

other biological hazards between people. In the case of individual devices being shared amongst multiple people, contact-based methods of authentication and identification in which a user types an identifying string with his or her fingertips, or authenticates or identifies himself or herself through contact-based biometric methods, such as fingerprint or palm print recognition, among others, create risk of transferring said biological hazards via the shared contact medium.

SUMMARY OF THE INVENTION

[010] It is thus an object of the invention to provide a non-contact based biometric system and methodology that supports accurate, secure, and rapid authentication and identification of users and devices to provide selective access to resources accessible through camera-equipped devices.

[011] In one embodiment of the present invention, users of such camera-equipped devices (hereinafter referred to at times as "smartphones" for convenience, although the devices are to be understood as including all devices with a camera capability, including both mobile devices and stationary devices, such as desktop computers) who are required to identify or authenticate themselves as a condition of obtaining access to one or more resources take one or a series of photos of their palm or both palms using the smartphone camera. The system of the present invention then employs computer vision technology to analyze the palm print image and either verify that the palm print signature matches the user's model in a database (user authentication) or find the matching user model among many models in a database (user identification).

[012] Further features and aspects of the present invention will become apparent from the following detailed description of exemplary embodiments in connection with reference to the attached figures.

[012A] The present disclosure provides a system for providing selective access to resources available in connection with a device comprising software executed on suitable computer hardware, said system comprising:

_____ (a) at least one camera associated with said device, said camera being capable of taking at least one photograph of a human palm print;

_____ (b) a detector module using local classifiers to locate and segment the region of interest of the palm without physical contact;

_____ (c) a conversion processor which converts raw pixel data associated with said region of interest of a human palm print into a unique signature associated with said palm print; and

(d) an authentication and identification engine, said authentication and identification engine determining whether access to one or more of said resources should be granted based upon said unique signature and at least one database containing a plurality of user models.

BRIEF DESCRIPTION OF THE DRAWINGS

[013] Figure 1 is a diagram depicting the major components of the system of the present invention in a preferred embodiment thereof;