

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

YEALINK (USA) NETWORK TECHNOLOGY CO., LTD., and
YEALINK NETWORK TECHNOLOGY CO., LTD.
Petitioners,

v.

BARCO N.V.
Patent Owner

U.S. Patent No. 11,403,237
IPR2024-01437

**Declaration of Dr. Kevin C. Almeroth in Support of Petitioner's Reply in the
Inter Partes Review of U.S. Patent No. 11,403,237**

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TABLE OF EXHIBITS

EXHIBIT	DESCRIPTION
Ex-1001	U.S. Patent No. 11,403,237
Ex-1002	Declaration of Kevin C. Almeroth, Ph.D.
Ex-1003	Curriculum Vitae of Kevin C. Almeroth, Ph.D.
Ex-1004	File History of U.S. Patent No. 11,403,237
Ex-1005	U.S. Patent Application Publication No. 2005/0210390 (“Ono”)
Ex-1006	U.S. Patent Application Publication No. 2008/0074560 (“Ichieda”)
Ex-1007	U.S. Patent Application Publication No. 2006/0069840 (“Corbett”)
Ex-1008	RESERVED
Ex-1009	English Translation of Japanese Patent Application Publication No. 2008-165007 (“Uchida”)
Ex-1010	Japanese Patent Application Publication No. 2008-165007
Ex-1011	Certification for English Translation of Japanese Patent Application Publication No. 2008-165007
Ex-1012–Ex-1019	RESERVED
Ex-1020	U.S. Patent Application Publication No. 2010/0087139 (“Glass”)
Ex-1021	U.S. Patent Application Publication No. 2009/0198839 (“Banerjee”)
Ex-1022	U.S. Patent Application Publication No. 2011/0115689 (“Sugiyama”)
Ex-1023	U.S. Patent Application Publication No. 2009/0187687 (Hulbert”)
Ex-1024	U.S. Patent Application Publication No. 2003/0112975 (“Taiwanese”)
Ex-1025	RESERVED
Ex-1026	U.S. Patent Application Publication No. 2009/0172219 (“Mardiks”)

EXHIBIT	DESCRIPTION
Ex-1027	U.S. Patent Application Publication No. 2010/0295994 (“Kaplan”)
Ex-1028–Ex-1029	RESERVED
Ex-1030	EP Patent Application Publication No. 2107463 (“Deforche”)
Ex-1031	English Translation of Japanese Patent Application Publication No. 2007-208606 (“Maeda”)
Ex-1032	RESERVED
Ex-1033	U.S. Patent Application Publication No. 2002/0196378 (“Slobodin”)
Ex-1034	U.S. Patent Application Publication No. 2002/0174254 (“Kita”)
Ex-1035–Ex-1049	RESERVED
Ex-1050	Imation Wireless Projection Link User Guide
Ex-1051	EZAir Press Release, “EZAir Wireless PC to TV Solutions Now Available Across Europe,” March 16, 2011
Ex-1052	Warpia Product Brief, “Wireless USB PC to TV Audio/Video Display Adapter,” 2009
Ex-1053	Q-Waves Product Overview, “Quicklink TV,” November 2010
Ex-1054	IOGear Installation Guide, “Wireless USB to VGA Kit,” 2008
Ex-1055	JP Patent Application Publication No. 2007-208606
Ex-1056	Certification for English Translation of JP Patent Application Publication No. 2007-208606
Ex-1057	RESERVED
Ex-1058	U.S. Patent Application Publication No. 2011/0038005 (“Ochai”)
Ex-1059	U.S. Patent Application Publication No. 2006/0229100 (“Born”)
Ex-1060	U.S. Patent No. 7,207,059 (“Kurian”)
Ex-1061–Ex-1066	RESERVED

EXHIBIT	DESCRIPTION
EX-1067	Clickshare CSE-200 base unit firmware
EX-1068	RESERVED
EX-1069	CSE-800 User Guide
EX-1070	Brogioli '002 depo transcript
EX-1071	Brogioli '237 depo transcript
EX-1072	Brogioli '676 depo transcript
EX-1073	Brogioli '951 depo transcript
EX-1074	What is a driver?
EX-1075	ClickShare Button connection issues
EX-1076	ClickShare C-5 Base Unit Datasheet
EX-1077	https://www.barco.com/en/inspiration/news-insights/2019-05-03-different-ways-to-share-your-content-with-clickshare (retrieved September 24, 2025).
Ex-1078	Erwin Six depo. transcript
Ex-1079	Barco Driver Version Installed 18-7-2025 (https://www.barco.com/en/support/knowledge-base/12770-clickshare-windows-driver-version-installed)
Ex-1080	“Why is ClickShare Windows Driver required and how can I install/update it on my PC?” (https://www.barco.com/en/support/knowledge-base/5676-clickshare-windows-driver-requirements-and-installation)
Ex-1081	Minidrivers, Miniport drivers, and driver pairs (https://learn.microsoft.com/en-us/windows-hardware/drivers/gettingstarted/minidrivers-and-driver-pairs)
Ex-1082	Yealink Press Release (https://www.yealink.com/en/product-detail/wireless-presentation-wpp30-eol)
Ex-1083	Second Declaration of Declaration of Kevin C. Almeroth, Ph.D.
Ex-1084	Dr. Brogioli Dist. Ct. Transcript

EXHIBIT	DESCRIPTION
Ex-1085	USB Audio Class System Driver (Usbaudio.sys) (https://learn.microsoft.com/en-us/windows-hardware/drivers/audio/usb-audio-class-system-driver--usbaudio-sys-)
Ex-1086	U.S. Patent No. 10,762,002
Ex-1087	RESERVED
Ex-1088	U.S. Patent No. 11,258,676
Ex-1089	U.S. Patent No. 11,422,951
Ex-1090	Deposition transcript of Andrew Ludke, Crestron
Ex-1091	Deposition transcript of William Scally, Barco's damages expert

I. INTRODUCTION

1. I have reviewed the Patent Owner's Response ("POR," Paper 15) and the associated exhibits. Below are my opinions concerning the POR.

II. BARCO'S CONCERNS WITH MY TESTIMONY SHOULD NOT BE AFFORDED WEIGHT.

2. In my opinion, the Patent Owner selectively references my testimony in an attempt to suggest inconsistency where there is none. For example, the Patent Owner highlights my statement that "data is data." POR, 10-11, citing EX-2006, transcript from IPR2024-01436. It is universally accepted in the field of Computer Science that all data in general-purpose computers is ultimately represented as binary values, i.e., 1's and 0's. This data, regardless of its type, is transmitted and received over various interfaces, such as USB. My testimony was limited to this foundational concept and, in my view, does not reflect any deficiency in my expertise.

3. In a separate proceeding that addressed an unrelated issue, I testified regarding prior art that teaches transcoding data "based on a type of functional data." See Ex. 2030, ¶¶212-213. In my opinion, this simply illustrates the routine nature of encoding and decoding audio and video data with different codecs, which is a common practice in the field. That testimony is not relevant to my "data is data" comment in the related '1436 IPR, except to reaffirm that all digital data

consists of 1's and 0's and can be transferred across any general-purpose computer interface, such as USB.

4. The Patent Owner also asserts that I lack clarity regarding the definition of “driver,” noting that I provided a specific definition for this proceeding. In my experience, there is no inconsistency in this position, as the term “driver” can have different meanings depending on the context in which it is used. It is common in the field for technical terms to have context-dependent definitions.

5. Furthermore, the Patent Owner devotes several pages to disputing my opinion that implementation details often represent design choices, claiming that my views are unreliable or inconsistent. POR, 12-16. In my opinion, the Patent Owner's argument attempts to confine the prior art solely to its explicit disclosures, without considering how a POSA would recognize the many possible methods of implementation.

III. GROUND I – IT WOULD HAVE BEEN OBVIOUS TO COMBINE KAPLAN AND MARDIKS.

A. Mardiks Is in the Same Field of Endeavor as the '237 Patent and Is Reasonably Pertinent to the Particular Problem

6. It is my opinion that Mardiks is in the same field of endeavor as the '237 patent at least because both concern using similar USB peripheral devices. Ex-1001, abstract, 8:42-43, claims 5 and 13. Ex-1026, ¶6 (Mardiks using “a USB flash drive to automatically launch an application residing in its memory after it is

connected to a host”). They both also include running applications stored on those peripheral devices. The POSA would therefore have found them directed to very similar problems of using applications stored on peripheral devices.

B. The POSA Would Have Been Motivated to Combine Kaplan and Mardiks as a Finite Number of Identified Predictable Solutions with a Reasonable Expectation of Success of Communicating Data using an HID Driver

7. In my opinion, Kaplan teaches using the windows operating system, which includes pre-installed generic drivers, to connect a peripheral device to a personal computer. Ex-1027, ¶¶17, 45, 47. Mardiks teaches that one way to connect a peripheral device was via a human interface device (HID) driver. Ex-1026, ¶¶2-3, 28. Mardiks discloses a computer that “sends requests for data to the peripheral device” via the HID driver. *Id.*, ¶¶29-30. Mardiks does not limit the type of data and states that the data “is used broadly in the present disclosure and is intended to include any carrier of information, such as commands, signals and the like, as will be appreciated by one of ordinary skill in the art.” *Id.*, ¶21. Therefore, it is my opinion that the POSA would have understood that the A/V screen capture data disclosed by Kaplan could be sent using Mardiks’ pre-installed generic driver because Mardiks states that any data can be sent using an HID driver.

8. In addition to Mardiks teachings, it is my opinion that Deforche provides additional motivation to use an HID driver, as described by Mardiks, because both Mardiks and Deforche teach using HID drivers to send any data type.

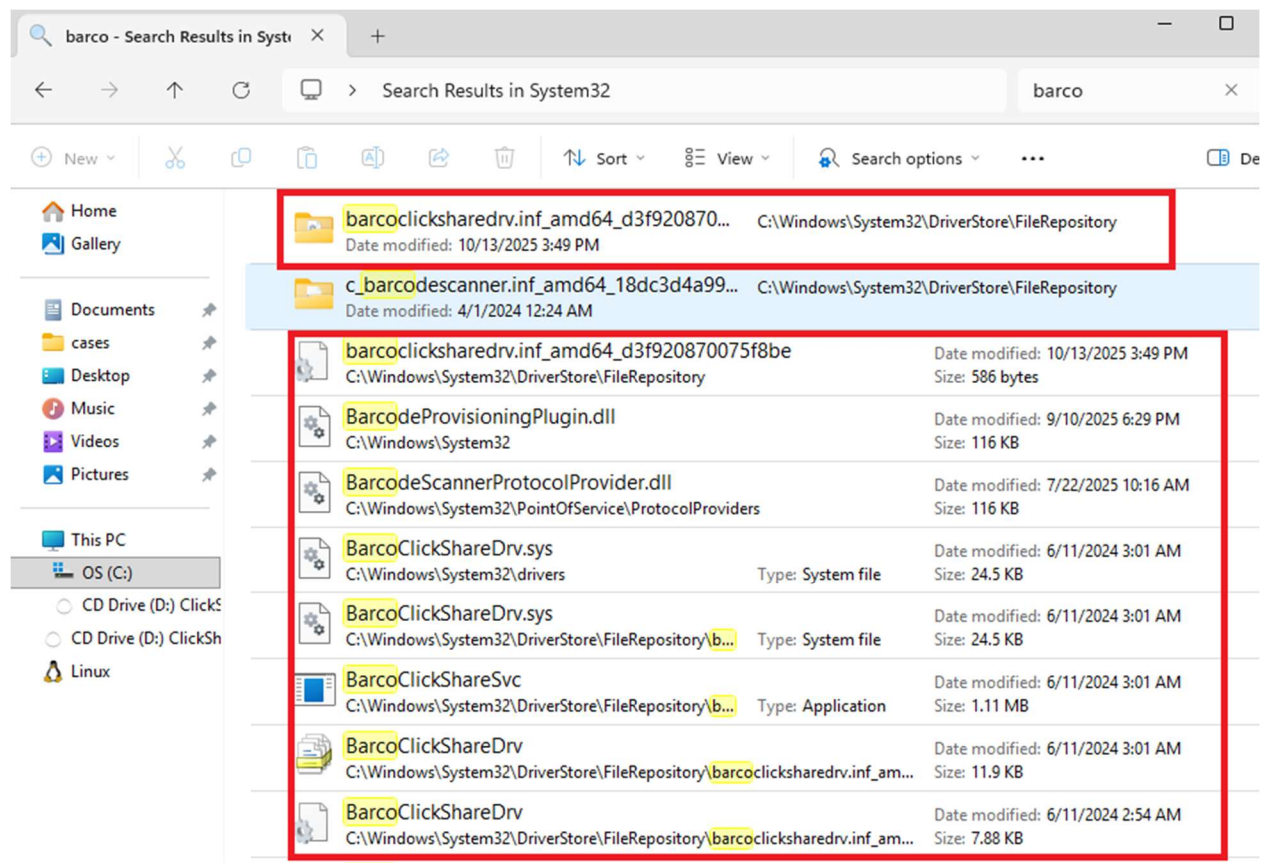
Ex-1030, ¶¶10, 33; Ex-1070, 12:2-19 (Dr. Brogioli testifying that Deforche's transmitter can send any data type, including audio).

IV. GROUND II – IT WOULD HAVE BEEN OBVIOUS TO COMBINE MAEDA AND DEFORCHE

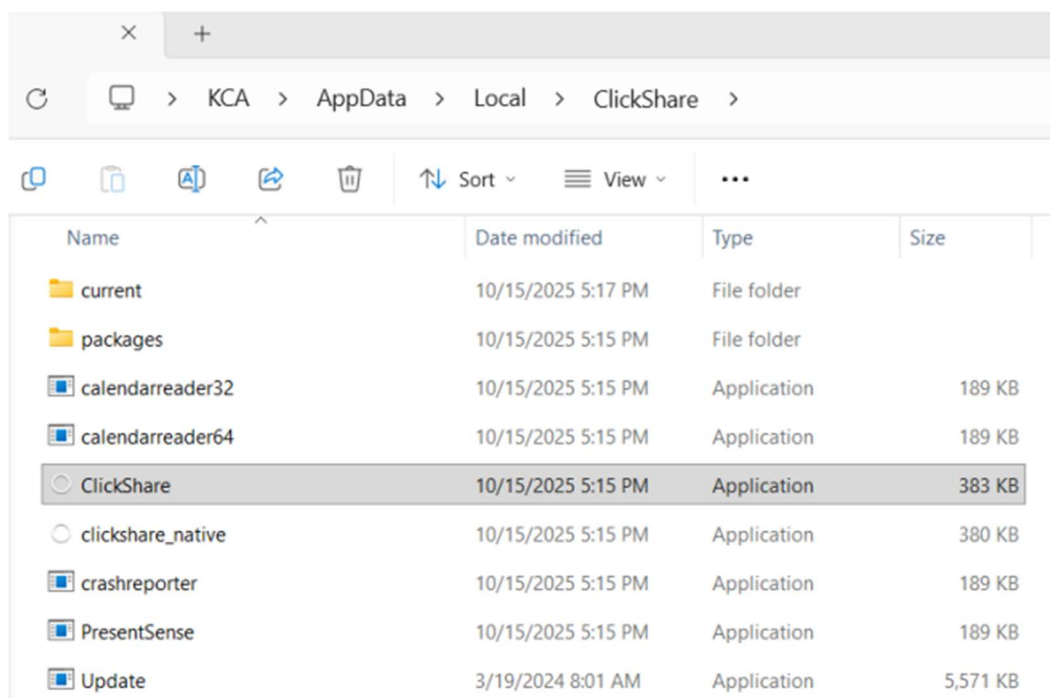
A. The POSA Would Have Had a Reasonable Expectation of Modifying Maeda to Use a Zero-Footprint Application Like Deforche's.

9. It is my opinion that Maeda's use of special purpose software is unimportant because the '002 patent obviously also uses special purpose software. Ex-1001, 6:23-25 (“[T]he present invention use software stored on the peripheral device which allows screen scraping when run on the processing device.”). Moreover, Dr. Brogioli testified that Barco's system installs special purpose software, but it is still zero-footprint. Ex-1070, 20:11-24:23 (testifying that Barco's software is zero-footprint despite driver installation); *see also* Ex-1069, 1 (“ClickShare driver is needed.”). Dr. Brogioli testified that such a system still has a “zero-footprint” despite having a driver installed permanently on a user's computer. Or, Maeda could have followed a zero-footprint approach, as disclosed by Deforche, which uses a portable application, such as Maeda's application which would obviously be implemented as a zero-footprint application due to the teaching, suggestion, or motivation disclosed by Deforche. Ex-1030, ¶¶16, 28 (“This means that the need can be avoided to install drivers and/or applications on PC's to give USB modem connectivity.”) 29-43, 50-51, and FIG. 4a.

10. I confirmed that Barco installs several files permanently after I connected a ClickShare dongle to my PC; below is a screenshot of the files I identified:



The Barco ClickShare dongle also attempted to create a launch-on-boot application and installed special-purpose software in my ../AppData/Local/ directory:



11. Dr. Brogioli’s report for the ’237 patent included one of these driver files. EX-2004, ¶125 (including BarcoClickShareDrv.cab). I also determined that the Barco website discusses permanently installing files. *See* Ex-1079 (“Barco Driver Version Installed”); Ex-1080 (“Why is ClickShare Windows Driver required and how can I install/update it on my PC? ... Once a ClickShare Button is plugged

into the PC, the Microsoft Driver Update mechanism will attempt to automatically download and install / update the ClickShare Windows Driver”).

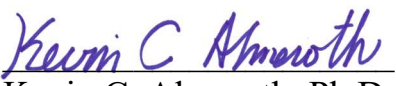
1. Maeda and Deforche Demonstrate a Reasonable Expectation of Success in Using First and Second “*Pre-Installed Generic Drivers*” for Audio and Video Signals.

12. First, I understand that Dr. Brogioli admitted that Deforche teaches this limitation. Ex-1072, 72:13-73:13; *see also* Ex-1030, abstract (“setting up, by means of a pre-installed generic driver of the operating system on the computer device, a modem/host communication interface”). I agree with Dr. Brogioli on this point.

13. Second, it is my opinion the person of ordinary skill in the art would have recognized that each of Maeda, Ahmed, and Deforche include drivers to drive their respective peripheral devices Ex-1027, ¶¶46-48 (Maeda disclosing using standard PC which obviously includes an operating system and drivers); EX-1014, 14:10-13; 17:3-16, 18:26-19:21 (Ahmed disclosing a separate “normal audio driver” and a “mirror display driver” or “normal display driver”); EX-1030, ¶10 (Deforche disclosing “a human interface device (HID) [or] a mass storage device (MSD) driver.”); *see also* Ex-1074 (“What is a driver?”). They each include differing levels of disclosure concerning drivers, and perhaps do not use the word “driver,” just they might not explicitly mention other standard PC components, such as memory, a processor, a motherboard, or permanent storage, such as a hard disk drive. However, the POSA would have understood that the disclosed PCs necessarily or at least

obviously included each of these components and drivers to make them work. Therefore, I relied on the various disclosures of the three references to provide explicit disclosure for what the POSA would have understood would have been obvious implementation details known in the art, such that a simple substitution of the various known methods would achieve the predictable result of communicating between a processing device and a peripheral device.

14. I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

By: 
Kevin C. Almeroth, Ph.D.

Dated: October 15, 2025