US009196224B2

(12) **United States Patent**
Cohen et al.

(10) **Patent No.: US 9,196,224 B2**
(45) **Date of Patent: Nov. 24, 2015**

(54) **MANAGING OBSTRUCTED VIEWS OF MULTIPLE DISPLAY SURFACES**

(75) Inventors: **Alexander J. Cohen**, Mill Valley, CA (US); **Edward K. Y. Jung**, Bellevue, WA (US); **Royce A. Levien**, Lexington, MA (US); **Robert W. Lord**, Seattle, WA (US); **Mark A. Malamud**, Seattle, WA (US); **John D. Rinaldo, Jr.**, Bellevue, WA (US)

(73) Assignee: **Invention Science Fund I, LLC**, Bellevue, WA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1041 days.

(21) Appl. No.: **12/006,236**

(22) Filed: **Dec. 31, 2007**

(65) **Prior Publication Data**

US 2009/0167633 A1 Jul. 2, 2009

(51) **Int. Cl.**
G09G 5/14 (2006.01)

(52) **U.S. Cl.**
CPC ***G09G 5/14*** (2013.01); *G09G 2310/04* (2013.01); *G09G 2340/12* (2013.01); *G09G 2340/14* (2013.01)

(58) **Field of Classification Search**
USPC 345/1.1–9
See application file for complete search history.

(56) **References Cited**

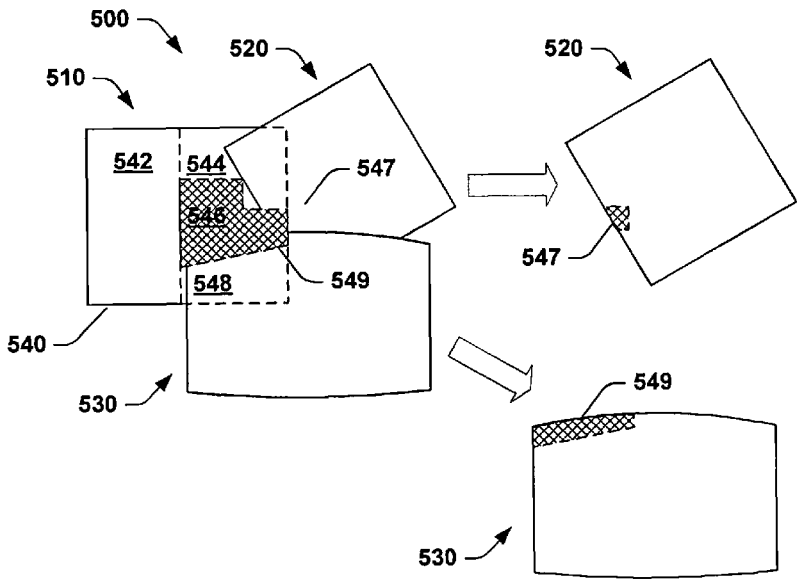
U.S. PATENT DOCUMENTS

5,266,955	A *	11/1993	Izumi et al.	342/70
5,534,888	A	7/1996	Lebby et al.	
6,124,851	A	9/2000	Jacobson	
6,160,540	A	12/2000	Fishkin et al.	
6,498,597	B1	12/2002	Sawano	
6,710,789	B1 *	3/2004	Sekiguchi et al.	715/781
6,940,497	B2	9/2005	Vincent et al.	
7,154,452	B2	12/2006	Nakamura et al.	
7,177,067	B1	2/2007	Sakamoto	
7,249,324	B2	7/2007	Nakamura et al.	
2006/0158335	A1	7/2006	Jung et al.	
2006/0158406	A1	7/2006	Jung et al.	
2006/0161977	A1	7/2006	Jung et al.	
2006/0259773	A1	11/2006	Jung et al.	
2006/0265744	A1	11/2006	Jung et al.	
2006/0282903	A1	12/2006	Jung et al.	
2007/0035511	A1 *	2/2007	Banerjee et al.	345/156
2007/0143621	A1	6/2007	Jung et al.	
2007/0152977	A1 *	7/2007	Ng et al.	345/173
2007/0180252	A1	8/2007	Jung et al.	
2007/0245024	A1 *	10/2007	Prus et al.	709/226
2007/0252804	A1 *	11/2007	Engel et al.	345/98
2007/0273609	A1 *	11/2007	Yamaguchi et al.	345/1.1
2009/0002327	A1 *	1/2009	Wilson et al.	345/173

* cited by examiner

Primary Examiner — Ryan A Lubit

(57) **ABSTRACT**

Embodiments of systems and methods for managing multiple overlapping electronic displays are disclosed, including the electronic displays of electronic paper, electronic books, computer monitors, and other electronic display devices. In one embodiment, a method includes sensing an overlap area of a first display and a second display relative to a specified view location, determining a nearest unobstructed display to the specified view location, and displaying within the overlap area of the nearest unobstructed display a highest priority information from among first and second information.

11 Claims, 8 Drawing Sheets