IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the *Inter Partes* Review of U.S. Patent No. 7,797,717 Trial No.: Not Yet Assigned Issued: September 14, 2010 Filed: May 23, 1995 Inventors: John Christopher Harvey, *et al.* Assignee: Personalized Media Communications, LLC Title: SIGNAL PROCESSING APPARATUS AND METHODS

DECLARATION OF CHARLES J. NEUHAUSER, Ph.D. UNDER 37 C.F.R.§ 1.68

I, Dr. Charles J. Neuhauser, do hereby declare:

1. I am making this declaration at the request of Zynga, Inc. in the matter

of the Inter Partes Review of U.S. Patent No. 7,797,717 ("the '717 Patent.")

2. I am being compensated for my work in this matter at my standard hourly rate of \$375 for consulting services. My compensation in no way depends on the outcome of this proceeding.

3. In preparing this Declaration, I considered the following materials:

(a) U.S. Patent No. 7,797,717 to Harvey ("Harvey '717) (Exhibit 1001);

(b) U.S. Patent No. 4,567,359 to Lockwood ("Lockwood") (Exhibit 1008);

(c) U.S. Patent No. 4,825,045 to Humble ("Humble") (Exhibit 1009);

(d) U.S. Patent No. 4,204,206 to Bakula ("Bakula") (Exhibit 1010); and

(e) U.S. Patent No. 4,674,041 to Lemon ("Lemon") (Exhibit 1011).

I. <u>Professional Background</u>

4. I am an engineer by training and profession. My current CV is attached. I was awarded the degree of BSEE from the University of Notre Dame in 1968. Directly after graduating I was employed by Bell Telephone Laboratories (now Alcatel-Lucent) as a Member of the Technical Staff. In this capacity I worked on the specification, testing and development of computer controlled data and telephone switching systems for deployment in telephone central offices. While I was at Bell Telephone Laboratories I received my MSEE from Northwestern University under a company sponsored program.

5. In 1971 I left Bell Telephone Laboratories to pursue a PhD in a newly formed CS/EE program at the Johns Hopkins University. My degree was awarded in 1980 based on my research into the use of emulation techniques in the evaluation of computer architectures.

6. In 1974 while working on my Ph.D. research I joined the Digital Systems team at Stanford University as a research associate where I worked on the

development of an emulation system used for architectural research. From about 1972 I also worked part-time with Palyn Associates, Inc. (later Palyn-Gould Group) ("Palyn) as a Member of the Technical Staff. At Palyn I worked initially on the development of a range of commercial products based on emulation concepts.

7. In 1980 I joined Palyn full time as a member of their technical staff and later as Director of Engineering and by 1985 as Vice President of Engineering. Palyn was a consulting company with a range of international clients in the general field of computer technology. My responsibilities at Palyn related to two broad areas. First, I was responsible for directing product development on behalf of our clients, and second, I consulted directly with clients on issues related to processor and peripheral design. My work here related to main-frame processors, minicomputers, micro-computers and systems that used such components.

8. In my role directing product development I was responsible for the specification, design, testing and debugging of a wide range of devices including mini-computers, microprocessors and peripheral controllers, such as printers, communications and printer interfaces. Work on these systems involved both hardware and software development.

9. In 1994 I began working as an independent consultant first doing business as CTCS and later as Neuhauser Associates, Inc. Since that time my

professional work has focused on technical analysis of system primarily in the support of litigation or potential litigation. I have worked extensively in the analysis of patent claims both with respect to determining infringement and invalidity. I also have experience in software copyright and technical trade secret matters. From time to time I lead teams of engineers in testing and technical evaluations.

10. At this time I have nearly 45 years of continuous professional experience in the field of processors and systems controlled by such processors. The Harvey '717 patent relates to system level interconnection of communication and computer devices. It also relates to their control by computers in response to signals. Over my engineering career I have designed many such computer controlled systems.

11. Since 1972 I have had extensive experience with microprocessors and systems controlled by such devices. In addition to the specification, design, implementation, testing, debugging and deployment of such hardware systems, I have also developed the support software for many such systems. Commonly, I or the engineers I directed made use of microprocessor based systems to implement communications functions or to control larger processors systems. This included responding to certain protocols or developing our own protocols.

12. In my current capacity as an independent consultant I have reviewed and verified the operation of a wide variety of technical systems, including processors, personal computers, television devices, peripherals and bus systems.

13. In forming the opinions expressed in this report I have relied upon my education and my 45 years of professional experience.

II. <u>Relevant Legal Standards</u>

14. I have been asked to provide my opinion as to whether claims 1-7 and 9 of the '717 Patent are anticipated or would have been obvious to a person of ordinary skill in the art at the time of the alleged invention, in view of the prior art.

15. I am an engineer by training and profession. The opinions I am expressing in this report involve the application of my engineering knowledge and experience to the evaluation of certain prior art with respect to the Harvey '717 patent. My knowledge of patent law is no different than that of any lay person. Therefore, I have requested the attorneys from Jones Day, who represent Zynga, to provide me with guidance as to the applicable patent law in this matter. The paragraphs below express my understanding of how I must apply current principles related to patent validity to my analysis.

16. It is my understanding that in determining whether a patent claim is anticipated or obvious in view of the prior art, the Patent Office must construe the claim by giving the claim its broadest reasonable interpretation consistent with the

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