What's needed for?

This apparatus can map the skin of patients who visit a dermatologist for early stage melanoma screening. The system can recognize and evaluate those nevi with a risk of developing melanoma. The 3D information it gathers is crossed with a database of risk factors. It can also monitor the evolution of nevi over time.

This invention aids doctors involved in early-stage diagnosis of melanoma by automatically recognizing and identifying nevi through thermography and photogrammetry. The system develops 1) a high resolution 3D model of the patient's skin defined within a textured system of visible (RGB) and infrared (IRT) data; 2) a list of the identified nevi. Each nevus is characterized by morphologic and chromatic information, as well as thermal response data. It is then crossed with melanoma risk factor information, on the basis of geometric, chromatic and thermographic diagnostic data, which are an integral part of the system. After the first mapping, the system can monitor the evolution of nevi over time.

Advantages

- Automated nevi mapping
- Identification of nevi at risk of melanoma
- Yields objective data necessary to monitor the evolution of nevi over time
- Speeds up mapping

Applications

- Medical diagnostic device for clinics and hospitals
- Dermatology analysis

Health and biomedical - Medical Devices

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SKIN DIAGNOSTIC
Three-dimensional mapping for melanoma diagnosis

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TRL scale

1 ▷ 2 ▷ 3 ▷ 4 ▷ 5 ▷ 6 ▷ 7 ▷ 8 ▷ 9