BARCELÓ, HARRISON & WALKER, LLP
Joshua C. Harrison, USPTO Reg.# 45,686
Reynaldo C. Barceló, USPTO Reg.# 42,290
E-mail: josh@bhiplaw.com
2901 West Coast Hwy, Suite 200
Newport Beach, California 92663
Telephone: (949) 340-9736
Facsimile: (949) 258-5752

Attorneys for Petitioner, Valve Corporation

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EXPERT DECLARATION OF DAVID REMPEL, M.D., IN SUPPORT OF VALVE CORPORATION'S SECOND PETITION FOR INTER-PARTES REVIEW OF U.S. PATENT 8,641,525.

IPR Petition Filing Date: 2016-10-25

Trial Number: To Be Assigned

Panel: To Be Assigned

Patent filing date: 2011-06-17

Patent issue date: 2014-02-04

Title: CONTROLLER FOR VIDEO GAME CONSOLE

Purported Inventors: Simon Burgess
Duncan Ironmonger

Purported assignee:
IRONBURG INVENTIONS LTD.
a United Kingdom Limited Company

I, David Rempel, M.D., hereby declare as follows:

1. I have been retained by Valve Corporation to provide my opinions as an expert witness regarding certain questions regarding U.S. Patent 8,641,525 (hereinafter the " '525 patent"), U.S. Patent 6,362,813 to Wörn et al. (hereinafter "Wörn"), U.S. Patent Application Publication 2010/0073283 to Enright (hereinafter "Enright"), U.S. Patent 6,153,843 to Date et al. (hereinafter "Date"), U.S. Patent 6,364,771 to Lee (hereinafter "Lee"), and U.S. Patent 4,032,728 to Oelsch (hereinafter "Oelsch").

EDUCATION AND EXPERIENCE

2. I am a Professor in the Department of Bioengineering at the University of California, Berkeley. I am also a Professor of Medicine Emeritus in the Department of Medicine at the University of California, San Francisco, where I have worked for more than 26 years. I have held a California Medical License since 1982.

3. In my current capacity, I am affiliated with the Ergonomics Program, in the Division of Occupational and Environmental Medicine.

4. I am a Fellow of the Human Factors and Ergonomics Society, and a Certified Professional Ergonomist by Board of Certification in Professional Ergonomics (1994).

5. I am a named inventor on U.S. Patent 6,509,891, entitled "Ergonomic Mouse Device," filed on 22 February, 2000.

6. In 2006 I was awarded the IEA/Liberty Mutual Prize in Occupational Safety and Ergonomics.

7. In 2007, I was awarded the HFES/User-Centered Product Design Award.

8. I am a member of the Editorial Board of the IIE Transactions on Occupational Ergonomics and Human Factors, and recently was a member of the Editorial Boards of the Human Factors journal and the Applied Ergonomics journal.

I have also served as a reviewer of professional authorship submitted to the International Journal of Industrial Ergonomics, and the Journal of Hand Surgery (Am).

9. I am an author or co-author of more than 150 peer-reviewed publications in my field, 18 books, chapters, or guidelines, and numerous government reports and conference presentations. Many of these were pertenent to the ergonomic evaluation and design of hand held devices.

10. Additional information on my education, experience, publications, and awards are found in my CV, attached as Exhibit 1 to this Declaration.

OPINIONS

11. In my opinion, the level of ordinary skill in the art pertaining to the '525 patent is that of a designer of commercial video game controllers. No collegiate education was required to fully understand the particular subject matter of the '525 patent at the time of its filing, or today. However, one of ordinary skill in the video game controller design art when the '525 patent was filed would have typically had a bachelor's degree in an industrial design or engineering field, and approximately two years of relevant experience.

12. The disclosure of the '525 patent does not adequately distinguish "thickness" from width, and therefore one of ordinary skill in the art would have considered the claim term "thickness" to have been vague and ambiguous at the time that the '525 patent was filed.

13. The term "inherently resilient" is expressly defined at col. 3, lines 34-35 of the '525 patent to mean that the elongate members "return to an unbiased position when not under load." One of ordinary skill in the art would understand that the "load" in this context must be supplied by the user's finger(s).

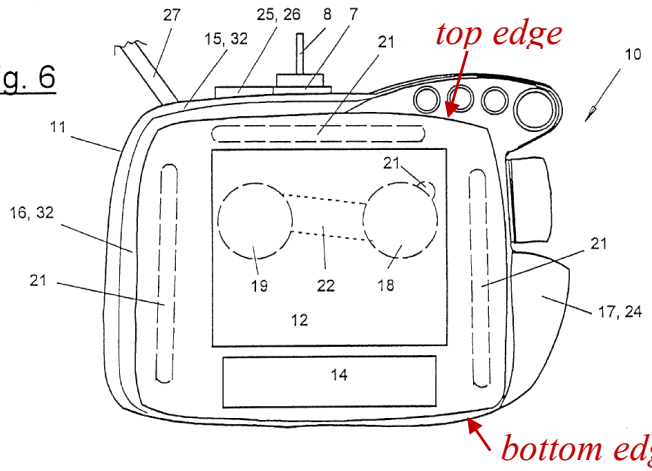
14. The '525 patent does not describe any difference between a "paddle lever" versus a "button," a "trigger," or any other control member, and so one of

ordinary skill in the art would have generally considered prior art buttons, triggers, and other control members to qualify as a "paddle lever" in the context of the '525 patent when it was filed.

15. One of ordinary skill in the art would have considered the controller disclosed by Wörn to have been hand held, when the '525 patent was filed, before, and since. For example, Wörn, col. 5, lines 34-37 states: "The operator can hold the programming device (10) in at least three [different] intended manners with the above described grip areas (15, 16, 17, 18). On the one hand, he can grasp the lateral grip strips (16, 17) with both hands."

16. Each of the switching keys 21 of Wörn is an elongate member that is shown in Fig. 6 of Wörn to be disposed on the back (i.e. underside) of the controller. Note that the switching keys 21 are shown in phantom lines. Fig. 6 of Wörn shows that each of the switching keys 21 extends substantially the full distance between a top edge and a bottom edge of the Wörn controller 10, and easily more than half of that full distance.

Fig. 6



17. Wörn col. 2, line 65 – col. 3, line 2, states: "One or more switching keys, which are designed as, e.g., permission and/or start/stop keys, are located on the underside of the housing in the vicinity of the grip strips in a position favorable for gripping." Wörn col. 5, lines 63-65 states: "Switching keys (21), which are preferably arranged in the area of the recessed grip (31), are located at one or more

grip strips (15, 16, 17) on the underside of the housing." One of ordinary skill in the art in June 2011 would understand that the term "underside of the housing," as used by Wörn in the foregoing contexts, to correspond to the "back" of the controller, as claimed in the '525 patent.

18. One of ordinary skill in the art when the '525 patent was filed would have considered it to be an obvious variation to lengthen the switching keys 21 of Wörn. For example, one of ordinary skill in the art then would have been motivated to extend the switching keys 21 of Wörn longer, to so that a user may better accommodate locating and depressing the switching keys 21 of Wörn with one or more fingers.

19. It is necessary and inherent that control buttons such as Wörn's switching keys 21 are resilient and flexible, because otherwise a user would not be able to repeatedly displace the buttons to accomplish the control function intended for such buttons. In June 2011, it was already notoriously old and well known common knowledge in the art to make a control button resilient and flexible, for example to enable users to repeatedly displace controller buttons whenever desired, and for them to return to an unbiased position upon the removal of the displacing load.

20. Fig. 6 of the Wörn patent shows that the switching keys 21, which correspond to the first and second back controls claimed in the '525 patent, are positioned to be operated by a middle finger of a user. One of ordinary skill in the art in June 2011 would interpret Fig. 6 of Wörn to indicate that the user's thumbs could be positioned on the front (facing the viewer of Fig. 6 of Wörn), and the user's middle fingers could wrap around the back to operate the back controls 21. For example, Wörn col. 2, lines 63-65, states: "The function keys are arranged on the top side of the housing in an ergonomically especially favorable manner and can be reached with the thumb."

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