## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

LINDSAY CORPORATION

Petitioner

Case IPR2015-01039

U.S. Patent No. 7,003,357

v.

VALMONT INDUSTRIES, INC.

# DECLARATION OF DR. CRAIG ROSENBERG UNDER 37 C.F.R. § 1.132

- I am Dr. Craig Rosenberg and my residential address is 1574
   NW 190<sup>th</sup> Street, Shoreline, WA 98177.
- 2. I have been retained as an independent expert consultant in this proceeding before the United States Patent and Trademark Office ("USPTO"), which I understand involves U.S. Patent No. 7,003,357, (Exhibit 1001 or the "'357 Patent"). The '357 Patent is assigned to Valmont Industries, Inc. ("Valmont"). Although I am being compensated at my



regular consulting rate of \$375 per hour for the time I spend on this matter, no part of my compensation is dependent on the outcome of this proceeding, and I have no other interest in the outcome of this case or the '357 Patent.

- 3. I understand that Lindsay Corporation is petitioning the Patent Office for an *inter partes* review of claims 1-18 of the '357 Patent. I have been retained by the Petitioner to offer technical opinions relating to the '357 Patent and certain prior-art references relating to its subject matter.
- 4. I have been asked to evaluate the '357 Patent, along with its prosecution history (Exhibit 1002) and related prior art to determine whether the claims in the '357 Patent would have been anticipated or been obvious to one of skill in the art at the time of filing of the '357 Patent. My qualifications and opinions are set for the below.

### **Educational and Professional Background and Qualifications**

5. I hold degrees in Industrial Engineering and Human Factors, including a Ph.D. from the University of Washington. For over 25 years I have worked in the areas of human factors, user interface design, software development, software architecture, and modeling and simulation across a wide variety of application areas including aerospace, entertainment, communications, and healthcare.



- 6. For the past 18 years, I have served as a consultant for Global Technica, Sunny Day Software, Stanley Associates, Technizon LLC, and CDI Corporation. In this capacity I have consulted for Boeing Company as a senior human factors engineer, user interface designer, and software architect for a wide range of advanced commercial and military programs. Many of the projects that I have been involved with include advanced software development, user interface design, agent-based software, and modeling and simulations in the areas of missile defense, homeland security, battle command management, networking and communications, air traffic control, location-based services, and Unmanned Aerial Vehicle ("UAV") command and control. Additionally, I was the lead system architect developing advanced air traffic controller workstations and air traffic control analysis applications, toolsets, and trade study simulations for Boeing Air Traffic Management.
- 7. I was also the architect of the Boeing Human Agent Model.

  The Boeing Human Agent Model is an advanced model for the simulation of human sensory, cognitive, and motor performance as applied to the roles of air traffic controllers, pilots, and UAV operators. In another project, I was the lead human factors engineer and user interface designer for Boeing's main vector and raster computer aided drafting and editing system that



produces the maintenance manuals, shop floor illustrations, and service bulletins for Boeing Commercial Aircraft Company. Additional responsibilities in my time as a consultant include system engineering, requirements analysis, functional specification, use case development, user stories, application prototyping, modeling and simulation, object oriented software architecture, graphical user interface analysis and design, as well as UML, C++, C#, and Java software development.

- 8. In 1995 and 1996, I was hired as the lead human factors engineer and user interface designer for the first two-way pager that was produced by AT&T. Prior to this technology, people could receive pages but had no way to respond utilizing their pager. This new technology allowed users to utilize a small handheld device to receive and send canned or custom pages, access and update an address book, and access and update a personal calendar. This very high profile project involved designing the entire feature set, user interface/user interaction design and specification, as well as all graphical design and graphical design standards.
- 9. In 1999 2001, I was the lead human factors engineer and user interface designer for a company called Eyematic Interfaces that was responsible for all user interface design and development activities associated with real-time mobile hand held 3D facial tracking, animation,



avatar creation and editing software for a product for Mattel. My work involved user interface design, human factors analysis, requirements gathering and analysis, and functional specifications.

- 10. I was the lead user interface designer for a company called ObjectSpeed that developed a portable handheld device for use in homes and businesses that had the many of the same capabilities that we take for granted in mobile cellular phones. This portable multifunction device supported email, chat, video conferencing, internet radio, streaming media, Microsoft Outlook integration, photo taking and sharing, etc. The ObjectSpeed device was specifically designed and developed as a portable handheld device.
- 11. I am the founder, inventor, user interface designer, and software architect of WhereWuz. WhereWuz is a company that produces advanced mobile software running on GPS-enabled smartphones and handheld devices. WhereWuz allows users to record exactly where they have been and query this data in unique ways for subsequent retrieval based on time or location. WhereWuz was specifically designed and developed to run on small handheld devices.
- 12. I am the co-founder of a medical technology company calledHealium. Healium is developing advanced wearable and handheld user



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