Remote Sensing of Biometric Signatures (Yissum)
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Through electromagnetic radiation from skin

Category	Homeland Security, Medical diagnostics
Development Stage	Proof of concept established in laboratory
Patent Status	PCT application filed
Market Size	Biometrics market predicted to reach $3.2-$4.6 billion in 2008

Highlights

- Method allows monitoring the electromagnetic radiation in sub-terahertz frequency range reflected and emitted by skin
- Biometric signature determined from sweat gland activity used in diagnosis of a person's physical and emotional health; each individual's skin organ specificity gives rise to unique electromagnetic fingerprint.
- Homeland security: identifying suspects about to commit dangerous act. Medical diagnostics: certain diseases cause unusual activity in sweat glands. Drug control: check for presence of drugs in the body. Identification: ID individuals through unique patterns of sweat glands in the skin.

Our Innovation

Method for passive detection of electromagnetic waves emanating from the skin in defined frequency ranges. Technology based on existing methods of microwave reception and transmission, combined with proprietary software, data treatment, and antenna design.

Key Features

- Non-invasive
- Specifics of spectral response of skin are highly correlated with level of physical and mental state of activity of subject

Development Milestones

- Passive and active measurements in specified frequency range (75-110 GHz) demonstrated promising results

The Opportunity

- Biometrics market shows significant annual growth; for example, German biometrics market will experience enormous growth through 2009, increasing from approximately 12 million € (2004) to
€377 million (2007)

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