

Title (en)
FINGERPRINT IMAGING

Title (de)
ABBILDUNG VON FINGERABDRÜCKEN

Title (fr)
IMAGERIE D'EMPREINTES

Publication
EP 1815394 A1 20070808 (EN)

Application
EP 05818860 A 20051031

Priority
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Abstract (en)
[origin: WO2006051440A1] A fingerprint imaging device has an array of optical waveguides (113) each having an optical axis extending between a source end (130) and a reflection end (135). The reflection ends form a detection surface (136) that is oblique to the optical axis so that light (100, 101) propagating along the optical axis is reflected internally to the optical waveguide when a target medium (e.g. air) having a refractive index less than that of the waveguide is present at the reflection end and such that light is transmitted through the reflection surface when the target medium (e.g. skin of a finger) has a refractive index greater than that of the waveguide. Illumination sources are optically coupled to respective optical waveguides. At least one detector (123) is provided proximal to the detection surface for receiving transmitted light after scattering from the target medium. The transmitted light can be used to determine whether the target medium belongs to an animate object by plethysmographic analysis, pulse oximetry analysis or Doppler blood perfusion analysis, for example.

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