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(12) **United States Patent**
Banning

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(54) **EASILY DEPLOYABLE INTERACTIVE DIRECT-POINTING SYSTEM AND PRESENTATION CONTROL SYSTEM AND CALIBRATION METHOD THEREFOR**

USPC 345/156-169, 173-178, 204-215;
178/18.01-18.09
See application file for complete search history.

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation of application No. 14/463,405, filed on Aug. 19, 2014, now Pat. No. 9,063,586, which is a continuation of application No. 14/175,960, filed on Feb. 7, 2014, now Pat. No. 8,866,742, which is a

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(57) **ABSTRACT**

A method for controlling movement of a computer display cursor based on a point-of-aim of a pointing device within an interaction region includes projecting an image of a computer display to create the interaction region. At least one calibration point having a predetermined relation to said interaction region is established. A pointing line is directed to substantially pass through the calibration point while measuring a position of and an orientation of the pointing device. The pointing line has a predetermined relationship to said pointing device. Movement of the cursor is controlled within the interaction region using measurements of the position of and the orientation of the pointing device.

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(52) **U.S. Cl.**
CPC **G06F 3/0346** (2013.01); **G06F 3/03549** (2013.01)

(58) **Field of Classification Search**
CPC G06F 3/033; G06F 3/0338; G06F 3/3046; G06F 3/0354; G06F 3/03549

20 Claims, 20 Drawing Sheets

