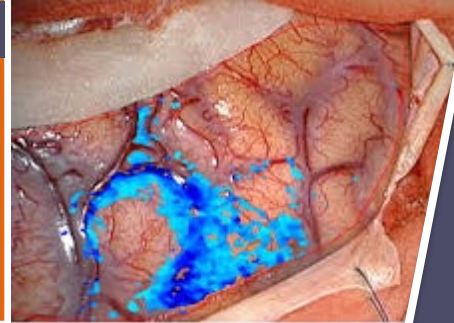


Automatic hemodynamics monitoring



Reference

Neuroimaging [D02588]

Key words

HEMODYNAMIC
MONITORING/AUTOMATIC
CALIBRATION



APPLICATIONS

- Identification of brain functional areas during neurosurgery
- Hemodynamics monitoring : cardiac perfusion, skin transplantation ...



TARGET MARKETS

- Hospitals, Telemedicine
- Microscope, Robots, Medical device manufacturers
- Medical imaging software

Technology readiness level

TRL 3 → TRL 4-5 by 2021



INTELLECTUAL PROPERTY

Working on a patent registration



LABORATORY

Centre de recherche en acquisition et en traitement de l'image pour la santé (CREATIS)

CNRS UMR 5220 – INSERM U1206 –
Université Lyon 1 – INSA Lyon -
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DESCRIPTION

Patients hemodynamics monitoring is a key factor in modern medical applications. Medical specialist have to control the hemodynamics to detect and/or to avoid tissue lesions throughout medical management and to monitor the patient's recovery.

In medical research applications, a color camera and a white light illumination can be used to monitor the patient hemodynamics. Such an implementation usually requires a complexe and device dependant calibration.

We propose a software that can be used with any kind of color camera to analyse the patient hemodynamics relying on an automatic calibration of the acquisition chain.

Many applications are possible :

- Mapping brain functions in neurosurgery (being evaluated)
- Reperfusion monitoring in cardiac surgery
- Remote patient monitoring for skin grafting
- ...

COMPETITIVE ADVANTAGES

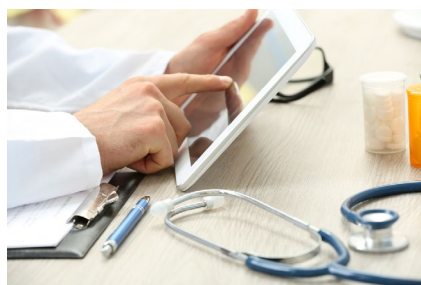
- Non invasive, contactless and real time solution
- Automatic calibration
- Provides functional information
- Provides tissue lesion information
- Detection of any temporal hemodynamic variation
- Wide field imaging

STAGE OF DEVELOPMENT

Software and acquisition setup prototype

PARTNERSHIP TYPE

PULSALYS is looking for industrial partners for the commercialization of the technology.



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