

Exhibit 5

Direct Infringement Claim Chart – ‘771 Patent

U.S. Patent 8,384,771
 “Method and Apparatus for Three-Dimensional Viewing of Images”
 Pre-Discovery Evidence of Use for Infringement

Priority Date: December 28, 2006

Note: Statements made herein are illustrative and not exhaustive

Claim Language	Where in the Accused Product(s) Each Limitation of the Asserted Claim(s) are Found – HoloLens 1, HoloLens 2, IVAS
<p>Claim 15. A computer system comprising:</p>	<p>Defendant Microsoft’s accused systems (<i>e.g.</i>, embodied in the HoloLens 1, HoloLens 2, Integrated Visual Augmentation System (IVAS), and related software applications) include a computer system. Reasonable discovery will confirm this interpretation.</p> <p>The evidence below is described with regard to the HoloLens 1, which was introduced by Microsoft on March 30, 2016. While there are technical improvements and additional features associated with HoloLens 2 (introduced February 24, 2019) and IVAS (a military variant of the HoloLens 2), each of the accused systems function similarly with reference to the ‘771 patent claim limitations as described below. Where needed, distinctions are made, with additional evidence and features described for HoloLens 2 and IVAS.</p> <p>In general, Microsoft has obtained patents covering its products and services related to the accused systems. On information and belief, Microsoft incorporates its patented features in the accused systems, and it is reasonable for D3D to rely on those Microsoft patents as evidence of how the HoloLens 1, HoloLens 2 and IVAS systems operate. Such citations to Microsoft patents are noted throughout the claim charts.</p> <p>The evidence below demonstrates that the accused systems operate as a computer system.</p> <p>For example, Microsoft has obtained US Patent No. 10,136,124, titled “Stereoscopic Display of Object.” The Abstract describes the product as “A computing device generates a stereoscopic display of an object by coordinating a first image and a second image.” The Abstract further describes how “the computing device may adjust at least one display property of the first image and/or the second image depending on one or more factors.” Similarly, the Summary of the Invention describes the product as “A computing device causes a stereoscopic display of an object by coordinating a display of a first image and a second image, one to each eye.” Claim 9 states, “A computing device, comprising: a processor; a memory having computer - executable instructions stored thereupon which, when executed by a computing device, cause the computing device to display a first image of an object on a display device, wherein the first image is aligned with a first eye of a user; display a second image of the object on the display device, wherein the second image is aligned with a second eye of the user; obtain data</p>

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indicating a vergence distance associated with the object; adjust a display property of the first image based, at least in part, on the vergence distance, wherein adjusting the display property of the first image obscures the display of the object to the first eye of the user for the purposes of reducing eyestrain.” (emphasis added). Microsoft’s ‘124 patent identifies April 27, 2015 as its priority date.

Microsoft, and other third parties, have published information concerning the accused systems, which further confirm that the accused systems operate as a computer system.

HoloLens (1st gen) hardware
09/16/2019 • 3 minutes to read • Applies to: HoloLens (1st gen)



Microsoft HoloLens (1st gen) is the world's first fully untethered holographic computer. HoloLens redefines personal computing through holographic experiences to empower you in new ways. HoloLens blends cutting-edge optics and sensors to deliver 3D holograms pinned to the real world around you.

Source: [https://docs.microsoft.com/en-us/hololens/hololens1-hardware#:~:text=Microsoft%20HoloLens%20\(1st%20gen\)%20is,the%20real%20world%20around%20you](https://docs.microsoft.com/en-us/hololens/hololens1-hardware#:~:text=Microsoft%20HoloLens%20(1st%20gen)%20is,the%20real%20world%20around%20you). (emphasis added).

For example, a Forbes January 14, 2017 article titled “Microsoft HoloLens Review: Winning the Reality Wars,” states:

“As a **standalone computer** it doesn't need to be connected to a desktop or laptop computer, it is genuinely standalone.”

Source: <https://www.forbes.com/sites/ewanspence/2017/01/14/microsoft-hololens-review-experience-review/#dfd83c0eabc0> (emphasis added)

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Further, a Verge April 6, 2016 article titled “Inside Microsoft’s HoloLens,” showed:

“Opening up the HoloLens is a startling reminder that this is a self-contained holographic **computer**.”



Image of components inside of the Microsoft display unit.

Source: <https://www.theverge.com/2016/4/6/11376442/microsoft-hololens-holograms-parts-teardown-photos-hands-on> (emphasis added)

The HoloLens 1 includes multiple, pre-installed software programs to provide the stereoscopic three-dimensional images.

Pre-installed software

- Windows 10
- Windows Store
- Holograms
- Microsoft Edge
- Photos
- Settings
- Windows Feedback
- Calibration
- Learn Gestures

Source: <https://docs.microsoft.com/en-us/hololens/hololens1-hardware>

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HoloLens 2

The HoloLens 2 is a display unit (DU), which includes a computer. The below image shows partial specifications of the HoloLens 2.

Compute and connectivity	
SoC	Qualcomm Snapdragon 850 Compute Platform
HPU	Second-generation custom-built holographic processing unit
Memory	4-GB LPDDR4x system DRAM
Storage	64-GB UFS 2.1
WiFi	802.11ac 2x2
Bluetooth	5.0
USB	USB Type-C

Source: <https://www.microsoft.com/en-us/hololens/hardware>

Further, Microsoft describes the HoloLens 2 as “an untethered holographic computer.”

HoloLens 2 hardware

09/17/2019 • 3 minutes to read • Applies to: HoloLens 2



Microsoft HoloLens 2 is an untethered holographic computer. It refines the holographic computing journey started by HoloLens (1st gen) to provide a more comfortable and immersive experience paired with more options for collaborating in mixed reality.

Source: <https://docs.microsoft.com/en-us/hololens/hololens2-hardware>

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