

Paper No. \_\_\_\_

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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VALVE CORPORATION,  
Petitioner,

v.

IMMERSION CORPORATION,  
Patent Owner.

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Case No. IPR2024-00714  
Patent No. 10,627,907

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**NOTICE OF INTENT TO DESIGNATE ELIZABETH A. DIMARCO,  
A PROVISIONALLY RECOGNIZED PATENT TRIAL  
AND APPEAL BOARD ATTORNEY, AS BACK-UP COUNSEL**

## LISTING OF EXHIBITS

| Exhibit | Description                                                                                                                                              |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1001    | U.S. Patent No. 10,627,907                                                                                                                               |
| 1002    | Prosecution History of U.S. Patent No. 10,627,907                                                                                                        |
| 1003    | Declaration of Jean Renard Ward                                                                                                                          |
| 1004    | CV of Jean Renard Ward                                                                                                                                   |
| 1005    | U.S. Patent Application Publication No. 2008/0055244 (“Cruz-Hernandez”)                                                                                  |
| 1006    | U.S. Patent Application Publication No. 2007/0152988 (“Levin”)                                                                                           |
| 1007    | U.S. Patent Application Publication No. 2013/0147610                                                                                                     |
| 1008    | U.S. Patent Application Publication No. 2001/0008849                                                                                                     |
| 1009    | Proof of Service in <i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv-00712                                                                                |
| 1010    | Defendant Valve’s Motion to Stay Pending <i>Inter Partes</i> Review, <i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv-00712 (W.D. Wash.)                  |
| 1011    | Federal Court Management Statistics (September 2023)                                                                                                     |
| 1012    | U.S. Patent Application Publication No. 2006/0142657                                                                                                     |
| 1013    | <i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv-00712, Dkt. No. 1 (Complaint) (W.D. Wash.) (filed Oct. 20, 2023)                                         |
| 1014    | Plaintiff’s Preliminary Infringement Contentions, <i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv-00712 (W.D. Wash.) (served Oct. 20, 2023)              |
| 1015    | Exhibit E to Plaintiff’s Preliminary Infringement Contentions, <i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv-00712 (W.D. Wash.) (served Oct. 20, 2023) |
| 1016    | U.S. Patent Application Publication No. 2004/0032395 (“Goldenberg”)                                                                                      |
| 1017    | U.S. Patent Application Publication No. 2007/0139375 (“Rosenberg”)                                                                                       |
| 1018    | U.S. Patent No. 6,203,432 (“Roberts”)                                                                                                                    |
| 1019    | November 21, 2023 Order Setting Jury Trial in <i>Immersion Corp. v. Valve Corp.</i> , Case No. 2:23-cv-00712 (W.D. Wash.)                                |
| 1020    | U.S. Patent No. 4,739,128                                                                                                                                |
| 1021    | U.S. Patent No. 6,480,185                                                                                                                                |
| 1022    | <i>RESERVED – NOT USED</i>                                                                                                                               |
| 1023    | International Application Publication Number WO 1999/066997 A1                                                                                           |

| <b>Exhibit</b> | <b>Description</b>                                                                                                                                                                                                                                   |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1024           | Minsky et al., “Feeling and seeing Issues in force display.” In Proceedings of the 1990 symposium on Interactive 3D graphics (I3D '90). Association for Computing Machinery, New York, NY, USA, 1990, 235–241.                                       |
| 1025           | Miller et al., "Design of 3D haptic widgets". Proceedings of the Symposium on Interactive 3D Graphics, 1999, pp. 97-102.                                                                                                                             |
| 1026           | U.S. Patent No. 5,914,705                                                                                                                                                                                                                            |
| 1027           | U.S. Patent No. 5,414,337                                                                                                                                                                                                                            |
| 1028           | U.S. Patent No. 4,590,909                                                                                                                                                                                                                            |
| 1029           | U.S. Patent No. 3,721,309                                                                                                                                                                                                                            |
| 1030           | U.S. Patent No. 2,710,596                                                                                                                                                                                                                            |
| 1031           | U.S. Patent No. 2,679,234                                                                                                                                                                                                                            |
| 1032           | “Jog dial.” Wikipedia,<br><a href="https://en.wikipedia.org/w/index.php?title=Jog_dial&amp;oldid=332257258">https://en.wikipedia.org/w/index.php?title=Jog_dial&amp;oldid=332257258</a> (accessed Nov. 21, 2023)                                     |
| 1033           | U.S. Patent No. 4,866,542                                                                                                                                                                                                                            |
| 1034           | U.S. Patent No. 5,289,439                                                                                                                                                                                                                            |
| 1035           | U.S. Patent No. 4,549,173                                                                                                                                                                                                                            |
| 1036           | U.S. Patent No. 4,344,351                                                                                                                                                                                                                            |
| 1037           | “Submachine gun.” Wikipedia, 10 November 2014,<br><a href="https://en.wikipedia.org/w/index.php?title=Submachine_gun&amp;oldid=633180945">https://en.wikipedia.org/w/index.php?title=Submachine_gun&amp;oldid=633180945</a> (accessed Feb. 10, 2024) |
| 1038           | “Sa 23.” Wikipedia, 9 December 2014,<br><a href="https://en.wikipedia.org/w/index.php?title=Sa_23&amp;oldid=637263283">https://en.wikipedia.org/w/index.php?title=Sa_23&amp;oldid=637263283</a> (accessed Feb. 10, 2024)                             |
| 1039           | U.S. Patent No. 4,553,258                                                                                                                                                                                                                            |
| 1040           | U.S. Patent No. 4,865,149                                                                                                                                                                                                                            |
| 1041           | Ramstein et al., “The PANTOGRAPH: A large workspace haptic device for a multi-modal human-computer interaction.” CHI '94, Conference on Human Factors in Computing Systems ACM/SIGCHI Companion-4/94. 57-58 (1994).                                  |
| 1042           | Rosenberg, “A Force Feedback Programming Primer-For PC Gaming Peripherals Supporting I-Force 2.0 and Direct-X 5.0,” Immersion Corporation 1997.                                                                                                      |
| 1043           | U.S. Patent No. 5,184,319                                                                                                                                                                                                                            |
| 1044           | Solomon, “Sensors Handbook” 2 <sup>nd</sup> Edition, McGraw-Hill 2010.                                                                                                                                                                               |
| 1045           | Fraden, “Handbook of Modern Sensors: Physics, Designs, and Applications.” 3 <sup>rd</sup> Edition, Springer New York, NY 2004.                                                                                                                       |

| <b>Exhibit</b> | <b>Description</b>                                                                                                                                                                      |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1046           | Webster, J.G., & Eren, H. (Eds.). (2014). Measurement, Instrumentation, and Sensors Handbook: Spatial, Mechanical, Thermal, and Radiation Measurement (2 <sup>nd</sup> ed.). CRC Press. |
| 1047           | Buxton, “Touch Gesture and Marking,” Ch. 7 in Baecker, ed., Readings in Human-Computer Interaction (1995)                                                                               |
| 1048           | U.S. Patent No. 6,160,489                                                                                                                                                               |
| 1049           | Strong, “An Electrotactile Display,” IEEE, Trans. On Man-Machine Sys., mms-11:1 (Mar. 1970)                                                                                             |
| 1050           | Massie, “Initial Haptic Explorations with the Phantom: Virtual Touch Through Point Interaction” MIT Thesis (1996)                                                                       |
| 1051           | Bliss, “Optical-to-Tactile Image Conversion for the Blind,” IEEE, Trans. On Man-Machine Sys., mms-11:1 (Mar. 1970)                                                                      |
| 1052           | European Patent Publication No. EP 0265011 A1                                                                                                                                           |
| 1053           | U.S. Patent No. 5,388,992                                                                                                                                                               |
| 1054           | IBM, “Mouse Ball-Actuating Device with Force and Tactile Feedback,” IBM Technical Disclosure Bulletin 32:9B (Feb. 1990)                                                                 |
| 1055           | Fukumoto, “Active Click Tactile Feedback for Touch Panels,” CHI 2001 Interactive Posters (2001)                                                                                         |
| 1056           | International Application Publication Number WO 92/00559 A1                                                                                                                             |
| 1057           | U.S. Patent Application Publication No. 2006/0241864 A1                                                                                                                                 |
| 1058           | U.S. Patent No. 5,782,639                                                                                                                                                               |
| 1059           | U.S. Patent Application Publication No. 2006/0049010 A1                                                                                                                                 |
| 1060           | International Application Publication No. WO 2004/042693 A1                                                                                                                             |
| 1061           | U.S. Application Publication No. 2003/0030619 A1                                                                                                                                        |
| 1062           | U.S. Patent No. 6,424,333                                                                                                                                                               |
| 1063           | European Application Publication No. EP 0799597 A1                                                                                                                                      |
| 1064           | U.S. Patent No. 5,719,561                                                                                                                                                               |
| 1065           | U.S. Patent No. 5,973,441                                                                                                                                                               |
| 1066           | Minsky, “Computational Haptics: The Sandpaper System for Synthesizing Texture for a Force-Feedback Display” MIT Thesis (1995)                                                           |
| 1067           | U.S. Patent No. 5,451,924                                                                                                                                                               |
| 1068           | Patrick, “Design Construction and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments,” MIT Thesis (1990)                                       |
| 1069           | Massie, “The PHANToM Haptic Interface—A Device for Probing Virtual Objects” in ASME, Dynamic Systems and Control (1994)                                                                 |
| 1070           | U.S. Patent No. 5,982,352                                                                                                                                                               |

| <b>Exhibit</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                      |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1071           | U.S. Patent No. 6,131,097                                                                                                                                                                                                                                                                                                               |
| 1072           | U.S. Patent No. 6,337,678                                                                                                                                                                                                                                                                                                               |
| 1073           | U.S. Patent No. 6,219,034                                                                                                                                                                                                                                                                                                               |
| 1074           | U.S. Patent No. 6,219,032                                                                                                                                                                                                                                                                                                               |
| 1075           | U.S. Patent No. 4,885,565                                                                                                                                                                                                                                                                                                               |
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| 1080           | Johnson, “Process Control Instrumentation Technology (8 <sup>th</sup> Ed.),” Pearson Education Limited 2014.                                                                                                                                                                                                                            |
| 1081           | de Silva, Sensors and Actuators: Control System Instrumentation. CRC Press 2007.                                                                                                                                                                                                                                                        |
| 1082           | Liptak, Instrument Engineers' Handbook. Vol. 2, Process Control and Optimization: Instrument Engineers Handbook (4th Ed.). CRC Press 2006.                                                                                                                                                                                              |
| 1083           | “normalize” Concise Oxford American Dictionary                                                                                                                                                                                                                                                                                          |
| 1084           | U.S. Patent No. 5,012,415                                                                                                                                                                                                                                                                                                               |
| 1085           | “mapping” The Penguin Dictionary of Mathematics 4 <sup>th</sup> edition (2008)                                                                                                                                                                                                                                                          |
| 1086           | “function” Wiktionary, (30 August 2017)<br><a href="https://web.archive.org/web/20170830044824/https://en.wiktionary.org/wiki/function">https://web.archive.org/web/20170830044824/https://en.wiktionary.org/wiki/function</a> (accessed Feb. 22, 2024) Wiktionary                                                                      |
| 1087           | “transfer function” Wiktionary, (7 April 2014)<br><a href="https://web.archive.org/web/20140407051205/http://en.wiktionary.org/wiki/transfer_function">https://web.archive.org/web/20140407051205/http://en.wiktionary.org/wiki/transfer_function</a> (accessed Feb. 22, 2024)                                                          |
| 1088           | “Analog-to-digital converter” Wikipedia, 26 November 2014,<br><a href="https://en.wikipedia.org/w/index.php?title=Analog-to-digital_converter&amp;oldid=635499644">https://en.wikipedia.org/w/index.php?title=Analog-to-digital_converter&amp;oldid=635499644</a> (accessed Feb. 19, 2024)                                              |
| 1089           | “Analog-to-Digital (ADC) Converter Types & ADC Functions” Arrow, <a href="https://www.arrow.com/en/research-and-events/articles/analog-to-digital-adc-converter-types-and-basic-functions">https://www.arrow.com/en/research-and-events/articles/analog-to-digital-adc-converter-types-and-basic-functions</a> (accessed Feb. 22, 2024) |
| 1090           | “How do Analog to Digital Converters (ADCs) work?” CircuitBread, (17 May 2022) <a href="https://www.circuitbread.com/ee-faq/how-do-analog-to-digital-converters-adcs-work">https://www.circuitbread.com/ee-faq/how-do-analog-to-digital-converters-adcs-work</a> (accessed Feb. 22, 2024)                                               |

| Exhibit | Description                                                                                                                                                                                                                                                                                                       |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1091    | “computation” Wiktionary, (14 August 2014)<br><a href="https://web.archive.org/web/20140814222220/http://en.wiktionary.org/wiki/computation">https://web.archive.org/web/20140814222220/http://en.wiktionary.org/wiki/computation</a> (accessed Feb. 25, 2024)                                                    |
| 1092    | Carlson, Handbook of Analog Computation. Electronic Associates, Inc. 1971.                                                                                                                                                                                                                                        |
| 1093    | “Analog computer” Wikipedia, 30 November 2014,<br><a href="https://en.wikipedia.org/w/index.php?title=Analog_computer&amp;oldid=636030888">https://en.wikipedia.org/w/index.php?title=Analog_computer&amp;oldid=636030888</a> (accessed Feb. 22, 2024)                                                            |
| 1094    | “analogue computer,” Newnes Dictionary of Electronics. 2002.                                                                                                                                                                                                                                                      |
| 1095    | “analog computer” Merriam-Webster Dictionary. 2 July 2013.<br><a href="https://web.archive.org/web/20130702122319/http://www.merriam-webster.com/dictionary/analog%20computer">https://web.archive.org/web/20130702122319/http://www.merriam-webster.com/dictionary/analog%20computer</a> (accessed Feb 24, 2024) |
| 1096    | “analogue computer” Oxford Dictionary of Computer Science (2016)                                                                                                                                                                                                                                                  |
| 1097    | Ulmann, Analog Computing. Oldenbourg Wissenschaftsverlag GmbH. 2013.                                                                                                                                                                                                                                              |
| 1098    | Hyndman, Analog and Hybrid Computing. Pergamon Press. 1970.                                                                                                                                                                                                                                                       |
| 1099    | Scott, Analog and Digital Computer Technology. McGraw-Hill. 1960.                                                                                                                                                                                                                                                 |
| 1100    | Dictionary of Computer and Internet Terms (10 <sup>th</sup> ed.) Kaplan Publishing. 2009.                                                                                                                                                                                                                         |
| 1101    | U.S. Patent No. 5,189,355                                                                                                                                                                                                                                                                                         |
| 1102    | U.S. Patent No. 6,703,550                                                                                                                                                                                                                                                                                         |
| 1103    | U.S. Patent No. 5,513,306                                                                                                                                                                                                                                                                                         |
| 1104    | U.S. Application Publication No. 2003/0114075 A1                                                                                                                                                                                                                                                                  |
| 1105    | U.S. Patent No. 6,107,765                                                                                                                                                                                                                                                                                         |
| 1106    | U.S. Patent No. 5,642,288                                                                                                                                                                                                                                                                                         |
| 1107    | U.S. Patent No. 5,530,859                                                                                                                                                                                                                                                                                         |
| 1108    | U.S. Patent No. 7,671,846                                                                                                                                                                                                                                                                                         |
| 1109    | U.S. Patent No. 4,428,005                                                                                                                                                                                                                                                                                         |
| 1110    | “Stick shaker” Wikipedia. <a href="https://en.wikipedia.org/wiki/Stick_shaker">https://en.wikipedia.org/wiki/Stick_shaker</a> (accessed Feb. 20, 2024)                                                                                                                                                            |
| 1111    | U.S. Application Publication No. 2011/0295395A1                                                                                                                                                                                                                                                                   |
| 1112    | Declaration of Elizaeth A. DiMarco in Support of Admission <i>Pro Hac Vice</i>                                                                                                                                                                                                                                    |
| 1113    | Declaration of Nathan R. Speed in Support of Admission <i>Pro Hac Vice</i>                                                                                                                                                                                                                                        |

Pursuant to 37 C.F.R. § 42.10(c)(2), and the Board's authorization given via email on March 19, 2025, Valve Corporation hereby submits this Notice of Intent to Designate Elizabeth A. DiMarco, a Provisionally Recognized PTAB Attorney, as Back-up Counsel.

Registered practitioner Richard F. Giunta, Reg. No. 36,149 is serving as Lead Counsel for Petitioner in this proceeding. *See* Paper 2. The most recent prior proceeding in which Ms. DiMarco was recognized *pro hac vice* by order of the Board, pursuant to a motion of the type described in 37 C.F.R. §42.10(c)(1), was IPR2022-00132 (Paper 9, March 4, 2022).

Filed herewith is a certification in the form of a declaration in which Ms. DiMarco attests to satisfying all requirements set forth by the Board for *pro hac vice* recognition of a provisionally recognized PTAB attorney. *See* Ex. 1112. A power of attorney from the Petitioner appointing Ms. DiMarco was previously filed in this proceeding on February 16, 2024. *See* Paper 1.

Respectfully submitted,  
*Valve Corporation*

Date: March 20, 2025

/Richard Giunta /  
Richard F. Giunta, Reg. No. 36,149  
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**CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6 (E)(4)**

I certify that on March 20, 2025, I will cause a copy of the foregoing document, including any exhibits filed therewith, to be served via electronic mail, as previously consented to by Patent Owner, upon the following:

David D. Schumann  
Palani P. Rathinasamy  
Moses Xie  
Timothy Dewberry

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Date: March 20, 2025

/MacAulay Rush/  
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Paralegal  
WOLF, GREENFIELD & SACKS, P.C.