



(19) **United States**

(12) **Patent Application Publication**
Ciesla et al.

(10) **Pub. No.: US 2011/0012851 A1**
(43) **Pub. Date: Jan. 20, 2011**

(54) **USER INTERFACE ENHANCEMENT SYSTEM**

Publication Classification

(76) Inventors: **Craig Michael Ciesla**, Mountain View, CA (US); **Micah B. Yairi**, Palo Alto, CA (US); **Nathaniel Mark Saal**, Palo Alto, CA (US)

(51) **Int. Cl.**
G06F 3/041 (2006.01)
(52) **U.S. Cl.** **345/173**

Correspondence Address:
SCHOX PLC
500 3rd Street, Suite 515
San Francisco, CA 94107 (US)

(57) **ABSTRACT**

A user interface enhancement system that includes a sheet that defines a surface and at least partially defines a fluid vessel arranged underneath the surface, a volume of fluid contained within the fluid vessel that cooperates with the sheet to transmit an image through the sheet without substantial obstruction, a displacement device that influences the volume of fluid within the fluid vessel to expand and retract at least a portion of the fluid vessel, thereby deforming a particular region of the surface, and an attachment component that couples the sheet to the device is disclosed.

(21) Appl. No.: **12/830,430**
(22) Filed: **Jul. 5, 2010**

Related U.S. Application Data

(60) Provisional application No. 61/223,004, filed on Jul. 3, 2009.

