



Technology Opportunity, Ref. No. UZ-10/584

Novel Method for reliable recognition of objects in medical images

A novel algorithm has been developed which allows to reliably recognize specific objects in images, even if such objects have a wide variability in their appearance. The method is particularly well suited for object recognition in histological slides or radiological images.

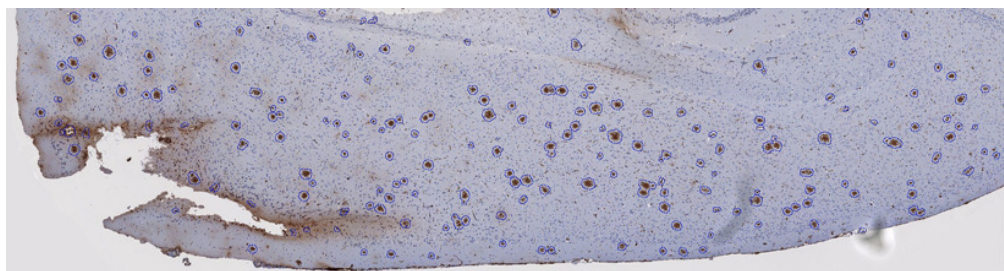
Keywords imaging, recognition, diagnostics, histology, algorithms

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Reference in preparation

Background Conventional image analysis software based on threshold-methods is well established in the medical and life science field. Unfortunately, such software only inadequately detects objects which show a vast variability in their appearance. The results are therefore not sophisticated enough for the daily work of scientists and medical doctors, or for automated diagnosis.

Invention A new image recognition algorithm has been developed which is based on a network of classifier modules. The algorithm is able to successfully detect objects with a vast variability in their appearance, such as objects without well-defined boundaries or diffuse objects. The usability of the method has been demonstrated by a working prototype software which has been successfully applied to detect plaques, connective tissue and blood cells in histological samples and axons in electron microscope images. Examples can be accessed under www.pathol.uzh.ch/ir (user: irtest pw: neuronlike).



Fields of Use image recognition, in particular for medical applications and in life sciences

Patent Status Patent filed

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