

Title (en)  
MULTI-TOUCH SENSING DISPLAY THROUGH FRUSTRATED TOTAL INTERNAL REFLECTION

Title (de)  
MEHRFACHBERÜHRUNGSDISPLAY DURCH VERHINDERTE INTERNE GESAMTREFLEXION

Title (fr)  
DISPOSITIF D'AFFICHAGE À DÉTECTION À TOUCHES MULTIPLES PAR L'INTERMÉDIAIRE DE RÉFLEXION INTERNE TOTALE FRUSTRÉE

Publication  
**EP 2047308 A4 20101124 (EN)**

Application  
**EP 07813780 A 20070803**

Priority

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- US 82132506 P 20060803

Abstract (en)  
[origin: WO2008017077A2] High-resolution, scalable multi-touch sensing display systems and processes based on frustrated total internal reflection employ an optical waveguide (12, 32, 42, 62, 76, 84) that receives light, such as infrared light, that undergoes total internal reflection and an imaging sensor (20, 50, 72a, 72b, 72c, 86, 104a, 104b) that detects light that escapes the optical waveguide (12, 32, 42, 62, 76, 84) caused by frustration of the total internal reflection due to contact by a user. The optical waveguide (12, 32, 42, 62, 76, 84) may be fitted with a compliant surface overlay (48, 64, 78, 88) to greatly improve sensing performance, minimize the affect of contaminants on and damage to the contact surface, to generally extend system life and to provide other benefits. The systems and processes provide true multi-touch (multi-input) and high- spatial and temporal resolution capability due to the continuous imaging of the frustrated total internal reflection that escapes the entire optical waveguide (12, 32, 42, 62, 76, 84). Among other features and benefits, the systems and processes are scalable to large installations and are well suited for use with rear-projection (22, 52, 74a, 74b, 74c) and other display devices.

IPC 8 full level  
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Citation (search report)

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- See references of WO 2008017077A2

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