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MICROSOFT CORPORATION ONE MICROSOFT WAY REDMOND, WA 98052			NGUYEN, VU	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 13/230,445	Applicant(s) WASHINGTON ET AL.	
	Examiner VU NGUYEN	Art Unit 2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 September 2011.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) Claim(s) 1-20 is/are pending in the application.
- 5a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 6) Claim(s) _____ is/are allowed.
- 7) Claim(s) 1-20 is/are rejected.
- 8) Claim(s) _____ is/are objected to.
- 9) Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on 12 September 2011 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 3) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 4) Other: _____.

DETAILED ACTION

Information Disclosure Statement

The Examiner considered the submitted information disclosure statement (IDS). Note that the cited NPL URL reference appeared to be invalid and thus was not considered.

Claim Objections

Claim 2 objected to because of the following informality:

- Claim 2 recites “the display component accessible to the device,” where “the display component [is/being] accessible to the device” was apparently intended (emphasis added).

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, claim 20 recites a “computer-readable storage medium,” which as interpreted is non-statutory.

Applicant is suggested to amend to “non-transitory computer-readable storage medium.” Support for such amendment can be found in PG Pub ¶ [0037].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 9-11, 14, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by “Writing DPI-Aware Win32 Applications” (hereinafter *Haveson*).

For **claim 1**, *Haveson* teaches a method of generating, using a device having a processor, a presentation comprising elements to be displayed on a display component, the method comprising:

executing on the processor instructions configured to:

identify a pixel density of the display component (*Haveson*, p. 11, ll. 49 – p. 12, ll. 60, get pixel density functions);

for respective elements of the presentation:

from a scale factor set, select a scale factor having a pixel density range including the pixel density of the display component (*Haveson*, p. 15, ll. 50-75, selecting best fit DPI from set of DPI settings based on scaling factor); and

request the element to generate a scaled representation using the scale factor (*Haveson*, p. 16, ll. 44-71, getting the right resource to load);
and

generate the presentation comprising the scaled representations of the elements (*Haveson*, p. 16, ll. 69-74, loading right resource).

For **claim 2**, *Haveson* teaches the method of claim 1:

the display component accessible to the device (*Haveson*, p. 32, ll. 13-56, display monitors accessible to machines running Microsoft operating system); and identifying the pixel density of the display component comprising:

querying the display component to report the pixel density (*Haveson*, p. 11, ll. 49 – p. 12, ll. 60, get pixel density functions of monitors).

For **claim 3**, *Haveson* teaches the method of claim 1, the scale factor set comprising:

a first scale factor selected based on a first pixel density range comprising at least a first pixel density and a second pixel density (*Haveson*, p. 32, ll. 13-40, scale level 100% based on range of DPIs); and

a second scale factor selected based on a second pixel density range comprising at least a third pixel density and a fourth pixel density (*Haveson*, p. 32, ll. 13-40, scale level 125% based on range of DPIs).

For **claim 4**, *Haveson* teaches the method of claim 1:

respective elements having a native size (*Haveson*, p. 12, ll. 63-75, baseline DPI); and

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respective scale factors specified as a percentage of the native size of the element (*Haveson*, p. 15, ll. 52-58, percentages of baseline DPI).

For **claim 6**, *Haveson* teaches the method of claim 1:

the presentation comprising a target size (*Haveson*, p. 15, ll. 50-58, 96 DPI); and
the scale factor set comprising:

a first scale factor selected to present the presentation at the target size on a first display component having a first pixel density (*Haveson*, p. 16, ll. 8-75, scale factor for gDPI = 96); and

a second scale factor selected to present the presentation at the target size on a second display component having a second pixel density (*Haveson*, p. 16, ll. 8-75, scale factor for gDPI = 120).

For **claim 9**, *Haveson* teaches the method of claim 1:

the device having a set of pixel dimensions (*Haveson*, p. 32, ll. 13-56, display with different DPI configuration); and

selecting the scale factor comprising: from the scale factor set, selecting a scale factor based on the pixel density and the pixel dimensions of the device (*Haveson*, p. 32, ll. 13-56, scale factor level).

For **claim 10**, *Haveson* teaches the method of claim 1:

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the device having a user scale factor selected by a user of the device (*Haveson*, p. 27, ll. 16-72, user adjusting DPI);

and selecting the scale factor comprising: from the scale factor set, selecting a scale factor based on the user scale factor and the pixel density (*Haveson*, p. 15, ll. 50-75, selecting best fit DPI from set of DPI settings based on scaling factor).

For **claim 11**, *Haveson* teaches the method of claim 1:

respective scale factors associated with a pixel density range stored as a pixel count per square area (*Haveson*, p. 15, ll. 38-75, DPI); and

selecting the scale factor comprising:

computing the pixel density of the display component as a pixel count per square area (*Haveson*, p. 32, ll. 17-40, optimal DPI chart); and

comparing the pixel density with the pixel density range of respective scale factors (*Haveson*, p. 15, ll. 50-75, DPI versus range of DPIS and percentages).

For **claim 14**, *Haveson* teaches the method of claim 1:

respective elements having an element type (*Haveson*, p. 13, ll. 17-34, scaling text; p. 15, ll. 38-76, scaling graphics; p. 15, ll. 42-44, custom scaling);

requesting the elements to generate a scaled representation comprising:

requesting the elements of a first element type to generate a scaled representation (*Haveson*, p. 14, ll. 11-46, requesting), and

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refraining from requesting the elements of a second element type to generate a scaled representation (*Haveson*, p. 13, ll. 34-73, text specific functions); and

generating the presentation comprising: generating the presentation comprising:

the scaled representations of the elements of the first element type (*Haveson*, p. 14, ll. 11-46, scaling font), and

unscaled representations of the elements of the second element type (*Haveson*, p. 14, ll. 11-46, scaling only font functions implies graphics are not scaled, unless otherwise specified).

For **claim 17**, *Haveson* teaches the method of claim 1, the instructions configured to, upon receiving a request to present the presentation on a second pixel density that is different from the pixel density:

for respective elements:

identify the second pixel density of the display component (*Haveson*, p. 32, ll. 17-40, Panel DPIs differing from OS DPIs);

from a scale factor set, select a second scale factor based on the second pixel density (*Haveson*, p. 32, ll. 17-40, scale levels); and

request the element to generate a second scaled representation using the second scale factor (*see claim 1 rejection*); and

generate a second presentation comprising the second scaled representations of the elements (*see claim 1 rejection*).

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For **claim 19**, *Haveson* teaches a method of presenting elements on a display component of a device having a processor, the method comprising:

sending to the device instructions that, when executed on the processor, cause the device to:

identify a pixel density of the display component (*see claim 1 rejection*);

from a scale factor set, select a scale factor based on the pixel density (*see claim 1 rejection*);

request respective elements to generate a scaled representation using the scale factor (*see claim 1 rejection*); and

present on the display component a presentation comprising the scaled representations of the elements (*see claim 1 rejection*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- I. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Haveson* as applied above, and further in view of *Kaasila et al.* (U.S. Pat. App. Pub. No. US 2003/0095135 A1; hereinafter *Kaasila*).**

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For **claim 5**, *Haveson* teaches the method of claim 4, the scale factor set comprising:

a first scale factor having a percentage greater than 100% (*Haveson*, p. 32, ll. 13-40, 125%);

Haveson does not explicitly teach, but *Kaasila* teaches: and a second scale factor having a percentage less than 100% (*Kaasila*, Figs. 35 and 36, ¶¶ [0601] and [0602], scale factor less than 100%).

Haveson and *Kaasila* are analogous because they are directed at digital content scaling.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to combine *Haveson* and *Kaasila*. One of the reasons would have been to optimize relatively limited computing resources, such as computational power, memory, or bandwidth to the Internet (*Kaasila*, ¶ [0076]).

II. Claims 7, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Haveson* as applied above, and further in view of *Barenbrug et al.* (U.S. Pat. No. US 2006/0158451 A1; hereinafter *Barenbrug*).

For **claim 7**, *Haveson* teaches the method of claim 1.

Haveson does not explicitly teach, but *Barenbrug* teaches:

the presentation comprising an element grid (*Barenbrug*, Fig. 3, ¶ [0046], mipmap grid); and

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the scale factor selected to size the elements according to the element grid (*Barenbrug*, ¶¶ [0058] and [0061], selecting correct mipmap portion based on resolution).

Haveson and *Barenbrug* are analogous because they are directed at computer graphics processing.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to combine *Haveson* and *Barenbrug* (*Haveson-Barenbrug*). One of the reasons to apply the concept present in mipmapping would have been to conserve memory bandwidth (*Barenbrug*, ¶ [0006]).

For **claim 8**, *Haveson-Barenbrug* teaches the method of claim 7:

the element grid comprising respective pixel boundaries (*Barenbrug*, ¶ [0045], u and v coordinates); and

the scale factors selected to, for elements of an element type having a native size, scale the elements to match the pixel boundaries of the element grid (*Barenbrug*, ¶ [0045], coordinates; ¶¶ [0058] and [0061], selecting correct mipmap portion based on resolution).

The same motivation that was utilized in the rejection of claim 7 applies equally to claim 8.

For **claim 12**, *Haveson-Barenbrug* teaches the method of claim 1:

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at least one element storing scaled representations of the element at respective scale factors (*Barenbrug*, Fig. 3, ¶ [0046], mipmap grid); and

requesting the element to generate a scaled representation comprising:

retrieving from the element the scaled representation at the scale factor (*Barenbrug*, ¶ [0045], coordinates; ¶¶ [0058] and [0061], selecting correct mipmap portion based on resolution).

The same motivation that was utilized in the rejection of claim 7 applies equally to claim 12.

III. Claims 13 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over *Haveson* as applied above, and further in view of *Newhall et al.* (U.S. Pat. No. US 7,525,551 B1; hereinafter *Newhall*).

For **claim 13**, *Haveson* teaches the method of claim 1.

Haveson does not explicitly teach, but *Newhall* teaches:

the device having a scaled representation cache (*Newhall*, col. 4, ll. 24-40, texture memory); and

requesting an element to generate a scaled representation comprising:

querying the scaled representation cache for a scaled representation of the element associated with the scale factor (*Newhall*, col. 6, ll. 32-45, step 305, determining “squash” value for a set of pixels);

upon locating the scaled representation in the scaled representation cache, retrieving the scaled representation from the scaled representation cache (*Newhall*, col. 7, ll. 45-50, selecting ripmap); and

upon failing to locate the scaled representation in the scaled representation cache (*Newhall*, Fig. 3):

requesting the element to generate the scaled representation using the scale factor (*Newhall*, Fig. 3, col. 9, ll. 24-32, step 340, creating additional ripmaps); and

storing the scaled representation of the element associated with the scale factor in the scaled representation cache (*Newhall*, col. 9, ll. 32-52, step 340, storing, memory).

Haveson and *Newhall* are analogous because they are directed at computer graphics.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to combine *Haveson* and *Newhall* (*Haveson-Newhall*). One of the reasons would have been to provide repeated use of the same data without additional memory bandwidth of the external texture memory being utilized.

For **claim 20**, *Haveson-Newhall* teaches a computer-readable storage medium comprising instructions that, when executed on a processor of a device comprising a display component having a pixel density, the device comprising a scaled representation cache, a user scale factor and a scale factor set comprising scale factors identifying a scale factor value for a pixel density range of pixel densities stored as a pixel count per square area, the scale factor set comprising:

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a first scale factor selected based on a first pixel density range comprising at least a first pixel density and a second pixel density (*see claim 3 rejection*); and

a second scale factor selected based on a second pixel density range comprising at least a third pixel density and a fourth pixel density, generate a presentation having an element grid, the presentation comprising elements having a native size, by (*see claims 3, 4, and 7 rejections*):

identifying a pixel density of the display component by querying the display component to report the pixel density (*see claim 2 rejection*);

computing the pixel density of the display component as a pixel count per square area (*see claim 11 rejection*);

for respective elements of the presentation:

from a scale factor set, selecting a scale factor having a pixel density range including the pixel density of the display component (*see claim 1 rejection*), and the scale factor selected based on the user scale factor (*see claim 10 rejection*) and selected to size the elements according to the element grid of the presentation (*see claims 7 and 8 rejections*);

querying the scaled representation cache for a scaled representation of the element associated with the scale factor (*see claim 13 rejection*);

upon locating the scaled representation in the scaled representation cache, retrieving the scaled representation from the scaled representation cache (*see claim 13 rejection*);

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upon failing to locate the scaled representation in the scaled representation cache:
cache:
requesting the element to generate the scaled representation using the scale factor (*see claim 13 rejection*); and
storing the scaled representation of the element associated with the scale factor in the scaled representation cache (*see claim 13 rejection*);
displaying the presentation on the display component (*see claim 13 rejection*);
upon receiving a request to present the presentation on a second pixel density that is different from the pixel density (*see claim 17 rejection*):
for respective elements:
identifying the second pixel density of the display component (*see claim 17 rejection*);
from a scale factor set, select a second scale factor based on the second pixel density (*see claim 17 rejection*); and
request the element to generate a second scaled representation using the second scale factor (*see claim 17 rejection*);
generating a second presentation comprising the second scaled representations of the elements (*see claim 17 rejection*); and
displaying the presentation on the display component (*see claim 1 rejection*).

The same motivation that was utilized in the rejection of claim 13 applies equally to claim 20.

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IV. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Haveson* as applied above, and further in view of *Vale et al.* (U.S. Pat. App. Pub. No. US 2004/0075671 A1; hereinafter *Vale*).

For **claim 15**, *Haveson* teaches the method of claim 1:

Haveson does not teach, but *Vale* teaches:

the presentation having at least two presentation contexts (*Vale*, ¶ [0024], original sized content and scaled content); and

generating the presentation comprising:

while the presentation is in a first presentation context, generating the presentation comprising the scaled representations of the elements (*Vale*, ¶ [0024], scaling); and

while the presentation is in a second presentation context, generating the presentation comprising unscaled representations of the elements (*Vale*, ¶ [0037], zooming (interpreted to include generating/returning to unscaled level)).

Haveson and *Vale* are analogous because they are directed at image scaling.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to combine *Haveson* and *Vale* (*Haveson-Vale*). One of the reasons would have been to provide a scaling method that is applicable to various devices other than a traditional computer display to increase usability of the images (*Vale*, ¶ [0005]).

For **claim 16**, *Haveson-Vale* teaches the method of claim 15:

the first presentation context comprising a touch-responsive presentation of the display component that is responsive to fingertip input of a fingertip of a user (*Vale*, ¶ [0018], touch sensitive);

the scale factors selected to scale touch-responsive elements of the touch-responsive presentation to facilitate fingertip input (*Vale*, ¶ [0024], scaling); and

the second presentation context comprising a touch-unresponsive presentation of the display component (*Vale*, ¶ [0024], original sized images are interpreted to mean touch-unresponsive presentation).

The same motivation that was utilized in the rejection of claim 15 applies equally to claim 16.

V. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Haveson* as applied above, and further in view of *Fullerton et al.* (U.S. Pat. App. Pub. No. US 2008/0030425 A1; hereinafter *Fullerton*).

For **claim 18**, *Haveson* teaches the method of claim 1.

Haveson does not teach, but *Fullerton* teaches: the display component accessible to a second device in communication with the device (*Fullerton*, Fig. 4, ¶ [0037], second display);

identifying the pixel density comprising: receiving the pixel density of the display component from the second device (*Fullerton*, Fig. 7, ¶ [0049], step 702); and

the instructions configured to send the presentation to the second device to be displayed on the display component (*Fullerton*, Fig. 7, ¶ [0049], steps 703-705).

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Haveson and *Fullerton* are analogous because they are directed at controlling display devices.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to combine *Haveson* and *Fullerton* (*Haveson-Fullerton*). One of the reasons would have been to provide controlling a data processing system having multiple displays with different scale factors (e.g., different pixel resolutions) (*Fullerton*, ¶ [0007]).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VU NGUYEN whose telephone number is (571)270-3982. The examiner can normally be reached on Monday - Friday, 7:30 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VU NGUYEN/

Examiner, Art Unit 2677

/AARON M RICHER/

Primary Examiner, Art Unit 2677