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(12) **United States Patent**
Goertz

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- (54) **SCANNING OF A TOUCH SCREEN**
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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 734 days.

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(57) **ABSTRACT**

A user interface for receiving input commands in a mobile terminal includes a display device for presenting visual information. Arrays of light sources and arrays of light detectors are arranged along respective first and second sides of the display device. Each array of light sources is configured to transmit light pulses over the display device, and each array of light detectors is configured to receive a part of the energy in the transmitted light pulses. A processing unit controls the light sources such that a light pulse is repeatedly transmitted from each source according to a predefined sequence. Based on an ambience light intensity and a measurement value registered by at least one light detector during transmission of light from the light source, the processing unit determines whether or not a light-obstructive object is present on the display device between a given light source and at least one light detector.

- (51) **Int. Cl.**
G06F 3/042 (2006.01)
- (52) **U.S. Cl.**
USPC **345/175; 345/173; 345/174**
- (58) **Field of Classification Search**
None
See application file for complete search history.

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