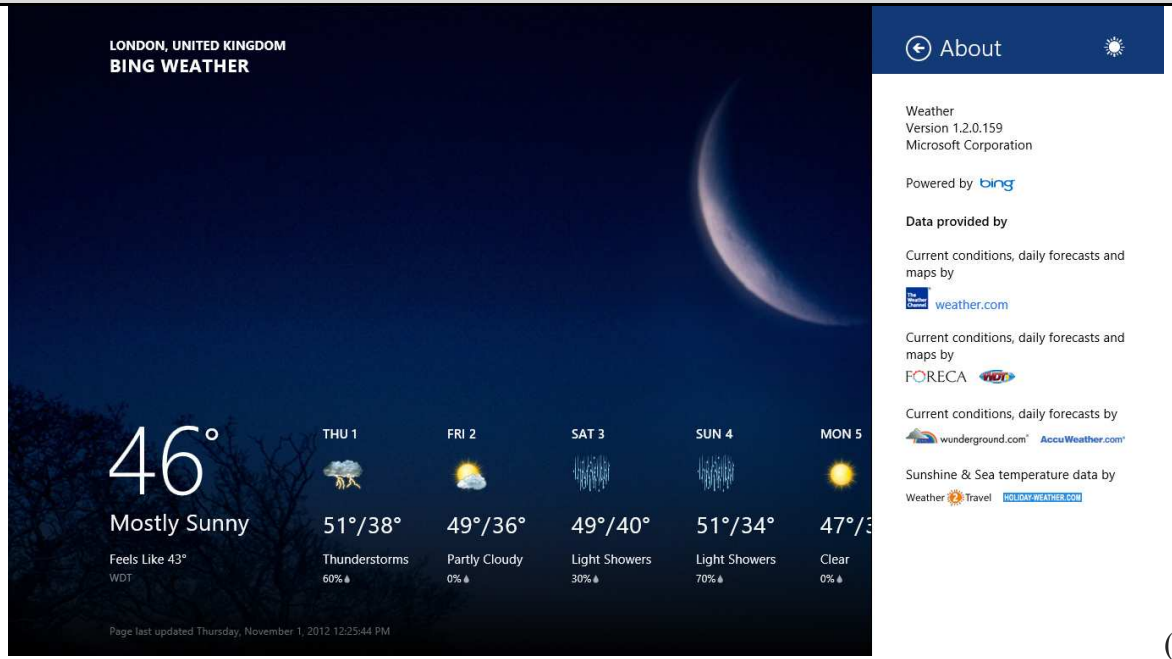
Limitation	Accused Instrumentality
	As an example, Microsoft sells the ASUSTeK X202E with the Windows 8 Operating System that includes at least the following applications pinned to the Start screen upon first power-up of the computer: Mail, People, Photos, Weather, News, Bing, Sports, Travel, Finance, and Music. (Exemplary screenshot of applications on ASUSTeK X202E).

Limitation	Accused Instrumentality
	Deleted Microsoft.Bing_1.2.0.137_x64__8wekyb3d8bbwe Microsoft.Bing_1.5.1.259_x64__8wekyb3d8bbwe Microsoft.BingFinance_1.2.0.135_x64__8wekyb3d8bbwe Microsoft.BingFinance_1.7.0.38_x64__8wekyb3d8bbwe Microsoft.BingMaps_1.2.0.136_x64__8wekyb3d8bbwe Microsoft.BingMaps_1.5.1.240_x64__8wekyb3d8bbwe Microsoft.BingNews_1.2.0.135_x64__8wekyb3d8bbwe Microsoft.BingNews_1.7.0.38_x64__8wekyb3d8bbwe Microsoft.BingSports_1.2.0.135_x64__8wekyb3d8bbwe Microsoft.BingSports_1.8.0.51_x64__8wekyb3d8bbwe Microsoft.BingTravel_1.2.0.145_x64__8wekyb3d8bbwe Microsoft.BingTravel_1.7.0.26_x64__8wekyb3d8bbwe Microsoft.BingWeather_1.2.0.135_x64__8wekyb3d8bbwe Microsoft.BingWeather_1.7.0.26_x64__8wekyb3d8bbwe Microsoft.Camera_6.2.8514.0_x64__8wekyb3d8bbwe Microsoft.Camera_6.2.9200.20523_x64__8wekyb3d8bbwe Microsoft.Media.PlayReadyClient_2.3.1662.0_x64__8wekyb3d8bbwe Microsoft.Media.PlayReadyClient_2.3.1662.0_x86__8wekyb3d8bbwe Microsoft.Media.PlayReadyClient_2.3.1678.0_x64__8wekyb3d8bbwe Microsoft.Media.PlayReadyClient_2.3.1678.0_x86__8wekyb3d8bbwe microsoft.microsoftskydrive_16.4.4204.712_x64__8wekyb3d8bbwe microsoft.microsoftskydrive_16.4.4388.928_x64__8wekyb3d8bbwe Microsoft.Reader_6.2.8516.0_x64__8wekyb3d8bbwe Microsoft.Reader_6.2.9200.20523_x64__8wekyb3d8bbwe Microsoft.SkypeApp_1.0.0.128_x86__kzf8qxf38zg5c Microsoft.SkypeApp_1.3.0.112_x86__kzf8qxf38zg5c Microsoft.VCLibs.110.00_11.0.50712.1_x64__8wekyb3d8bbwe Microsoft.VCLibs.110.00_11.0.50712.1_x86__8wekyb3d8bbwe Microsoft.VCLibs.110.00_11.0.50727.1_x64__8wekyb3d8bbwe Microsoft.VCLibs.110.00_11.0.50727.1_x86__8wekyb3d8bbwe Microsoft.VCLibs.110.00_11.0.51106.1_x64__8wekyb3d8bbwe Microsoft.VCLibs.110.00_11.0.51106.1_x86__8wekyb3d8bbwe Microsoft.VCLibs.110_11.0.50522.1_x64__8wekyb3d8bbwe Microsoft.VCLibs.110_11.0.50522.1_x86__8wekyb3d8bbwe microsoft.windowscommunicationsapps_16.4.4206.722_x64__8wekyb3d8bbwe microsoft.windowscommunicationsapps_16.4.4406.1205_x64__8wekyb3d8bbwe microsoft.windowsphotos_16.4.4204.712_x64__8wekyb3d8bbwe microsoft.windowsphotos_16.4.4388.928_x64__8wekyb3d8bbwe Microsoft.WinJS.1.0.RC_1.0.8377.0_neutral__8wekyb3d8bbwe Microsoft.WinJS.1.0_1.0.8514.0_neutral__8wekyb3d8bbwe Microsoft.WinJS.1.0_1.0.9200.20512_neutral__8wekyb3d8bbwe Microsoft.XboxLIVEGames_1.0.927.0_x64__8wekyb3d8bbwe Microsoft.XboxLIVEGames_1.1.134.0_x64__8wekyb3d8bbwe Microsoft.ZuneMusic_1.0.927.0_x64__8wekyb3d8bbwe Microsoft.ZuneMusic_1.1.144.0_x64__8wekyb3d8bbwe Microsoft.ZuneVideo_1.0.927.0_x64__8wekyb3d8bbwe Microsoft.ZuneVideo_1.1.134.0_x64__8wekyb3d8bbwe (Exemplary screenshot of Windows Applications included with Windows 8 on ASUSTeK X202E at C:\Windows\Program Files\WindowsApps). As an example, Windows 8 includes the following Sports, Finance, Travel, and Weather applications:

Limitation	Accused Instrumentality
	 (Exemplary screenshot of Sports Application "About" from Microsoft Surface with Windows RT).

Limitation	Accused Instrumentality
	 (Screenshot of Microsoft Surface with Windows RT Finance Application "About").

Limitation	Accused Instrumentality
	 (Screenshot of Microsoft Surface with Windows RT Travel application "About").

Limitation	Accused Instrumentality
	 (Screenshot of Microsoft Surface with Windows RT Weather application "About"). Mail allows you to see all of your accounts in one place, whether it's Outlook.com, Gmail, or your company's Exchange mail. You can pin email accounts to the Start screen so you can see your new mail on the live Mail tile without opening the Mail app. You can even pin individual folders to stay up to date. Want to read or reply? Click the tile and go straight to your inbox. You can even send a file from your PC and have it automatically uploaded to SkyDrive for recipients to see. (W8 Product Guide, p. 20 (emphasis added)).

Limitation	Accused Instrumentality
	Just like the Mail app, Calendar combines your information by pulling together your multiple calendars into a single day, week, or month view. You decide which of your calendars are shown, and you can adjust the colors to suit your preferences. Pinning the Calendar app to the Start screen means you see upcoming events on the tile. You can even choose to see upcoming appointments on the Windows lock screen so you won't have to unlock your PC to see what's going on. (W8 Product Guide, p. 20 (emphasis added)). Windows 8 makes it easy to build full-screen Windows Store apps that are fun to use and explore. Flexible and easy-to-use controls, built-in animations, and layout options make your apps feel fast and fluid. Live tiles on the Windows Start screen display information from your website or service and help ensure your app is useful—even when it's not running. When users acquire additional apps, their experience is enriched when those apps participate in app contracts. For example, when an app implements the Search contract, users can search its content from an unrelated app. Users can also choose to share content from one app with another. And apps can be optimized to the user's context, hardware, and preferences. (W8 Product Guide, p. 49 (emphasis added)).

Limitation	Accused Instrumentality
	This topic discusses the concepts and terminology surrounding app tiles, which are the Start screen tiles that represent and launch your app. An app tile is more than a big icon; it has the ability to display a continuously changing set of content that can be used to keep the user aware of events associated with that app (such as new social networking posts, new news headlines, or stock quotes) when the app is not running. A tile notification can originate either from a local API call or from the cloud. An interesting and useful tile can give a user incentive to launch your app, and this aspect of your app development should not be slighted. (Tile Overview).

Limitation	Accused Instrumentality
	 (Microsoft's Best Apps). "The content of a tile is defined in XML, based on a set of templates provided by Windows. To define a tile's contents, you can simply fill in one of the templates with your own text and images. You can also use the NotificationsExtensions object, or create the XML payload from scratch and provide it as a string. Depending on the template you select, your tile can contain text, images, or both." (Tile Overview). "A tile notification is defined as an XML document whose elements are defined in the tile schema. Notifications can be sent to the tile by the app when it is running, retrieved periodically from a specified Uniform Resource Identifier (URI), or sent by a cloud-based service associated with the app. In the latter case, notifications are

Limitation	Accused Instrumentality
	routed through the Windows Push Notification Services (WNS)." (Tile Overview (emphasis added)). **TileUpdateManager** Creates TileUpdater objects used to change and update Start menu tiles. This class also provides access to the XML content of the system-provided tile templates so that you can customize that content for use in updating your tiles. (Windows UI Notifications). TileUpdater.StartPeriodicUpdate "Begins a series of timed updates for the tile that the updater is bound to. Update content is retrieved from a specified Uniform Resource Identifier (URI). Updates begin at a specified time." (TileUpdater.StartPeriodicUpdate).

Limitation	Accused Instrumentality
	Syntax JavaScript `tileUpdater.startPeriodicUpdate(tileContent, startTime, requestedInterval);` Parameters *tileContent* Type: **Uri** [JavaScript] | **System.Uri** [.NET] | **Windows::Foundation::Uri** [C++] The URI from which the XML content of the tile update will be retrieved. *startTime* Type: **Date** [JavaScript] | **System.DateTimeOffset** [.NET] | **Windows::Foundation::DateTime** [C++] The time at which the URI should first be polled for new tile content. *requestedInterval* Type: **PeriodicUpdateRecurrence** The frequency with which the URI is polled for new tile content, following the initial update at *startTime*. (TileUpdater.StartPeriodicUpdate).

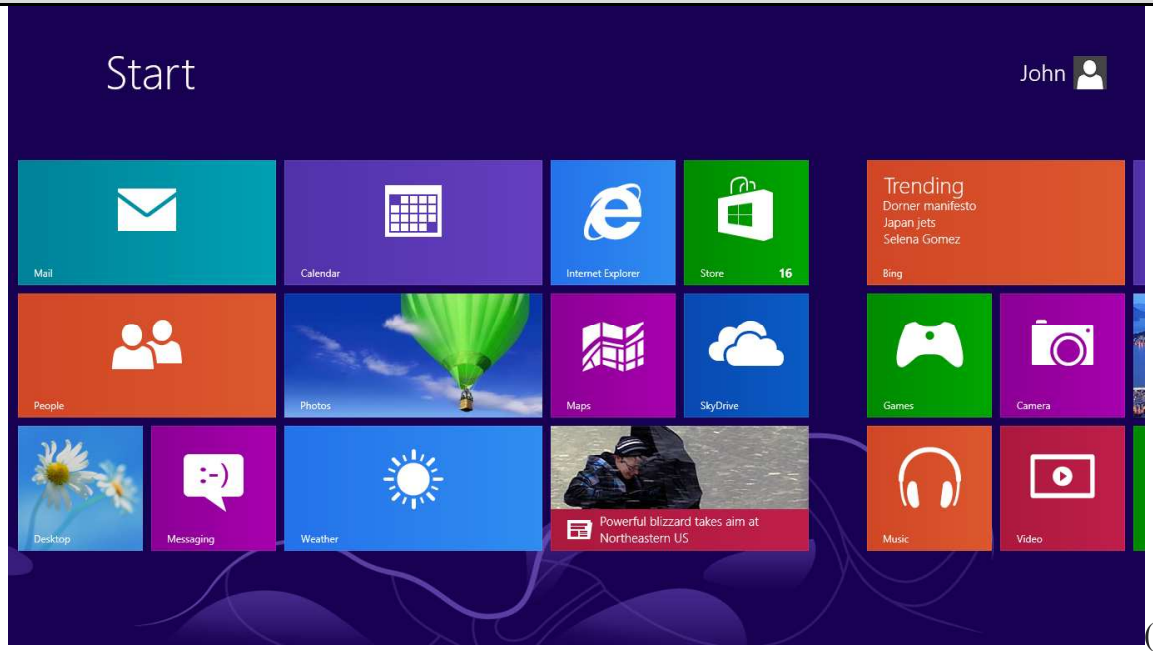
Limitation	Accused Instrumentality

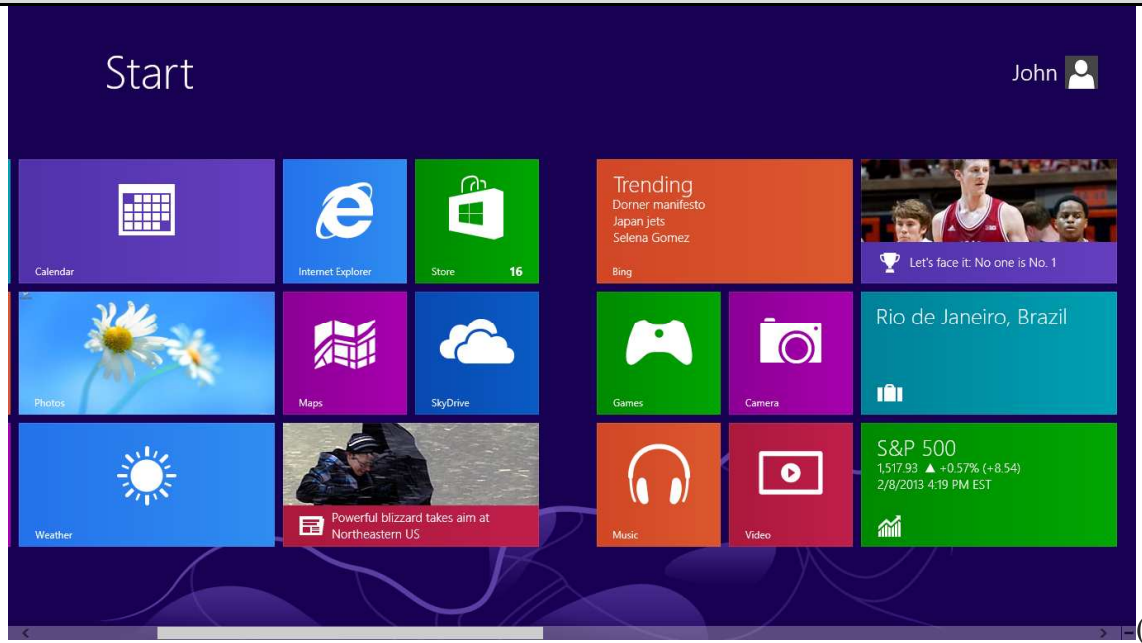
	To define the initial content for a non-default tile, use **TileUpdateManager.getTemplateContent** to get template content that can be modified.
	
	To define the content for an update to an existing non-default tile, you can use **TileNotification.content** to get the existing tile content that can then be modified.
	
	JavaScript
	`var tileTextAttributes = tileXml.getElementsByTagName("text");`
	`tileTextAttributes[0].appendChild(tileXml.createTextNode("Hello World! My very own tile n`
	
	JavaScript
	`var tileImageAttributes = tileXml.getElementsByTagName("image");`
	
	Images can be used from the app's package, the app's local storage, or from the web. Versions of this step are shown for each image source. In a tile notification that contains multiple images, the image elements can use any combination of those image source types. Images used in templates are required to be less than 200 KB in size and smaller than 1024 x 1024 pixels. For more information, see Tile and toast image sizes.

Limitation	Accused Instrumentality
	JavaScript `var tileImageAttributes = tileXml.getElementsByTagName("image");` Images can be used from the app's package, the app's local storage, or from the web. Versions of this step are shown for each image source. In a tile notification that contains multiple images, the image elements can use any combination of those image source types. Images used in templates are required to be less than 200 KB in size and smaller than 1024 x 1024 pixels. For more information, see Tile and toast image sizes. (Quickstart: Sending a Tile Update). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1b] partitioning a visual display of the device into an array of tiles, wherein each tile in said array of tiles is associated with an information source in said plurality of information sources;	The Accused Instrumentalities partition a visual display of the device into an array of tiles, wherein each tile in the array of tiles is associated with an information source in the plurality of information sources. For example, Windows 8 partitions the display of a tablet or personal computer into an array of tiles, including Mail, Photos, Music, Sports, Finance, News, Weather, and Travel tiles that are associated with an information source:

Limitation	Accused Instrumentality
	 The new Windows 8 Start screen (W8 Product Guide, p. 4). *See also [1a].*

Limitation	Accused Instrumentality
	The new Start screen The new Start screen has all of the information you care about in one place, such as your contacts, the weather, and the next appointment on your calendar. Windows 8 is truly yours: websites, playlists, photo albums, contacts, and your favorite apps are front and center. Because you decide how to organize and group things on the screen, viewing and interacting with content is faster than ever. The tiles on your Start screen are brimming with content, and they change and update in real time so you can see what's going on and stay on top of things. You can share and connect with other people in a couple of clicks, and get real-time updates about things like news, sports, and what your friends are up to. Check your schedule or get the latest weather forecast. Tiles are a quick way to see it all. Launch apps, switch between tasks, and check notifications without digging for information. It's all right here on the Start screen. (W8 Product Guide, p. 6).

Limitation	Accused Instrumentality
	 (Exemplary screenshot of ASUSTeK X202E with Windows 8 Start screen showing Mail, People, Photos, Weather, News and Music tiles).

Limitation	Accused Instrumentality
	 (Exemplary screenshot of ASUSTeK X202E with Windows 8 Start screen showing Bing, Sports, Travel, Music, and Finance tiles on the right).

Limitation	Accused Instrumentality
	(Exemplary screenshot of Microsoft Surface with Windows RT showing Photos, Finance, Weather, Sports, News, Bing, and Travel tiles). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1c] assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;	The Accused Instrumentalities assign a first refresh rate to a first tile of the array of tiles and a second refresh rate to a second tile of the array of tiles. For example, Microsoft states that a tile may be assigned a refresh rate based on the following notification schemes: periodic update (such as every half hour, every hour, every 6 hours, every 12 hours, or once a day), scheduled update (at a specific time), a local update, or a push notification update. For example, Microsoft describes the following:

Limitation	Accused Instrumentality
	• Follow the user experience guidelines for tiles and badges when you consider what to place on the tile and how frequently the tile should be updated. (Guidelines and Checklist for Periodic Notifications (emphasis added)). **How often should your tile update?** If you choose to use a live tile, consider how often the tile should be updated. • For personalized content, such as message counts or whose turn it is in a game, we recommend that you update the tile as the information becomes available, particularly if the user would notice that the tile content was lagging, incorrect, or missing. • For nonpersonalized content, such as weather updates, we recommend that the tile be updated no more than once every 30 minutes. This allows your tile to feel up-to-date without overwhelming your user. (Guidelines for Tiles). • Send frequent updates to the tile so the user feels that the app is connected and receiving fresh, live content. The cadence of tile notifications will depend on your specific app scenario. For example, a busy social media app might update every 15 minutes, a weather app every two hours, a news app a few times a day, a daily offers app once a day, and a magazine app monthly. If your app will update less than once a week, consider using a simple square tile with a badge to avoid the appearance of stale content. (Guidelines for Tiles). A live tile is one of the best ways to entice users back to your app. This post shows you how to update your app's live tile using polling and local APIs so that you can show off what is great about your app directly on the Windows 8 Start screen. Your tile can put front and center the best of what's going on inside of your app. The app tile is a core part of your app, and quite possibly its most frequently seen part – take advantage of the tile to get users back into your app!

Limitation	Accused Instrumentality
	(Creating a great tile experience (part 1)). **Choosing delivery method for a notification** Now that I know what I want the tiles to look like (see part 1 for a refresher) I need to figure out when to update them. There are 4 ways that an app can update its tile (see Choosing a notification delivery method in the Dev Center). Apps can use local notifications to update their tile, which is useful if info changes while the app is running. Apps can schedule tile and toast updates to happen at precise times. Also, apps can use push or polling tile notifications to update their tiles from the cloud while they are not running. Polling is great for low-frequency broadcast content. Push is great for sending toast notifications, which need to arrive immediately, or tile updates that are targeted to individual users. In this post, I focus on polling updates and local updates. (Creating a great tile experience (part 2)). **Delivery method** / **Use with** / **Description** / **Examples** Local / Tile, Badge, Toast / A set of API calls that send notifications while your app is running, directly updating the tile or badge, or sending a toast notification. / • A music app updates its tile to show "Now Playing". • A game app updates the tile with the user's high score while the user is in the game. • A badge glyph is cleared when the app is activated, letting the user know that they've seen all the new information in the app. (Choosing a Notification Delivery Method).

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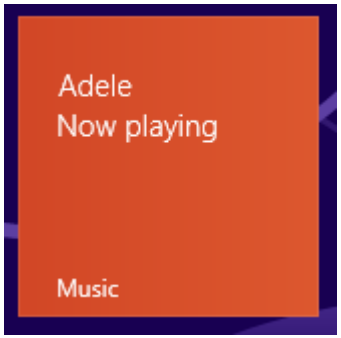
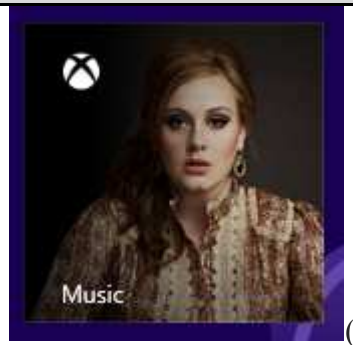
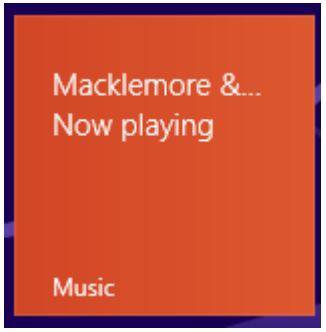
Periodic	Tile, Badge	Notifications that update tiles and badges regularly at a fixed time interval by polling a cloud service for new content.	• A weather app updates its tile, which shows the forecast, at 30-minute intervals. • A "daily deals" site updates its deal-of-the-day every morning.
Push	Tile, Badge, Toast, Raw	Notifications sent from a cloud server, even if your app isn't running.	• A shopping app sends a toast notification to let a user know about a sale on an item that they're watching. • A news app updates its tile with breaking news as it happens. • A sports app keeps its tile up-to-date during an ongoing game. • A communication app provides alerts about incoming messages or phone calls.

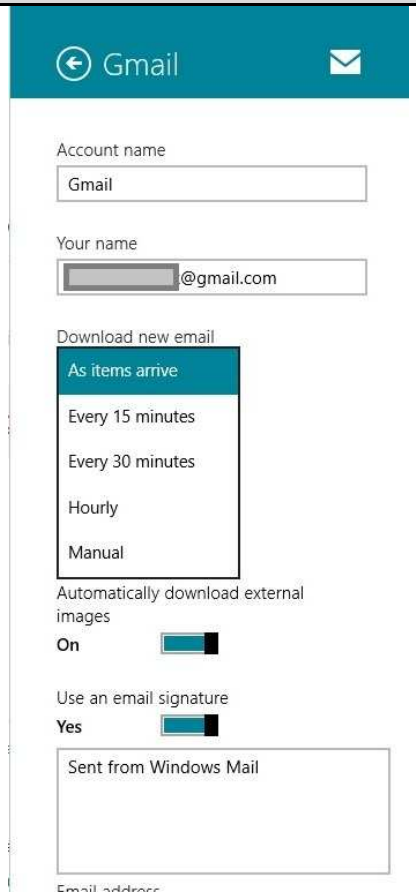
(Choosing a Notification Delivery Method).

Local notifications
Updating the app tile or badge or raising a toast notification while the app is running is the simplest of the notification delivery mechanisms; it requires only local API calls. Every app could have information to show on the tile, which would be useful or interesting to the user, even if that content changes only when the user launches and interacts with the app. Local notifications are also a great way to keep the app tile current, even if you also use one of the other notification mechanisms. For instance, a photo app tile could show photos from a recently added album.

(Choosing a Notification Delivery Method).

As an example, on information and belief the Music tile is updated with text and image using a local notification when the Music application changes the artist of the song playing:

Limitation	Accused Instrumentality
	  (Exemplary screenshots of Music tile when song by artist Adele is playing.)  (Exemplary screenshot of Music tile when song by artist Macklemore & Ryan Lake is playing). As an additional example, on information and belief the Mail application is updated with text using a local notification when new mail is received. In addition, a user can specify when the Mail application checks for new mail, which, on information and belief, corresponds to the rate at which the Mail tile is updated with information about new mail:

Limitation	Accused Instrumentality
	 (Screenshot of Sony Vaio with Windows 8 Mail application settings showing option to download email as items arrive, every 15 minutes, every 30 minutes, hourly, and manually).

Limitation	Accused Instrumentality
	Scheduled notifications Scheduled notifications are identical to local notifications except that they can specify the precise time when a tile should be updated or a toast notification should be shown. Scheduled notifications are ideal for situations where the content to be updated is known in advance, such as a meeting invitation. If you don't have advance knowledge of the notification content, you should use a push or periodic notification. By default, scheduled notifications expire three days from the time that they are delivered. If needed, you can override this default with an explicit expiration time. (Choosing a Notification Delivery Method). **Periodic notifications** Periodic notifications give you live tile updates with a minimal cloud service and client investment. They are also an excellent method of distributing the same content to a wide audience. Your client code specifies the URL of a cloud location that Windows will poll for tile or badge updates, and how often the location should be polled. At each polling interval, Windows contacts the URL to download the specified XML content and display it on the tile. (Choosing a Notification Delivery Method). **Push notifications** Push notifications are ideal for those situations where your app has real-time data or data that is personalized for your user, such as social network updates, incoming messages, or game invitations. Push notifications are also useful in situations where the data is time-sensitive in a way that would not suit periodic notifications, such as sports scores while the game is happening. Push notifications are also best for content that is generated at unpredictable times, such as breaking news or instant messages. (Choosing a Notification Delivery Method; *see also* Push notification overview (Windows Store apps), available at http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh913756.aspx).

Limitation	Accused Instrumentality
	PeriodicUpdateRecurrence enumeration This topic has not yet been rated Specifies the time period for subsequent polls of the tile or badge data source for new content. Used by **BadgeUpdater.StartPeriodicUpdate**, **TileUpdater.StartPeriodicUpdate**, and **TileUpdater.StartPeriodicUpdateBatch**. Syntax JavaScript `var value = Windows.UI.Notifications.PeriodicUpdateRecurrence.halfHour;`

Limitation	Accused Instrumentality
	The **PeriodicUpdateRecurrence** enumeration has these members. **Member** / **Value** / **Description** **HalfHour | halfHour** / 0 / Poll every half an hour. **Hour | hour** / 1 / Poll every hour. **SixHours | sixHours** / 2 / Poll every 6 hours. **TwelveHours | twelveHours** / 3 / Poll every 12 hours. **Daily | daily** / 4 / Poll once a day. (Periodic Update Recurrence). TileUpdater.StartPeriodicUpdate "Begins a series of timed updates for the tile that the updater is bound to. Update content is retrieved from a specified Uniform Resource Identifier (URI). Updates begin at a specified time." (TileUpdater.StartPeriodicUpdate).

Limitation	Accused Instrumentality
	Syntax JavaScript `tileUpdater.startPeriodicUpdate(tileContent, startTime, requestedInterval);` Parameters *tileContent* Type: **Uri** [JavaScript] | **System.Uri** [.NET] | **Windows::Foundation::Uri** [C++] The URI from which the XML content of the tile update will be retrieved. *startTime* Type: **Date** [JavaScript] | **System.DateTimeOffset** [.NET] | **Windows::Foundation::DateTime** [C++] The time at which the URI should first be polled for new tile content. *requestedInterval* Type: **PeriodicUpdateRecurrence** The frequency with which the URI is polled for new tile content, following the initial update at *startTime*. (TileUpdater.StartPeriodicUpdate).

Limitation	Accused Instrumentality

	3. Begin the periodic updates (single URL)
	This example shows how to start polling a single URL to provide new content for the tile once an hour. This code uses a previously defined variable called `polledUrl`, which is a string that specifies the URL to be polled.
	
	JavaScript
	
	`var notifications = Windows.UI.Notifications;`
	`var recurrence = notifications.PeriodicUpdateRecurrence.hour;`
	`var url = new Windows.Foundation.Uri(polledUrl);`
	
	`notifications.TileUpdateManager.createTileUpdaterForApplication().startPeriodicUpdate(url,`
	
	(Quickstart: Setting up periodic notifications (emphasis added)).
	
	Step 4: Specify the time that the tile notification should be delivered
	This example specifies that the notification should appear in 3 hours. This example uses the **DateTime** object.

Limitation	Accused Instrumentality

	`Int16 dueTimeInHours = 3;`
	`DateTime dueTime = DateTime.Now.AddHours(dueTimeInHours);`
	
	Step 5: Create the scheduled tile notification object
	Send the tile notification content and the scheduled delivery time to the constructor.
	
	C#
	`ScheduledTileNotification scheduledTile = new ScheduledTileNotification(tileXml, dueTime);`
	
	Step 7: Add your tile notification to the schedule.
	Create the **TileUpdater** object, which in turn is used to add your notification to the schedule.
	
	C#
	`TileUpdateManager.createTileUpdaterForApplication().AddToSchedule(scheduledTile);`
	
	(How to schedule a tile notification).
	
	For example, on information and belief, the Accused Instrumentalities assign a periodic refresh rate of a half hour to the Finance application:
	
	See, e.g., AppConfiguration.xml for Finance (emphasis added):

Limitation	Accused Instrumentality
	AppConfiguration.xml 1 <?xml version="1.0" encoding="utf-8" ?> 2 <Configuration xmlns="http://schemas.microsoft.com/appex/2012/configuration.xsd"> 3 <Manifest AppID="FinanceApp" AppNumber="1" SplashImage="url('/shared/images/splash.png')" SplashBackground="#008A00"> 4 <DataSources> 1189 <Dictionary Name="PullNotification"> 1190 <String Name="AppTileUri"> 1191 <Value><![CDATA[http://appexbingfinance.trafficmanager.net/Market.svc/AppTile?symbol={symbol}&type={type}&mkt={market}&mode={mode}]]></Value> 1192 </String> 1193 <String Name="HeroLiveTileUri"> 1194 <Value><![CDATA[http://{market}.appex-rf.msn.com/cgtile/v1/{market}/Finance/Today.xml]]></Value> 1195 </String> 1196 <String Name="UpdateRecurrence"> 1197 <!-- Recurrence valid values: halfHour, hour, sixHours, tweleveHours, daily --> 1198 <Value>halfHour</Value> 1199 </String> 1200 </Dictionary> Also on information and belief, the Accused Instrumentalities assign a periodic refresh rate of one hour to the Weather application. *See, e.g.,* AppConfiguration.xml for Weather application (emphasis added):

Limitation	Accused Instrumentality
	AppConfiguration.xml 1 <?xml version="1.0" encoding="utf-8" ?> 2 <Configuration xmlns="http://schemas.microsoft.com/appex/2012/configuration.xsd"> 3 <Manifest AppID="WeatherApp" AppNumber="3" SplashImage="url('/images/splash.png')" SplashBackground="#2672EC"> 391 <String Name="UpdateRecurrenceForTile"> 392 <!-- Recurrence valid values: halfHour, hour, sixHours, twelveHours, daily --> 393 <Value>hour</Value> *See also* AppConfiguration.xml for Sports at lines 1987-1989 (halfHour), AppConfiguration.xml for News at lines 449-450 (hour), tileManager.js for Music. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1d] updating information from a first information source in said plurality of information sources presented to said first tile in accordance with said first refresh rate; and	The Accused Instrumentalities update information from a first information source of the plurality of information sources that is presented to the first tile in accordance with the first refresh rate. For example, the Accused Instrumentalities update information for the Photos, Mail, Messaging, Music, Finance, Weather, Sports, News, Bing, and Travel tiles according to their assigned refresh rates. As one specific example, the Accused Instrumentalities update image and text information presented on the Finance tile in accordance with the half hour periodic update rate. *See, e.g.,* AppConfiguration.xml for Finance. *See, e.g.,* AppConfiguration.xml for Finance (emphasis added):

Limitation	Accused Instrumentality
	AppConfiguration.xml 1 <?xml version="1.0" encoding="utf-8" ?> 2 <Configuration xmlns="http://schemas.microsoft.com/appex/2012/configuration.xsd"> 3 <Manifest AppID="FinanceApp" AppNumber="1" SplashImage="url('/shared/images/splash.png')" SplashBackground="#008A00"> 4 <DataSources> 1189 <Dictionary Name="PullNotification"> 1190 <String Name="AppTileUri"> 1191 <Value><![CDATA[http://appexbingfinance.trafficmanager.net/Market.svc/AppTile?symbol={symbol}&type={type}&mkt={market}&mode={mode}]]></Value> 1192 </String> 1193 <String Name="HeroLiveTileUri"> 1194 <Value><![CDATA[http://{market}.appex-rf.msn.com/cgtile/v1/{market}/Finance/Today.xml]]></Value> 1195 </String> 1196 <String Name="UpdateRecurrence"> 1197 <!-- Recurrence valid values: halfHour, hour, sixHours, tweleveHours, daily --> 1198 <Value>halfHour</Value> 1199 </String> 1200 </Dictionary>

Limitation	Accused Instrumentality
	All about you The Start screen is all about you. Vibrant and beautiful, the Start screen is the first thing you'll see. Each tile on the Start screen is connected to a person, app, website, playlist, and everything else that's important to you. This isn't the usual wall of static icons. Instead, you see: status updates, weather forecasts, Tweets, and more—you see live updates before you ever open a single app. Pin as many tiles to Start as you want, and then group, arrange, and name them so it's just the way you want it. (W8 and WRT Product Guide, p. 6 (emphasis added)). **Tiles are connected and alive** Through tiles on the Start screen, apps are alive with activity and can deliver vibrant content, even when they're not running. Using live tiles, your app can provide useful, at-a-glance data to the user, while minimizing battery usage. Windows Push Notification Services (WNS) enables your app to receive messages and send them to your app's live tile or provide a notification to the user. (W8 Product Guide, p. 54). Also on information and belief, the Accused Instrumentalities update text information presented on the Weather application tile in accordance with the one hour periodic update rate. *See, e.g.,* AppConfiguration.xml for Weather application (emphasis added):

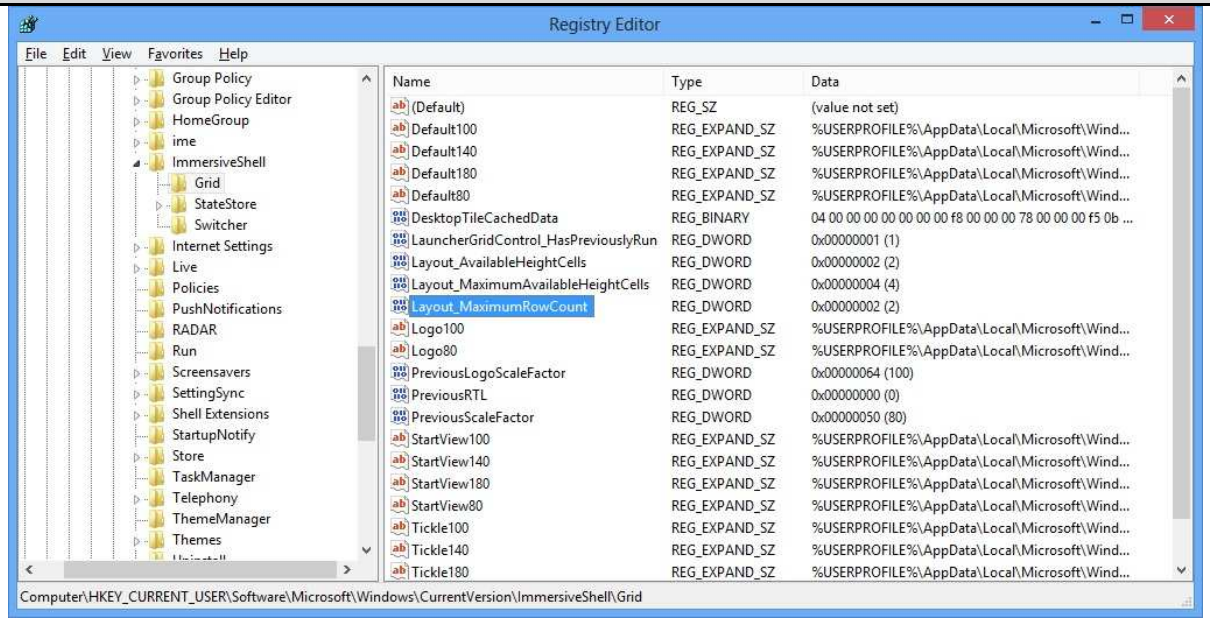
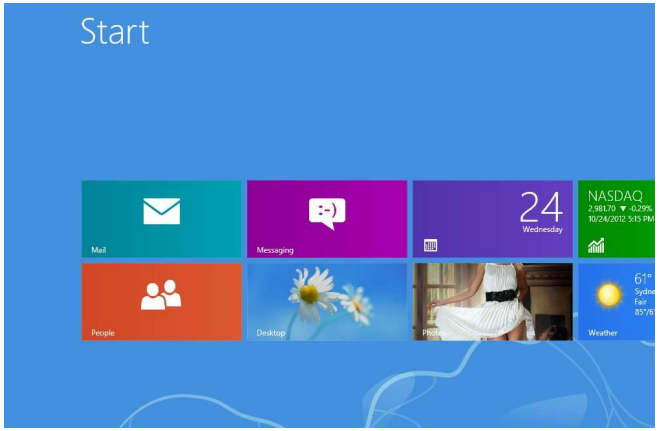
Limitation	Accused Instrumentality
	AppConfiguration.xml 1 <?xml version="1.0" encoding="utf-8" ?> 2 <Configuration xmlns="http://schemas.microsoft.com/appex/2012/configuration.xsd"> 3 <Manifest AppID="WeatherApp" AppNumber="3" SplashImage="url('/images/splash.png')" SplashBackground="#2672EC"> 391 <String Name="UpdateRecurrenceForTile"> 392 <!-- Recurrence valid values: halfHour, hour, sixHours, twelveHours, daily --> 393 <Value>hour</Value> *See also* AppConfiguration.xml for Sports at lines 1987-1989 (halfHour), AppConfiguration.xml for News at lines 449-450 (hour), tileManager.js for Music. (Exemplary screenshot of

Limitation	Accused Instrumentality
	Windows RT on Microsoft Surface at time A with Live Travel, Weather, and Photo tiles.) (Exemplary screenshot of Windows RT on Microsoft Surface at time B with Travel tile, Weather tile, and Photo tile updated.) In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1e] simultaneously updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said	The Accused Instrumentalities simultaneously update information from a second information source in the plurality of information sources presented to the second tile in accordance with the second refresh rate. For example, the Accused Instrumentalities update information for the Photos, Mail, Messaging, Music, Finance, Weather, Sports, News, Bing, and Travel tiles according to their assigned refresh rates. On information and belief, the Accused Instrumentalities update information from the information source for the Finance application in accordance with a half hour periodic update. *See, e.g.,* AppConfiguration.xml for Finance (emphasis added):

Limitation	Accused Instrumentality
second refresh rate.	AppConfiguration.xml 1 <?xml version="1.0" encoding="utf-8" ?> 2 <Configuration xmlns="http://schemas.microsoft.com/appex/2012/configuration.xsd"> 3 <Manifest AppID="FinanceApp" AppNumber="1" SplashImage="url('/shared/images/splash.png')" SplashBackground="#008A00"> 4 <DataSources> 1189 <Dictionary Name="PullNotification"> 1190 <String Name="AppTileUri"><Value><![CDATA[http://appexbingfinance.trafficmanager.net/Market.svc/AppTile?symbol={symbol}&type={type}&mkt={market}&mode={mode}]]></Value> 1191 <Value><![CDATA[http://appexbingfinance.trafficmanager.net/Market.svc/AppTile?symbol={symbol}&type={type}&mkt={market}&mode={mode}]]></Value> 1192 </String> 1193 <String Name="HeroLiveTileUri"><Value><![CDATA[http://{market}.appex-rf.msn.com/cgtile/v1/{market}/Finance/Today.xml]]></Value> 1194 <Value><![CDATA[http://{market}.appex-rf.msn.com/cgtile/v1/{market}/Finance/Today.xml]]></Value> 1195 </String> 1196 <String Name="UpdateRecurrence"><!-- Recurrence valid values: halfHour, hour, sixHours, tweleveHours, daily --> 1197 <Value><!-- Recurrence valid values: halfHour, hour, sixHours, tweleveHours, daily --> 1198 <Value>halfHour</Value> 1199 <Value>halfHour</Value> 1200 </String> </Dictionary>

Limitation	Accused Instrumentality
	(Exemplary screenshot of Windows RT on Microsoft Surface showing Live Travel, Weather, and Photo tiles). (Exemplary screenshot of Windows RT on Microsoft Surface showing updated Travel tile, Weather tile, and Photo tile).

Limitation	Accused Instrumentality
	In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
2. The method of claim 1 wherein said partitioning includes partitioning said array of tiles in accordance with a user-defined array size.	The Accused Instrumentalities partition the array of tiles in accordance with a user-defined array size. *See claim 1.* For example, the user may specify the number of rows of tiles and may add or delete tiles from the array. Microsoft also provides a script to reduce the number of rows to two: https://channel9.msdn.com/Blogs/OneScript/How-to-Change-the-Number-of-Title-Rows-on-the-Start-Screen-in-Windows-8 By default, Windows 8 automatically sets the number of rows of tiles to fit your screen, depending on your monitor size and resolution. However, you can tell Windows 8 to display a certain number of rows of tiles at all times, despite the screen resolution. To do this, we will make a change to the registry. If you are not already on the Desktop, click the Desktop tile on the Start screen. (Change the Default Number of Rows of Tiles).

Limitation	Accused Instrumentality
	 (Screenshot of Microsoft Surface with Windows RT with highlighted registry entry to change the number of rows).  (Screenshot of Microsoft Surface with Windows RT

Limitation	Accused Instrumentality
	showing array size defined by user to have two rows). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
3. The method of claim 1 wherein said partitioning includes partitioning said array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape.	The Accused Instrumentalities partitions the array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape. *See claim 1.* For example, the tiles on the Start screen of the Accused Instrumentalities can be configured to all have a uniform square shape as shown below: (Screenshot of Windows RT on Microsoft Surface with each tile having uniform square shape). Microsoft describes that the user can configure the shape and size of the tiles on the Start screen:

Limitation	Accused Instrumentality
	Customize the Start screen Just like you had a Start menu in Windows 7, you have a Start screen in Windows 8 and Windows RT. It has all of the info you care about in one place. You can just glance at the tiles to get the latest headlines, real-time updates, and info, or you can open apps, websites, contacts, and folders. So arrange Start any way you want it, and put your favorite apps, people, and websites front and center. Here are a few options you can try. **Rearrange and resize tiles** To move a tile, drag it up or down, and then drag it anywhere you want it. (You don't need to press and hold.) You can arrange the tiles any way you want. Put similar tiles together, group all your favorites, or create a "Work" group for the apps for your job. Here's how to name a group of tiles: 1. Touch the Start screen with two or more fingers, and then pinch them toward each other to zoom out. (If you're using a mouse, click the Zoom button ▬.) 2. Select the group of tiles you want to name, and then tap or click **Name Group**. If a tile isn't fitting in the spot you want, you can make it larger or smaller. Just select the tile on the Start screen to open the app commands, and then tap or click **Larger** or **Smaller**. (Some tiles can't be resized.) ("Customize the Start Screen," available at http://windows.microsoft.com/en-US/windows-8/start-screen#1TC=t1.) In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from

Limitation	Accused Instrumentality
	the claimed functionality and performs the same function in the same way to achieve the same result.
6. The method of claim 1 wherein said first refresh rate is different from said second refresh rate.	The Accused Instrumentalities includes at least one tile with an assigned first refresh rate that is different from a second refresh rate assigned to a second tile. *See, e.g., element [1c].* For example, Microsoft states that a tile may be assigned a refresh rate based on the following notification schemes: periodic update (such as every half hour, every hour, every 6 hours, every 12 hours, or once a day), scheduled update (at a specific time), a local update, or a push notification update. (*See, e.g.,* Choosing a Notification Delivery Method). As an example, on information and belief the Finance tile is assigned a periodic refresh rate of a half hour and the Weather tile is assigned a periodic refresh rate of one hour. As a further example, the Finance tile is assigned a periodic refresh rate, and the Music tile is assigned a local notification update refresh rate. *See, e.g., element [1c].* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
8. The method of claim 1 wherein said array comprises more than one row and more than one column.	The array of the Accused Instrumentalities comprise more than one row and more than one column. *See claim 1.* For example, the array of tiles in the Accused Instrumentalities may comprise three rows and three columns.

Limitation	Accused Instrumentality
	Built-in apps With Windows 8, your entire PC is cloud-connected. You'll have new Microsoft Mail, Calendar, SkyDrive, Photos, People, and Messaging apps that are connected to services like Facebook, LinkedIn, and Twitter just by adding them to your Microsoft account. Use built-in apps for the things you do the most (W8 Product Guide, p. 20). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from

Limitation	Accused Instrumentality
	the claimed functionality and performs the same function in the same way to achieve the same result.
11. The method of claim 1 wherein said first refresh rate is assigned automatically.	In the Accused Instrumentalities a first refresh rate is assigned automatically. *See claim 1.* For example, on information and belief, the refresh rate for at least the Weather and Finance tiles is set at runtime as specified by the corresponding AppConfiguration.xml file. *See [1c].* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
12. The method of claim 1 wherein said array comprises a grid wherein each of said tiles occupies a fixed position on said grid.	In the Accused Instrumentalities the array comprises a grid wherein each of the tiles occupies a fixed position on the grid. *See claim 1.* For example, as shown below, the tiles on the Windows 8 Start screen are arranged into an array comprising a grid. The tiles on the grid occupy a fixed position on the grid. **Customize the Start screen** Just like you had a Start menu in Windows 7, you have a Start screen in Windows 8 and Windows RT. It has all of the info you care about in one place. You can just glance at the tiles to get the latest headlines, real-time updates, and info, or you can open apps, websites, contacts, and folders. So arrange Start any way you want it, and put your favorite apps, people, and websites front and center. Here are a few options you can try.

Limitation	Accused Instrumentality
	Rearrange and resize tiles To move a tile, drag it up or down, and then drag it anywhere you want it. (You don't need to press and hold.) You can arrange the tiles any way you want. Put similar tiles together, group all your favorites, or create a "Work" group for the apps for your job. Here's how to name a group of tiles: 1. Touch the Start screen with two or more fingers, and then pinch them toward each other to zoom out. (If you're using a mouse, click the Zoom button ━.) 2. Select the group of tiles you want to name, and then tap or click **Name Group**. If a tile isn't fitting in the spot you want, you can make it larger or smaller. Just select the tile on the Start screen to open the app commands, and then tap or click **Larger** or **Smaller**. (Some tiles can't be resized.) ("Customize the Start Screen," available at http://windows.microsoft.com/en-US/windows-8/start-screen#1TC=t1.)

Limitation	Accused Instrumentality
	 The new Windows 8 Start screen (W8 Product Guide, p. 4). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
19. The method of claim 1 wherein said device is a computer.	The Accused Instrumentalities include computers. For example, the ASUSTeK X202E is a computer, and the Microsoft Surface is a computer. *See, e.g., claim 1, and specifically [1 pre]*.

Limitation	Accused Instrumentality
21. The method of claim 1 wherein said plurality of information sources comprises at least two information sources selected from the group consisting of: analog signal; video signal; audio signal; text; an e-mail program; a world-wide-web page; streaming video; streaming audio; and graphics.	In the Accused Instrumentalities, the plurality of information sources comprise at least two information sources selected from the group consisting of: analog signal; video signal; audio signal; text; an e-mail program; a world-wide-web page; streaming video; streaming audio; and graphics. For example, the Messaging tile is associated with a text information source, the information source associated with the Photos tile are graphics, and the Mail tile is associated with an e-mail program. Built-in apps With Windows 8, your entire PC is cloud-connected. You'll have new Microsoft Mail, Calendar, SkyDrive, Photos, People, and Messaging apps that are connected to services like Facebook, LinkedIn, and Twitter just by adding them to your Microsoft account. Use built-in apps for the things you do the most

Limitation	Accused Instrumentality
	(W8 Product Guide, p. 20). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22 pre] An electronic readable memory to direct an electronic device to function in a specified manner, comprising:	Microsoft makes, uses, sells, and/or offers to sell Accused Instrumentalities comprising the following limitations. To the extent this preamble is found to be a limitation, the Accused Instrumentalities include an electronic readable memory to direct an electronic device to function in the claimed specified manner. For example, Microsoft makes, uses, sells, and/or offers to sell electronic devices, such as a tablet or personal computer, with the Windows 8 operating system that function in the claimed manner. Such devices include an electronic readable memory for storing Windows 8 to direct the electronic device to function in the specified manner. As an example, Microsoft sells the ASUSTeK X202E laptop with the Windows 8 Operating System stored in memory. (Buy ASUS VivoBook X202E). *See also [1 pre]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22a] a first set of instructions to control simultaneous communication with a plurality of information sources;	The Accused Instrumentalities include a first set of instructions to control simultaneous communication with a plurality of information sources. *See, e.g., [1a]*. For example, Microsoft describes that the TileUpdater.StartPeriodicUpdate method "Begins a series of timed updates for the tile that the updater is bound to. Update content is retrieved from a specified Uniform Resource Identifier (URI)." On information and belief more than one Application that Microsoft provides with Windows 8 calls this function, therefore the Accused Instrumentalities control simultaneous communications to more than one information source. As an example, the News application includes the following instruction for scheduling an update to the News tile of the js\NewsUtilities.js file:

Limitation	Accused Instrumentality
	1248 // Start a new update with the new market 1249 tileUpdater.startPeriodicUpdate(uri, PlatformJS.Services.appConfig.getInt32("LiveTileUpdateFrequency")); The Sports Application includes the following instruction for scheduling an update to the Sports tile of the file js\SportsOobeBackgroundTask.js: 108 if (urisToPoll && urisToPoll.length > 0) { 109 notifications.TileUpdateManager.createTileUpdaterForApplication().startPeriodicUpdateBatch(urisToPoll, recurrence); In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22b] a second set of instructions to arrange a display into an array of tiles;	The Accused Instrumentalities include a second set of instructions to arrange a display into an array of tiles. *See [1b]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22c] a third set of instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of	The Accused Instrumentalities include a third set of instructions to associate a first information source of the plurality of information sources to a first tile of the array of tiles and a second information source of the plurality of information sources to a second tile of the array of tiles. *See, e.g., [1b]*. For example, Microsoft describes that, for periodic updates, "[u]pdate content is retrieved from a specified Uniform Resource Identifier (URI)." In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.

Limitation	Accused Instrumentality
said plurality of information sources to a second tile of said array of tiles;	
[22d] a fourth set of instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and	The Accused Instrumentalities include a fourth set of instructions to retrieve information from the first information source in accordance with a first retrieval rate and retrieve information from the second information source in accordance with a second retrieval rate. *See, e.g., [1d] and [1e]*. As an example, for periodic updates, Microsoft states the following: *requestedInterval* Type: **PeriodicUpdateRecurrence** The frequency with which the URI is polled for new tile content, following the initial update at *startTime*. (TileUpdater.StartPeriodicUpdate.) In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22e] a fifth set of instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said	The Accused Instrumentalities include a fifth set of instructions to present information to a first tile in accordance with the first retrieval rate and present information to a second tile in accordance with a second retrieval rate. *See, e.g., [1d] and [1e]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.

Limitation	Accused Instrumentality
second retrieval rate.	
27. The electronic readable memory of claim 22 wherein said second set of instructions arrange said array of tiles on a display of a computer.	In the Accused Instrumentalities, the second set of instructions arrange the array of tiles on a display of a computer. *See claim 1, claim 19, claim 22.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
30. The electronic readable memory of claim 22 wherein said second set of instructions produce an array of non-overlapping tiles wherein each tile has a uniform size and shape.	In the Accused Instrumentalities, the second set of instructions produce an array of non-overlapping tiles wherein each tile has a uniform size and shape. *See claim 22, claim 3.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
34. The electronic readable memory of claim 22 further comprising a set of instructions to deliver selected textual content from said first information source to said first tile.	The Accused Instrumentalities include a set of instructions to deliver selected textual content from the first information source to a first tile. For example, on information and belief, the Accused Instrumentalities include a set of instructions to deliver textual content from a Mail application to the Mail tile. *See claim 1, claim 22.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.

Limitation	Accused Instrumentality
37. The electronic readable memory of claim 22 further comprising a set of instructions to deliver information from a network document to a selected tile of said array of tiles.	The Accused Instrumentalities include a set of instructions to deliver information from a network document to a selected tile of the array of tiles. For example, the Accused Instrumentalities include a set of instructions to deliver information from the following URI to the News tile: http://{mkt}.appex-rf.msn.com/cgtile/v1/{mkt}/News/Today.xml, where "mkt" is a market specified by the operating system. (Lines 478-480 of the News AppConfiguration.xml file). *See claim 22.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
38. The electronic readable memory of claim 22 further comprising a set of instructions to deliver a web page to a selected tile of said array of tiles.	The Accused Instrumentalities include a set of instructions to deliver a web page to a selected tile of said array of tiles. For example, the Accused Instrumentalities include a set of instructions to deliver information from the following URI to the News tile: http://{mkt}.appex-rf.msn.com/cgtile/v1/{mkt}/News/Today.xml, where "mkt" is a market specified by the operating system. (Lines 478-480 of the News AppConfiguration.xml file). *See claim 22.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
39. The electronic readable memory of claim 22 wherein said first retrieval rate is different from said second retrieval rate.	In the Accused Instrumentalities, a first retrieval rate is different from a second retrieval rate. *See claim 22, claim 6.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
40. The electronic readable memory of claim 22 wherein said array comprises more	In the Accused Instrumentalities, the array may comprise more than one row and more than one column. *See claim 22, claim 8.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe

Limitation	Accused Instrumentality
than one row and more than one column.	under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46 pre] A system for facilitating the organization and management of multiple data sources, comprising:	Microsoft makes, uses, sells, and/or offers to sell Accused Instrumentalities comprising the following limitations. To the extent this preamble is found to be a limitation, the Accused Instrumentalities constitute a system for facilitating the organization and management of multiple data sources. For example, Microsoft makes, uses, sells, and/or offers to sell computing devices, such as a tablet or personal computer, with the Windows 8 operating system. Such devices include memory for storing Windows 8. As an example, Microsoft sells the ASUSTeK X202E laptop with the Windows 8 Operating System stored in memory. (Buy ASUS VivoBook X202E). *See, e.g., claim 1*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46a] a device that includes a processor configured to execute instructions, a memory connected to said processor to store at least one program that includes a graphical user interface, and an input device, wherein said processor executes	The Accused Instrumentalities include a device that includes a processor configured to execute instructions, a memory connected to the processor to store at least one program that includes a graphical user interface, and an input device. For example, Microsoft makes, uses, sells, and/or offers to sell computing devices, such as a tablet or personal computer, with the Windows 8 operating system. Such devices include a processor configured to execute instructions, and memory for storing Windows 8, which includes a graphical user interface. Such devices also include an input device, such as a touch screen or touch pad. As an example, Microsoft sells the ASUSTeK X202E laptop with the Windows 8 Operating System stored in memory, an Intel Core processor, a touch screen, and a touchpad:

Limitation	Accused Instrumentality
instructions to:	DISPLAY | 11.6 in LED-backlit TFT LCD (1366 x 768), 10-finger multi-touch support PROCESSOR | Intel Core i3-3217U 1.80 GHz MEMORY | 4 GB DDR3 1333 MHz HARD DRIVE SIZE | 500 GB SATA 5400 RPM OPERATING SYSTEM | Windows 8 PC TYPE | Notebook (Buy ASUS VivoBook X202E). *See also [1 pre]*. With Windows 8, you don't have to choose between a fun touch device and a hard-working PC because you can have it both ways. Prefer a mouse and keyboard? Great. Prefer touch? Enjoy the convenience. Windows 8 runs on amazing hardware, from tablets to laptops to all-in-ones with large, high-definition screens. Whether you like to stay put or work on the go, you can enjoy the power, convenience, and versatility of Windows. (W8 Product Guide, p. 27).

Limitation	Accused Instrumentality
	 (W8 Product Guide, p. 28). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46b] control simultaneous communication with a plurality of	In the Accused Instrumentalities, the processor executes instructions to control simultaneous communication with a plurality of information sources. *See [22a]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from

Limitation	Accused Instrumentality
information sources;	the claimed functionality and performs the same function in the same way to achieve the same result.
[46c] arrange a display into an array of tiles;	In the Accused Instrumentalities, the processor executes instructions to arrange a display into an array of tiles. *See [22b]*.
[46d] associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;	In the Accused Instrumentalities, the processor executes instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles. *See [22c]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46e] retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second	In the Accused Instrumentalities, the processor executes instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate. *See [22d]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.

Limitation	Accused Instrumentality
retrieval rate; and	
[46f] present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.	In the Accused Instrumentalities, the processor executes instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate. *See [22e]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
47. The system of claim 46 wherein said array comprises more than one row and more than one column.	In the Accused Instrumentalities the array comprises more than one row and more than one column. *See claim 46, claim 8.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.

EXHIBIT B

The infringement evidence cited below is exemplary and not exhaustive. The cited examples are taken from the following documents along with additional materials describing Microsoft's technology:

1) Windows Phones – Microsoft Store Online (http://www.microsoftstore.com/store/msstore/cat/categoryID.44067100) (Feb. 6, 2013) ("Windows Phones – Microsoft Store Online")
2) Windows Phone 8X by HTC | Windows Phone, available at http://www.windowsphone.com/en-us/phones/htc/windows-phone-8x-by-htc?model=accord_ul ("Windows Phone 8X by HTC – AT&T")
3) HTC Trophy Details, available at http://www.verizonwireless.com/b2c/store/controller?item=phoneFirst&action=viewPhoneDetail&selectedPhoneId=5635 ("HTC Trophy Details")
4) Features, Windows Phone Features, available at http://www.windowsphone.com/en-us/features/all (Feb. 5, 2013) ("Windows Phone Features I")
5) Windows Phone Features, available at http://www.windowsphone.com/en-us/features (Oct. 21, 2012) ("Windows Phone Features II")
6) Features | Windows Phone Features, http://www.windowsphone.com/en-us/features#start (Nov. 18, 2012) ("Windows Phone Features III")
7) Tiles for Windows Phone, available athttp://msdn.microsoft.com/en-us/library/windowsphone/develop/hh202948(v=vs.105).aspx ("Tiles for Windows Phone")
8) Tiles Overview for Windows Phone, available at http://msdn.microsoft.com/en-us/library/windowsphone/develop/hh202948(v=vs.92).aspx (Sept. 25, 2012) ("Tiles Overview for Windows Phone")
9) Get Started with Windows Phone 8, available at http://www.windowsphone.com/en-US/how-to/wp8/start/get-started-with-windows-phone-8 ("Get Started with Windows Phone 8")
10) Tiles and Notifications for Windows Phone, available at http://msdn.microsoft.com/en-us/library/windowsphone/develop/jj662933(v=vs.105).aspx, ("Tiles and Notifications")

11) Notifications for Windows Phone, available at http://msdn.microsoft.com/en-us/library/windowsphone/develop/jj207004(v=vs.105).aspx, ("Notifications for Windows Phone")

12) Tile Design Guidelines for Windows Phone, available at http://msdn.microsoft.com/en-us/library/windowsphone/design/jj662929(v=vs.105).aspx ("Tile Design Guidelines")

13) Local Notifications for Windows Phone, available at http://msdn.microsoft.com/en-us/library/windowsphone/develop/jj207047(v=vs.105).aspx, ("Local Notifications").

14) ShellTileSchedule Class, available at http://msdn.microsoft.com/en-us/library/windowsphone/develop/microsoft.phone.shell.shelltileschedule(v=vs.105).aspx ("ShellTileSchedule Class")

15) UpdateInterval Enumeration, available at http://msdn.microsoft.com/en-us/library/windowsphone/develop/microsoft.phone.shell.updateinterval(v=vs.105).aspx, ("UpdateInterval Enumeration")

16) Microsoft Jump Start Course, Building Applications for Windows Phone Mango | Module 10, (Aug. 24, 2011) ("Microsoft Jump Start Course")

17) Download Apps and Games FAQ, available at http://www.windowsphone.com/en-US/how-to/wp8/apps/download-apps-and-games-faq ("Download Apps and Games FAQ")

18) Everything Goes Back to Start, available at http://www.windowsphone.com/en-US/How-to/wp7/start/everything-goes-back-to-start ("Everything Goes Back to Start")

19) Move or Unpin a Tile on Start, available at http://www.windowsphone.com/en-US/how-to/wp7/start/move-or-delete-tile-on-start ("Move a Tile")

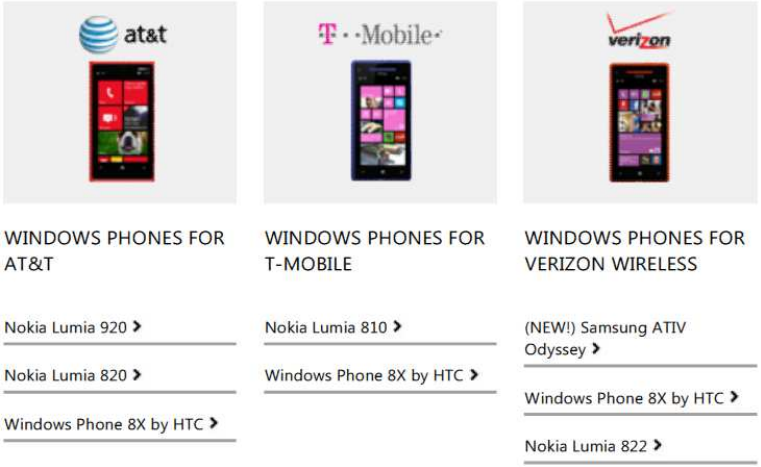
20) Features | Windows Phone Features, available at http://www.windowsphone.com/en-us/features (Feb. 13, 2013) ("Windows Phone Features IV")

21) Windows Phone 8X by HTC 16GB for AT&T (Blue) – Microsoft Store Online, http://www.microsoftstore.com/store/msstore/pd/productID.256540500 ("Windows Phone 8X by HTC at Microsoft Store Online")

22) Windows Phone 8X by HTC 16GB 4G LTE for AT&T – Microsoft Store, Specifications ("Windows Phone 8X Specifications")

The Accused Instrumentalities include, but are not limited to the Windows Phone 8 operating system, smartphones implementing Windows Phone 8, including but not limited to the Windows Phone 8X by HTC, Windows Phone 8X – 4G LTE by HTC, Nokia Lumia 810, Nokia Lumia 820, Nokia Lumia 822, Nokia Lumia 900, and the Nokia Lumia 920, the Windows Phone 7 operating system (including subsequent releases such as versions 7.5 and 7.8), and smartphones implementing Windows Phone 7, including but not limited to the HTC HD7, HTC Titan, HTC Titan II, HTC Trophy, and Nokia Lumia 710 (collectively "the Accused Instrumentalities"). Based on SurfCast's investigation thus far, any differences between the operation of the Windows Phone 7 and Windows Phone 8 operating systems do not affect the infringement analysis below. Discovery is ongoing and SurfCast reserves the right to supplement these contentions as appropriate.

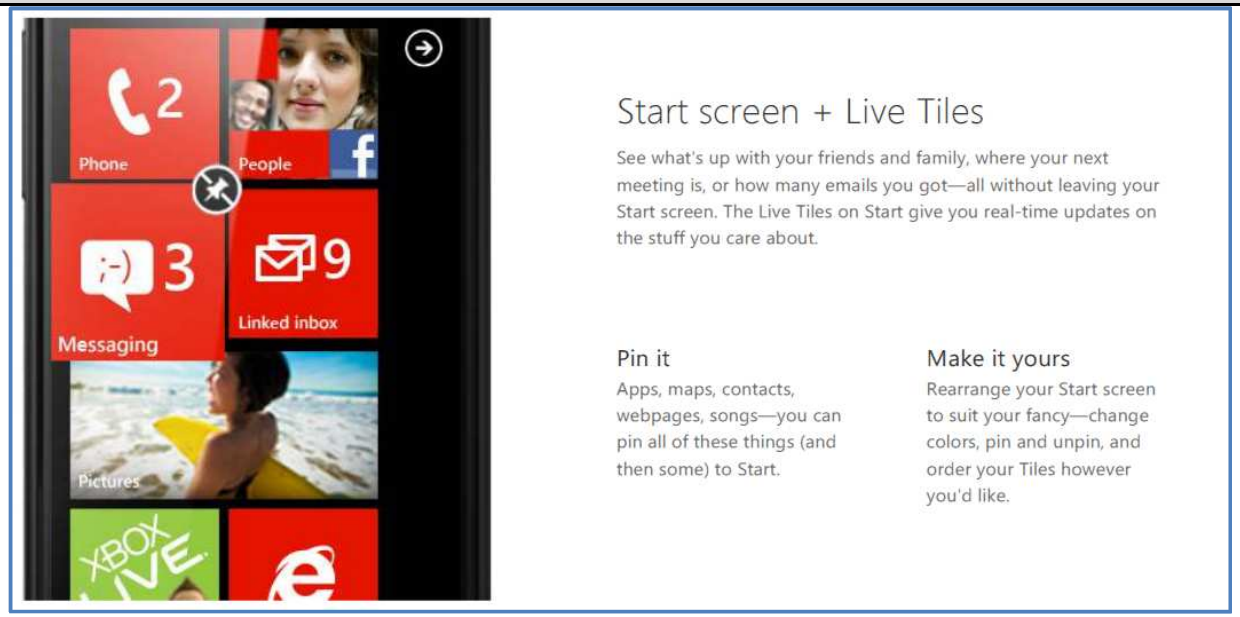
Limitation	Accused Instrumentality
[1 pre] A method executed by a device under the control of a program, said device including a memory for storing said program, said method comprising:	Microsoft makes, uses, sells, and/or offers to sell Accused Instrumentalities comprising the following limitations. To the extent this preamble is found to be a limitation, the Accused Instrumentalities practice a method executed by a device under the control of a program, wherein the device includes a memory for storing the program. For example, a smartphone with the Windows Phone 8 or Windows Phone 7 operating system executes the claimed method. Such devices include memory for storing the Windows Phone operating system.

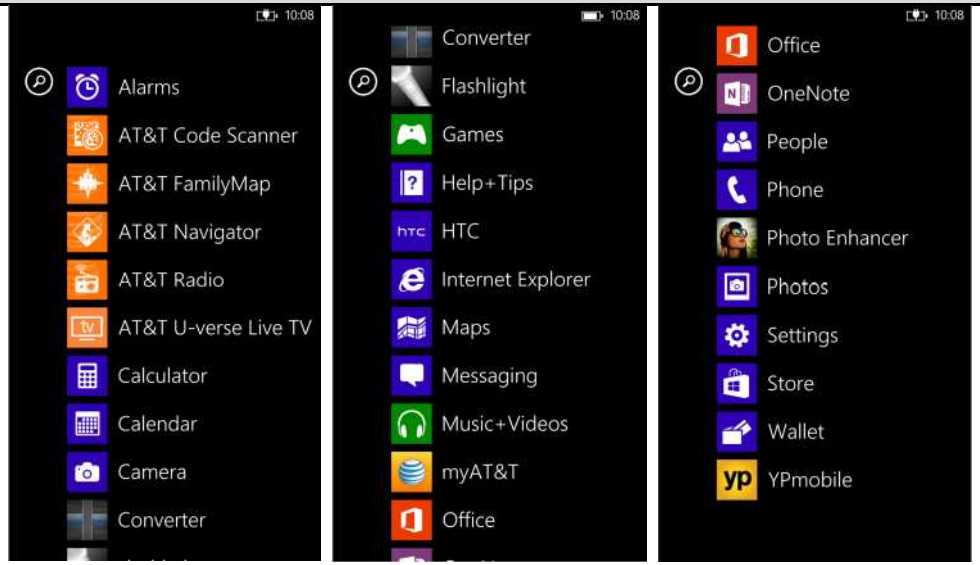
Limitation	Accused Instrumentality
	   (Windows Phones – Microsoft Store Online (Feb. 6, 2013)). As an example, the Windows Phone 8X by HTC for AT&T includes the Windows Phone 8 Operating System stored in memory:

Limitation	Accused Instrumentality
	Storage 16 GB storage 1024 MB RAM Software Windows Phone 8 (Windows Phone 8X by HTC – AT&T). As another example, the HTC Trophy includes the Windows Phone 7 Operating System stored in memory: Operating System Windows Phone 7 Display 3.8" capacitive touch screen 480x800 wvga TFT LCD display Orientation in portrait and landscape Keyboard Virtual QWERTY Keyboard Battery / SAR Battery (1300 mAh) Usage: Up to 294 mins. Standby: Up to 286 hrs. 1.48W/kg @ 1g (HEAD); 1.02 W/kg @ 1g (BODY) Memory / Processor 1GHz processor & 586MB RAM 16GB internal memory (actual formatted capacity is less) (HTC Trophy Details).

Limitation	Accused Instrumentality
	(Screenshot of Windows Phone 8X by HTC for AT&T with the Windows Phone 8.0 operating system). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1a] selecting a plurality of information sources;	The Accused Instrumentalities select a plurality of information sources. For example, Windows Phone includes Mail, Photos/Pictures, Messaging, Music, and People tiles on the start screen and built-in applications including Mail, Photos/Pictures, Messaging, Music, and People:

Limitation	Accused Instrumentality
	(Windows Phone Features I). (Windows Phone Features I).

Limitation	Accused Instrumentality
	 (Windows Phone Features II).

Limitation	Accused Instrumentality
	 (Exemplary screenshots of applications on Windows Phone 8X by HTC for AT&T).

Limitation	Accused Instrumentality
	You are what you pin A Pin the Live Tiles you want, and snap! There's the stuff you care about, updating in real time, right on your Start screen. You can pin people, apps, songs, websites, directions, games, photos, docs, and more. Only Windows Phone has Live Tiles, and only Windows Phone lets you pin what you love. (Windows Phone Features III).

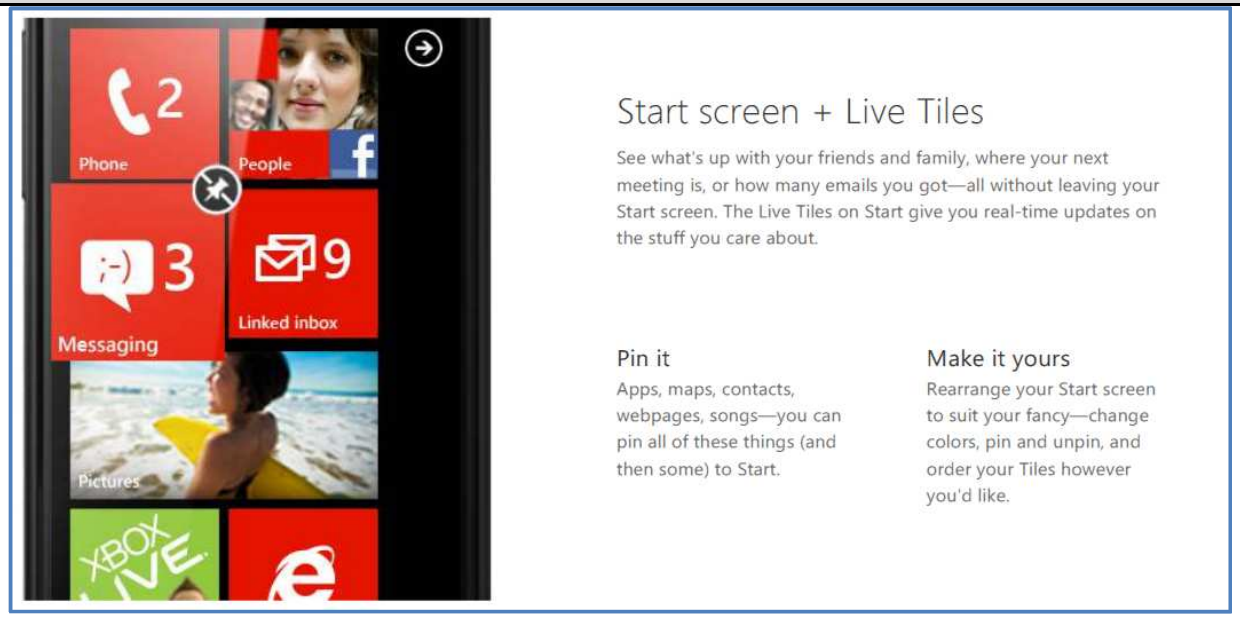
Limitation	Accused Instrumentality
	 Pin apps You can pin any app to your Start screen. But when you pin Live Apps, they'll deliver info and updates in real time—like fresh Groupon deals, flight info, news headlines, and more. (Windows Phone Features III). A Tile is an image that represents your app on the **Start** screen. All apps have at least one Tile, known as the *default* Tile, which displays on the **Start** screen when a customer pins your app from the App list. Apps can also add support for one or more *secondary* Tiles—for example, let's say your app displays the current weather of a city on its Tile. By supporting secondary Tiles, your customer could choose to pin a Tile for each city that he or she chooses. (Tiles

Limitation	Accused Instrumentality
	for Windows Phone). A Tile is a link to an application displayed in Start. There are two types of Tiles – Application Tiles and secondary Tiles. The *Application Tile* is the Tile created when a user pins an application to Start by pressing and holding the application's icon in the Applications List. Tapping a pinned Application Tile navigates the user to the application's opening page. A *secondary Tile* is created programmatically by an application based on interaction from the user. Typical uses for a secondary Tile include a weather application that pins a Tile to Start for each city that the user wants a weather report for, or a news application that pins a Tile to Start for each type of news that the user would like to see – World, Local, Sports, and so on. The application's code provides the Tile with launch parameters to customize the navigation destination of the Tile. For example, tapping on a secondary Tile pinned from a weather application might open the details page for a particular city. That Tile might also have weather details for that city displayed and updated live on the Tile. (Tiles Overview for Windows Phone).

<table>
<tr><th>Limitation</th><th>Accused Instrumentality</th></tr>
<tr><td></td><td>
<table>
<tr><th>Tile type</th><th>Tile creation</th><th>Tile deletion</th><th>Tile update</th></tr>
<tr><td>Application Tile</td><td>Can be created by the user only when the user taps and holds the application name in the Application List and then selects pin to start. Properties are initially set in the Application Manifest. For more information, see How to: Set the Initial Properties for the Application Tile for Windows Phone</td><td>Cannot be deleted. The Application Tile may or may not be pinned to Start. But even if the user has not pinned the Application Tile to Start, it can be updated programmatically such that its property data will be fresh should the user decide to pin it.</td><td>Can be updated by:
• ShellTile APIs. The Application Tile is always the first item in the ActiveTiles collection, even if the Tile is not pinned to Start.
• Push Notifications for Windows Phone
• ShellTileSchedule APIs</td></tr>
</table>
(Tiles Overview for Windows Phone).

In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
</td></tr>
<tr><td>[1b] partitioning a visual display of the device into an array of tiles, wherein each tile in said array of tiles is associated with an information source in said plurality of information</td><td>The Accused Instrumentalities partition a visual display of the device into an array of tiles, wherein each tile in the array of tiles is associated with an information source in the plurality of information sources. For example, each Windows Phone partitions the display of the Phone into an array of tiles, including Mail, Photos, Music, People, and Messaging tiles that are each associated with an information source:</td></tr>
</table>

Limitation	Accused Instrumentality
sources;	(Windows Phone Features I). (Windows Phone Features I).

Limitation	Accused Instrumentality
	 (Windows Phone Features II).

Limitation	Accused Instrumentality
	You are what you pin A Pin the Live Tiles you want, and snap! There's the stuff you care about, updating in real time, right on your Start screen. You can pin people, apps, songs, websites, directions, games, photos, docs, and more. Only Windows Phone has Live Tiles, and only Windows Phone lets you pin what you love. (Windows Phone Features III).

Limitation	Accused Instrumentality
	 Pin apps You can pin any app to your Start screen. But when you pin Live Apps, they'll deliver info and updates in real time—like fresh Groupon deals, flight info, news headlines, and more. (Windows Phone Features III). A Tile is an image that represents your app on the **Start** screen. All apps have at least one Tile, known as the *default* Tile, which displays on the **Start** screen when a customer pins your app from the App list. Apps can also add support for one or more *secondary* Tiles—for example, let's say your app displays the current weather of a city on its Tile. By supporting secondary Tiles, your customer could choose to pin a Tile for each city that he or she chooses. (Tiles for Windows Phone).

Limitation	Accused Instrumentality
	A Tile is a link to an application displayed in Start. There are two types of Tiles – Application Tiles and secondary Tiles. The *Application Tile* is the Tile created when a user pins an application to Start by pressing and holding the application's icon in the Applications List. Tapping a pinned Application Tile navigates the user to the application's opening page. A *secondary Tile* is created programmatically by an application based on interaction from the user. Typical uses for a secondary Tile include a weather application that pins a Tile to Start for each city that the user wants a weather report for, or a news application that pins a Tile to Start for each type of news that the user would like to see – World, Local, Sports, and so on. The application's code provides the Tile with launch parameters to customize the navigation destination of the Tile. For example, tapping on a secondary Tile pinned from a weather application might open the details page for a particular city. That Tile might also have weather details for that city displayed and updated live on the Tile. (Tiles Overview for Windows Phone).

Limitation	Accused Instrumentality

Tile type	Tile creation	Tile deletion	Tile update
Application Tile	Can be created by the user only when the user taps and holds the application name in the Application List and then selects **pin to start**. Properties are initially set in the Application Manifest. For more information, see How to: Set the Initial Properties for the Application Tile for Windows Phone	Cannot be deleted. The Application Tile may or may not be pinned to Start. But even if the user has not pinned the Application Tile to Start, it can be updated programmatically such that its property data will be fresh should the user decide to pin it.	Can be updated by: • ShellTile APIs. The Application Tile is always the first item in the ActiveTiles collection, even if the Tile is not pinned to Start. • Push Notifications for Windows Phone • ShellTileSchedule APIs

(Tiles Overview for Windows Phone).

Limitation	Accused Instrumentality
	Many Tiles offer information at a glance, so you don't even have to go into the app to learn what the temperature is, how many emails you have, or whether a friend recently posted a picture on Facebook. When you pin a contact to Start, you'll get their Facebook, Twitter, and LinkedIn updates right from that Tile, plus you'll see when they've called or sent you any messages. And it's like speed dial—calling, texting, or emailing them is just two taps away. (Get Started with Windows Phone 8). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also

Limitation	Accused Instrumentality
	infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1c] assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;	The Accused Instrumentalities assign a first refresh rate to a first tile of the array of tiles and a second refresh rate to a second tile of the array of tiles. For example, Microsoft describes that a "Live Tile" may be assigned a refresh rate of a particular time, a particular interval, immediately, or in response to a push notification. Microsoft describes the following: ▼ What are Live Tiles and Live Apps? *Live Apps* are apps that support *Live Tiles*: pinned tiles on the Start screen with information or images that change periodically. For example, a weather app's tile could display current temperatures and conditions that update every few minutes, or a social media app might show recent messages to you. (Download Apps and Games FAQ). **Applies to:** Windows Phone 8 | Windows Phone OS 7.1 In Windows Phone you can create and schedule notifications either locally, or by using a cloud service. You can use notifications to send toasts, update Tiles on the **Start** screen, and even display alarms and reminders. This section contains everything you need to know about Tiles, toasts, alarms and reminders, and how to send and receive all types of notifications. (Tiles and Notifications).

Limitation	Accused Instrumentality
	Applies to: Windows Phone 8 | Windows Phone OS 7.1 In Windows Phone you can create and schedule notifications either locally, or by using a cloud service. You can use notifications to send toasts, update Tiles on the **Start** screen, and even display alarms and reminders. This section describes everything you need to know about notifications in Windows Phone. Local notifications You can create notifications to your Tile, create a toast notification, and create an alarm or reminder by setting up an immediate, one-time, or recurring schedule. For more info, see Local notifications for Windows Phone. Push notifications You can send updates to your Tile, create a toast notification, or send raw data to your app by using push notifications from a cloud service. For more info, see Push notifications for Windows Phone. (Notifications for Windows Phone). Tiles can be live (updated through notifications), or you can leave them static. A tile begins as a default Tile, defined in the app's manifest. A static tile will always display the default content, which is usually a full-tile logo image. A live Tile can update the default Tile to show new content and can return to the default Tile only through another update. All Tiles have an area, dependent on the template, for displaying a count. Tiles on the Start screen come in three sizes—small, medium, and wide (wide being optional). (Tile

Limitation	Accused Instrumentality
	Design Guidelines). Microsoft describes the "Tile design philosophy" to developers as follows: Tile design philosophy Your goal is to create an appealing Tile for your app. If you use a live Tile, your goal is to present engaging new content that your customers will find valuable to see in their Start screen and that invites them to launch the app. To that end, avoid the overuse of loud colors. Simple, clean, elegantly designed tiles will be more successful than those that scream for attention. (Tile Design Guidelines). When you're designing your app, consider using a live Tile for several reasons: • Tiles are the "front door" to your app. A compelling live Tile can draw users into your app when your app isn't running. Customers increasingly value an app that they use frequently. • A live Tile is a selling point that differentiates your app from apps on operating systems that only allow static Tiles and icons in their Start screen. • A live Tile is a selling point that differentiates your app from other apps in the Windows Phone Store. Customers are likely to prefer the app with the great live Tile to a similar app with a static tile. • If customers like your live Tile, a prominent placement of that Tile in Start will drive reengagement with your app. Serendipitous discovery of cool content in the app through the tile will make users happy. (Tile Design Guidelines).

Limitation	Accused Instrumentality
	Some characteristics that make a live Tile compelling are: • Fresh, frequently updated content that makes customers feel that your app is active even when it's not running. Example: Showing the latest headlines or a count of new e-mails. (Tile Design Guidelines). *Small, medium, and wide tiles* When you create a Tile for your app, here are some design guidelines to consider: • Use the wide Tile only if your app has new and interesting content to display to the user and those notifications are updated frequently (at least weekly). (Tile Design Guidelines).

Limitation	Accused Instrumentality
	Applies to: Windows Phone 8 | Windows Phone OS 7.1 You can schedule "local" notifications to run at a specific time or interval by using the following classes or features: • **Tiles** - ShellTileSchedule (Local Notifications). Local Tile notifications Tiles can be updated locally using the ShellTileSchedule class. You can send an immediate notification, or control how often the notification occurs on a recurring schedule. For more info about how to schedule a Tile update, see How to send a scheduled local Tile update for Windows Phone. For more info about Tiles in general, see Tiles for Windows Phone. (Local Notifications). Microsoft describes that the ShellTileSchedule class "[c]reates an object that allows an application to schedule updates of its Tile's background image." (ShellTileSchedule Class). Microsoft defines the following properties for ShellTileSchedule:

Limitation	Accused Instrumentality
	Properties Name — Description Interval — Sets the interval of how often the background image of the Tile is updated. MaxUpdateCount — Defines the number of times that the schedule will run. If this value is not set or is set to a number less than 1, then the schedule will run indefinitely. Recurrence — Defines whether the schedule will be executed one time or multiple times. The recurrence values are defined in UpdateRecurrence. RemoteImageUri — The fully qualified URI of the background image. StartTime — Defines the start time of the schedule. Top (ShellTileSchedule Class). Microsoft describes that a tile may be updated at an interval of an hour, a day, a week, or a month:

Limitation	Accused Instrumentality

	Syntax
	C#
	`public enum UpdateInterval`
	XAML Attribute Usage
	`<object property="enumerationValue" .../>`
	
	Members
	
	Member name / Description
	EveryHour / The schedule will be run every hour.
	EveryDay / The schedule will be run every day.
	EveryWeek / The schedule will be run every week.
	EveryMonth / The schedule will be run every month.
	
	(UpdateInterval Enumeration).

Limitation	Accused Instrumentality
	Tile Schedule • Periodically updates the tile image without pushing message though • Updates images only from the web, not from the app local store • Sets up notification channel and binds it to a tile notification • Few limitations – Image size must be less than 80 KB – Download time must not exceed 60 seconds – Lowest update time resolution is 60 minutes – If the schedule for an indefinite or finite number of updates fails too many times, OS will cancel it • Update recurrence can by Onetime, EveryHour, EveryDay, EveryWeek or EveryMonth (Microsoft Jump Start Course). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1d] updating information from a first information source in said plurality of information sources presented to said first tile in accordance with said first refresh rate; and	The Accused Instrumentalities update information from a first information source in the plurality of information sources presented to the first tile in accordance with the first refresh rate. *See [1c]*. For example, Microsoft describes "Live Tiles" that update information from associated information sources in accordance with refresh rates, such as a first refresh rate:

Limitation	Accused Instrumentality
	▼ What are Live Tiles and Live Apps? *Live Apps* are apps that support *Live Tiles*: pinned tiles on the Start screen with information or images that change periodically. For example, a weather app's tile could display current temperatures and conditions that update every few minutes, or a social media app might show recent messages to you. (Download Apps and Games FAQ). (Windows Phone Features I).

Limitation	Accused Instrumentality
	Start screen Start is the home screen reimagined—Live Tiles keep you caught up on everything from your sister's texts to your next meeting and Live Apps dish up news, deals, and more. **Live Tiles** These amazing little gems deliver automatic updates on what's happening in your world, right to your Start screen. Pin the ones you want, then move and resize them as you like. (Windows Phone Features I). **Start screen + Live Tiles** See what's up with your friends and family, where your next meeting is, or how many emails you got—all without leaving your Start screen. The Live Tiles on Start give you real-time updates on the stuff you care about. **Pin it** Apps, maps, contacts, webpages, songs—you can pin all of these things (and then some) to Start. **Make it yours** Rearrange your Start screen to suit your fancy—change colors, pin and unpin, and order your Tiles however you'd like.

Limitation	Accused Instrumentality
	(Windows Phone Features II). The new Windows Phone 8X by HTC brings your world to life with Live Tiles, designed to keep you closer to what matters most, on a brilliantly clear and crisp display—all on the AT&T nationwide 4G network. A lightning-fast dual-core 1.5 GHz processor delivers the speed you want, so you can experience powerful entertainment and more right on your phone. The 8-megapixel camera gives you crystal-clear photos and HD video, and a full 16 GB of storage lets you store your memories right in the phone. ▪ Exclusive built-in amplifier for Beats Audio for high-def, uncompromised sound with less distortion ▪ HD 4.3-inch 1280 x 720 Super LCD screen protects your ▪ 2.1-megapixel, 88-degree ultra-wide-angle camera ▪ Live Tiles on Start give you real-time updates on the stuff you care about (Windows Phone 8X by HTC at Microsoft Store Online). Push Notifications and Live Tiles • Push Notifications offer developers a way to send timely information to their applications even when they are not around + • Windows phone has the unique ability to provide the end user glanceable access to the information they care most about, via Live Tiles (Microsoft Jump Start Course). For example, on information and belief, the Accused Instrumentalities update information from the Music application presented to the Music tile immediately when the Music application changes the selected

Limitation	Accused Instrumentality
	artist. As an example, when a user selects a song by The Beatles, the Music tile on the start screen is updated and displays text and graphics related to The Beatles. When a user selects a song by Taylor Swift, the Music tile on the start screen is updated and displays text and graphics related to Taylor Swift: In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[1e] simultaneously updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said second refresh rate.	The Accused Instrumentalities simultaneously update information from a second information source in the plurality of information sources presented to the second tile in accordance with the second refresh rate. *See [1c] and [1d]*. For example, Microsoft describes "Live Tiles" that update information from associated information sources in accordance with refresh rates, such as a second refresh rate:

Limitation	Accused Instrumentality
	▼ What are Live Tiles and Live Apps? *Live Apps* are apps that support *Live Tiles*: pinned tiles on the Start screen with information or images that change periodically. For example, a weather app's tile could display current temperatures and conditions that update every few minutes, or a social media app might show recent messages to you. (Download Apps and Games FAQ). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
2. The method of claim 1 wherein said partitioning includes partitioning said array of tiles in accordance with a user-defined array size.	The Accused Instrumentalities partition the array of tiles in accordance with a user-defined array size. For example, the user may specify the number of rows of tiles by moving and resizing the tiles, and may add or delete tiles from the array thereby defining the size of the array. Move things around We start you off with a fairly orderly configuration of Tiles, but you don't have to leave it that way: when you move them around, you're free to leave gaps between them, have only one Tile in a row, or fill up every available space. You can also adjust Tile sizes so you can pack a lot of apps into a small space or revel in the glory of an expanded Tile. All Tiles can be shrunk to the smallest size, and many can be expanded to span the width of the Start screen. (Everything Goes Back to Start).

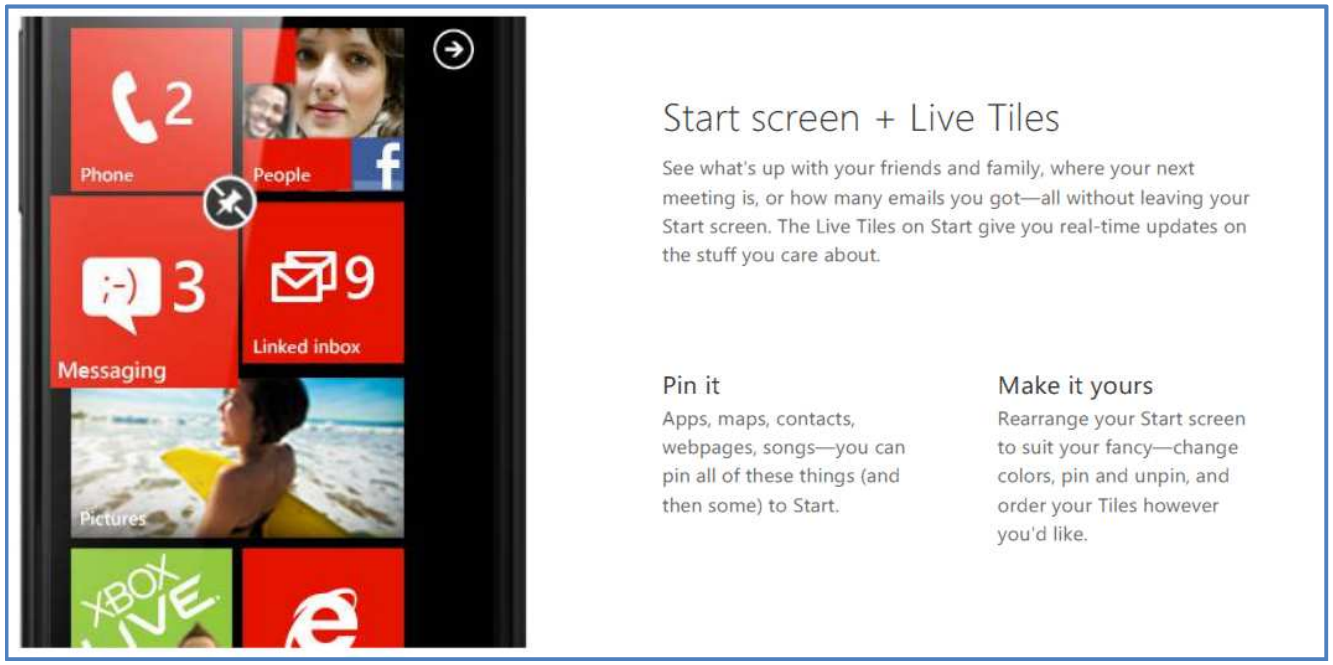
Limitation	Accused Instrumentality
	To move a Tile 1. Tap and hold the Tile you want to move until it pops into the foreground. 2. Push the Tile where you want it to go. (Move a Tile). To resize a Tile 1. Tap and hold the Tile you want to change to a different size. 2. Tap the **Resize** arrow until the Tile changes to the size you want. (Move a Tile). As an example, a user may resize the tile associated with the Music application to be a wide tile, a medium

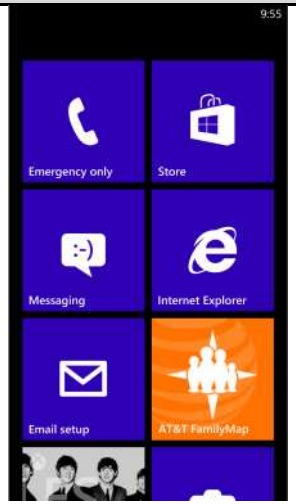
Limitation	Accused Instrumentality
	sized square tile, or a small tile: In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
3. The method of claim 1 wherein said partitioning includes partitioning said array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape.	The Accused Instrumentalities partitions the array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape. For example, a user may resize the tiles on the Start screen. *See claim 2.* As an example, the tiles on the Start screen of the Accused Instrumentalities can be configured to all have a uniform square shape as shown below: (Exemplary screenshot of Windows Phone 8X by HTC for AT&T with each tile

Limitation	Accused Instrumentality
	having a uniform size and shape. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
6. The method of claim 1 wherein said first refresh rate is different from said second refresh rate.	In the Accused Instrumentalities the first refresh rate can be different from the second refresh rate. *See [1c] - [1e]*. For example, Microsoft describes that a tile associated with a weather application could have a refresh rate of every few minutes, and a social media application could have a refresh rate of immediately: ▼ What are Live Tiles and Live Apps? *Live Apps* are apps that support *Live Tiles*: pinned tiles on the Start screen with information or images that change periodically. For example, a weather app's tile could display current temperatures and conditions that update every few minutes, or a social media app might show recent messages to you. (Download Apps and Games FAQ). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
8. The method of claim 1 wherein said array comprises more than one row and more than one	The array of the Accused Instrumentalities comprise more than one row and more than one column. *See, e.g., claim 2*. For example, the array of tiles in the Accused Instrumentalities may comprise four rows and two columns.

Limitation	Accused Instrumentality
column.	 Start screen + Live Tiles See what's up with your friends and family, where your next meeting is, or how many emails you got—all without leaving your Start screen. The Live Tiles on Start give you real-time updates on the stuff you care about. Pin it Apps, maps, contacts, webpages, songs—you can pin all of these things (and then some) to Start. Make it yours Rearrange your Start screen to suit your fancy—change colors, pin and unpin, and order your Tiles however you'd like. (Windows Phone Features II).

Limitation	Accused Instrumentality
	(Exemplary screenshot of Windows Phone 8X by HTC for AT&T with two columns and more than one row). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
11. The method of claim 1 wherein said first refresh rate is assigned automatically.	In the Accused Instrumentalities a first refresh rate is assigned automatically. *See claim 1.* For example, on information and belief, the refresh rate for at least the Photos tile is set when the device is powered on. *See [1c], [1d].* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
12. The method of claim 1 wherein said array	In the Accused Instrumentalities the array comprises a grid wherein each of the tiles occupies a fixed position on the grid. *See claim 1.* For example, as shown below, the tiles on the Windows Phone Start

Limitation	Accused Instrumentality
comprises a grid wherein each of said tiles occupies a fixed position on said grid.	screen are arranged into an array comprising a grid. The tiles on the grid occupy a fixed position on the grid.  (Windows Phone Features II).

Limitation	Accused Instrumentality
	 (Exemplary screenshot of Windows Phone 8X by HTC for AT&T with tiles on the Start screen arranged into an array comprising a grid). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
17. The method of claim 1 wherein said device is a mobile telephone.	The Accused Instrumentalities include Windows Phone 8 and Windows Phone 7 smartphones which are mobile telephones. *See, e.g.,* Windows Phones – Microsoft Store Online.

Limitation	Accused Instrumentality
	 Start screen + Live Tiles See what's up with your friends and family, where your next meeting is, or how many emails you got—all without leaving your Start screen. The Live Tiles on Start give you real-time updates on the stuff you care about. Pin it Apps, maps, contacts, webpages, songs—you can pin all of these things (and then some) to Start. Make it yours Rearrange your Start screen to suit your fancy—change colors, pin and unpin, and order your Tiles however you'd like. (Windows Phone Features II, showing "Phone" application tile). Software Windows Phone 8 Networks GSM 850; GSM 1800; GSM 900; GSM 1900; W-CDMA 850; W-CDMA 900; W-CDMA 1900; W-CDMA 2100 (Windows Phone 8X by HTC – AT&T). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially

Limitation	Accused Instrumentality
	different from the claimed functionality and performs the same function in the same way to achieve the same result.
20. The method of claim 1 wherein said device is a personal digital assistant.	The Accused Instrumentalities include Windows Phone 8 devices and Windows Phone 7 devices which include a PDA functionality. For example, the Accused Instrumentalities include an email program (Mail), a web browser (Internet Explorer), an appointment calendar (Calendar), and a memo or note program (Office Word document): Office Hub Start a Word doc or Excel spreadsheet on your computer, then sync it to SkyDrive as you head out the door. Then you can write or edit some more on your phone with Office Mobile—from a cab, the beach, wherever. SkyDrive makes it a cinch to share docs and edit them with another person, too. Email Email on your Windows Phone is customizable and clutter free. You can choose to see multiple accounts (Outlook.com, Hotmail, Google Mail) in one Linked Inbox, group your messages by conversation, and get separate views for flagged, urgent, or unread mail. (Windows Phone Features IV).

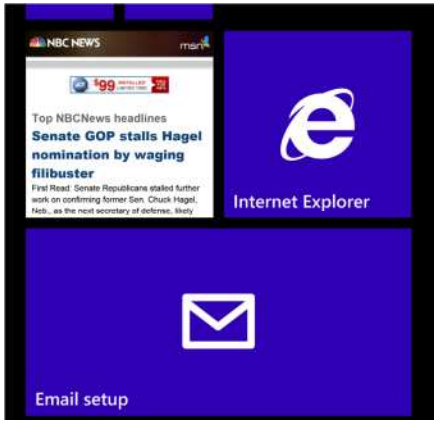
Limitation	Accused Instrumentality
	Internet Explorer 10 Open multiple tabs, get search suggestions as you type, and share a web link in just a couple of taps. Plus SmartScreen Filter helps protect you from dicey websites. More than just an address book, the People Hub is the place to kick off conversations (phone, text, IM, email, even Skype) and check out your friends' latest tweets, posts, and pics. (Windows Phone Features I.) In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
21. The method of claim 1 wherein said plurality of information sources comprises at least two information sources selected from the group consisting of: analog signal; video signal; audio signal; text; an e-mail program; a world-wide-web page; streaming video; streaming audio; and graphics.	In the Accused Instrumentalities, the plurality of information sources comprises at least two information sources selected from the group consisting of: analog signal; video signal; audio signal; text; an e-mail program; a world-wide-web page; streaming video; streaming audio; and graphics. For example, the information source associated with the Photos tile are graphics, and the Mail tile is associated with an e-mail program. *See [1a]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22 pre] An electronic	Microsoft makes, uses, sells, and/or offers to sell Accused Instrumentalities comprising the following

Limitation	Accused Instrumentality
readable memory to direct an electronic device to function in a specified manner, comprising:	limitations. To the extent this preamble is found to be a limitation, the Accused Instrumentalities include an electronic readable memory to direct an electronic device to function in the claimed specified manner. For example, Microsoft makes, uses, sells, and/or offers to sell electronic devices, such as the Windows Phone 8X by HTC, with the Windows Phone 8 operating system, that function in the claimed manner. Such devices include an electronic readable memory for storing the Windows Phone operating system to direct the electronic device to function in the specified manner. As an example, Microsoft sells the Windows Phone 8X by HTC for AT&T with the Windows Phone 8 operating system stored in memory. (Screenshot of Windows Phone 8X by HTC for AT&T with the Windows Phone 8.0 operating system). *See also [1 pre]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the

Limitation	Accused Instrumentality
	same result.
[22a] a first set of instructions to control simultaneous communication with a plurality of information sources;	The Accused Instrumentalities include a first set of instructions to control simultaneous communication with a plurality of information sources. *See, e.g., [1a]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22b] a second set of instructions to arrange a display into an array of tiles;	The Accused Instrumentalities include a second set of instructions to arrange a display into an array of tiles. *See [1b]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22c] a third set of instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;	The Accused Instrumentalities include a third set of instructions to associate a first information source of the plurality of information sources to a first tile of the array of tiles and a second information source of the plurality of information sources to a second tile of the array of tiles. *See, e.g., [1b]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.

Limitation	Accused Instrumentality
[22d] a fourth set of instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and	The Accused Instrumentalities include a fourth set of instructions to retrieve information from the first information source in accordance with a first retrieval rate and retrieve information from the second information source in accordance with a second retrieval rate. *See, e.g., [1d] and [1e]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[22e] a fifth set of instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.	The Accused Instrumentalities include a fifth set of instructions to present information to a first tile in accordance with the first retrieval rate and present information to a second tile in accordance with a second retrieval rate. *See, e.g., [1d] and [1e]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
25. The electronic readable memory of claim 22 wherein said second set of instructions arrange said array of tiles on a display of a mobile telephone.	In the Accused Instrumentalities the second set of instructions arrange the array of tiles on a display of a mobile telephone. *See claim 1, claim 17.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
28. The electronic readable memory of claim 22 wherein said second set of	In the Accused Instrumentalities the second set of instructions arrange the array of tiles on a personal digital assistant. *See claim 1, claim 20.*

Limitation	Accused Instrumentality
instructions arrange said array of tiles on a personal digital assistant.	In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
34. The electronic readable memory of claim 22 further comprising a set of instructions to deliver selected textual content from said first information source to said first tile.	The Accused Instrumentalities include a set of instructions to deliver selected textual content from the first information source to a first tile. For example, on information and belief, the Accused Instrumentalities include a set of instructions to deliver textual content from a Mail application to the Mail tile. *See claim 1, claim 22.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
37. The electronic readable memory of claim 22 further comprising a set of instructions to deliver information from a network document to a selected tile of said array of tiles.	The Accused Instrumentalities include a set of instructions to deliver information from a network document to a selected tile of the array of tiles. For example, the Accused Instrumentalities include a set of instructions to deliver information from the following URI to the News tile: http://{mkt}.appex-rf.msn.com/cgtile/v1/{mkt}/News/Today.xml, where "mkt" is a market specified by the operating system. (Lines 478-480 of the News AppConfiguration.xml file). *See claim 22.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
38. The electronic readable memory of claim 22 further comprising a set of instructions to deliver a web page to a selected tile	The Accused Instrumentalities include a set of instructions to deliver a web page to a selected tile of the array of tiles. For example, the Accused Instrumentalities include a set of instructions to deliver information from the following URI to the News tile: http://{mkt}.appex-rf.msn.com/cgtile/v1/{mkt}/News/Today.xml, where "mkt" is a market specified by

Limitation	Accused Instrumentality
of said array of tiles.	the operating system. (Lines 478-480 of the News AppConfiguration.xml file). *See claim 22.* As another example, a user can pin a web page to the start screen such that the pinned web page is delivered to the pinned tile. For example, when the web page at www.nbcnews.com is pinned to the start screen, the web page for cnn.com is delivered to the pinned tile:  (Exemplary screenshot showing www.nbcnews.com web page tile on start screen of Windows Phone 8X by HTC for AT&T.) In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
39. The electronic readable memory of claim 22 wherein said first retrieval rate is different from said second retrieval rate.	In the Accused Instrumentalities, a first retrieval rate is different from a second retrieval rate. *See claim 22, claim 6.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the

Limitation	Accused Instrumentality
	same result.
40. The electronic readable memory of claim 22 wherein said array comprises more than one row and more than one column.	In the Accused Instrumentalities, the array may comprise more than one row and more than one column. *See claim 22, claim 8.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46 pre] A system for facilitating the organization and management of multiple data sources, comprising:	Microsoft makes, uses, sells, and/or offers to sell Accused Instrumentalities comprising the following limitations. To the extent this preamble is found to be a limitation, the Accused Instrumentalities constitute a system for facilitating the organization and management of multiple data sources. For example, Microsoft makes, uses, sells, and/or offers to sell smartphones with the Windows Phone 7 and Windows Phone 8 operating systems. Such devices include memory for storing the Windows Phone 7 or Windows Phone 8 operating system. As an example, Microsoft sells the Windows Phone 8X by HTC for AT&T with the Windows Phone 8 operating system stored in memory.

Limitation	Accused Instrumentality
	(Screenshot of Windows Phone 8X by HTC for AT&T with the Windows Phone 8.0 operating system). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46a] a device that includes a processor configured to execute instructions, a memory connected to said processor to store at least one program that includes a graphical user interface, and an input device,	The Accused Instrumentalities include a device that includes a processor configured to execute instructions, a memory connected to the processor to store at least one program that includes a graphical user interface, and an input device. For example, Microsoft makes, uses, sells, and/or offers to sell smartphones with the Windows Phone 7 and Windows Phone 8 operating systems. Such devices include a processor configured to execute instructions, and memory for storing the Windows Phone 7 or Windows Phone 8 operating system, which includes a graphical user interface. Such devices also include an input device, such as a touch screen. As an example, Microsoft sells the Windows Phone 8X by HTC for AT&T with the Windows Phone 8 Operating System stored in memory, a 1.5 GHz processor, and a touch

Limitation	Accused Instrumentality
wherein said processor executes instructions to:	screen: Display 4.3" Super LCD 2 720x1280 resolution 342 ppi Corning Gorilla Glass 2 Storage 16 GB storage 1024 MB RAM Camera 8.0 MP 1080p HD video Front-facing camera LED flash Autofocus HTC ImageChip Processor 1.5 GHz MSM8960 Dual core Software Windows Phone 8 Networks GSM 850; GSM 1800; GSM 900; GSM 1900; W-CDMA 850; W-CDMA 900; W-CDMA 1900; W-CDMA 2100 (Windows Phone 8X by HTC – AT&T).

Limitation	Accused Instrumentality
	QUICK LOOK FEATURES & SPECIFICATIONS • Camera Megapixels-8 MP • Camera (Front)-Yes • Touch Screen-Yes • Int'l Compatible-Yes • GPS Capable-Yes • Use as a Modem-Yes • Email-Yes • Mobile Web Browsing-Yes • WiFi-Yes • 4G-Yes • 3G-Yes • Display-4.3" HD720p (1280 x 720 pixels; 16:9 aspect ratio; 16 million colors) • Operating System-Windows Phone 8 ("Win8") • Keyboard-Virtual QWERTY • Built-In Memory-Up to 16GB • Dimensions-5.21" x 2.61" x 0.39" • Weight-4.6 Ounces • Battery Type-Li-Ion • Standby Time-Up to 12.1 days • Talk Time-Up to 11.3 hours • Data Plan-Required (Windows Phone 8X Specifications). In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46b] control simultaneous communication with a plurality of information	In the Accused Instrumentalities, the processor executes instructions to control simultaneous communication with a plurality of information sources. *See [22a]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also

Limitation	Accused Instrumentality
sources;	infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46c] arrange a display into an array of tiles;	In the Accused Instrumentalities, the processor executes instructions to arrange a display into an array of tiles. *See [22b]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46d] associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;	In the Accused Instrumentalities, the processor executes instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles. *See [22c]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
[46e] retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information	In the Accused Instrumentalities, the processor executes instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate. *See [22d]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the

Limitation	Accused Instrumentality
source in accordance with a second retrieval rate; and	same result.
[46f] present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.	In the Accused Instrumentalities, the processor executes instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate. *See [22e]*. In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.
47. The system of claim 46 wherein said array comprises more than one row and more than one column.	In the Accused Instrumentalities the array comprises more than one row and more than one column. *See claim 46, claim 8.* In addition to the Accused Instrumentalities literally infringing this claim limitation, such products also infringe under the doctrine of equivalents. The above-described functionality is at most insubstantially different from the claimed functionality and performs the same function in the same way to achieve the same result.