Available Online at http://www.journalajst.com

ASIAN JOURNAL OF SCIENCE AND TECHNOLOGY

ISSN: 0976-3376

Asian Journal of Science and Technology
Vol.06, Issue, 10, pp. 1819-1821, October, 2015

RESEARCH ARTICLE

THE DIGITAL EXPRESSION THROUGH THE PIXELOMETRÍA AND HOLOGRAPHY, GEOMETRY OF BIOLOGICAL IMPORTANCE, DETECCION OF VASCULAR PATTERN, DIGITAL OPTICAL BIOPSY

***Zarate, J.O., Folgar, M.A., Pelayes, D., La Carta, G. and Alvarado, M.**

Department of Pathology, University of Buenos Aires, Digital Pathology laboratory and Bioengineering, Maimonides University

ARTICLE INFO

Article History:
Received 26th July, 2015
Received in revised form
07th August, 2015
Accepted 23rd September, 2015
Published online 17th October, 2015

Key words:
Optical digital biopsy,
Vascular pattern.

ABSTRACT

The geometry of the pixels indicates a certain combination of dimensional Euclidean and elliptic, especially with 3D options that are allowed in a construction scheme Riemannian geometry. But the truth when applying laws neofísica is that these distinctions You are influenced by the existence of sub Character differential colorimetric as the subpixels red green and blue, like the stuck pixels and dead. The monitors or standards which are expressed by colors and resolution have come to the most interesting expressions graphics cards as S3raphics, Nvidia, ATI or other with CRT monitors. We applicated this hipotesis (xxxxx) about the retinal vascular pattern

Copyright © 2015 Zarate et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

All this leads to an information or computer theory 16.8 million possible combinations, surpassing widely to everything dug up today in individizualización of things, for example proteins, with LCD. The pixelometría (a term coined by us as philosophy Geometric), in diagnostic interface between positron optical coherence microscopy retina and is the basis theoretical than we have shown in reality, ie see histologically optical coherence tomography of especially retina. In fact they involved multiple laws and accepted computer correlation and Fourier transform or Hough.

In practice, after the use of several "transformed" the cells are formed by pixels; each cell type and computer conditions stable (monitor, zomm, program, etc.) equals a similar domain image digital. To assess the sizes we use the conventional nomograms: dpi (dots per inch) high value printed photographic (standard in resolution 300 dpi). Use ppi (pixels per inch), enables assess the resolution of an image, since the resolution is the number of pixels. They describe. The dpi, does not exist, since the point It is not digital. In summary resolution of an image, pathological retina our case, is the quantity of pixels that describe it.

****Corresponding author: Zarate, J.O.,***
Department of Pathology, University of Buenos Aires, Digital Pathology laboratory and Bioengineering, Maimonides University.

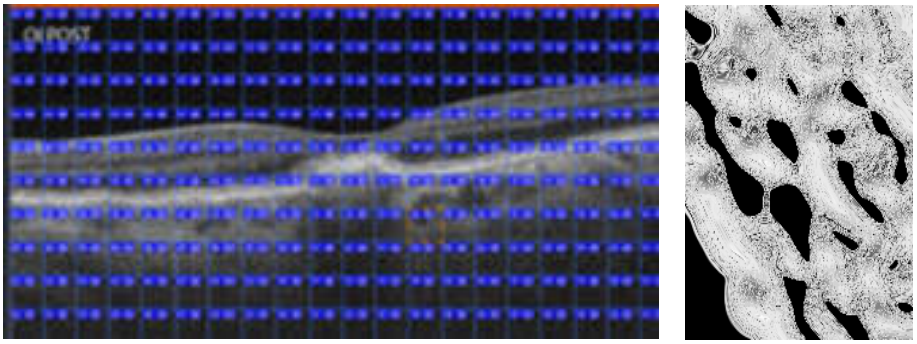
MATERIALS AND METHODS

The techniques we use in our method image processing coherence tomography retinal optical microscopy, they are based transformed into laws, concealment or selection of display areas and edges on tone curves. Most methods for transforming Pictures are classified: Methods using direct mapping or to below. Methods using the reverse mapping. Forward mappings are more complex and computationally xpensive to implement. The reverse mapping method is easier implement the direct mapping. The reverse mapping process values each output pixel and calculates the corresponding positions in the input image using e interpolating between pixels of the image Closest entry to determine the value the output pixel.

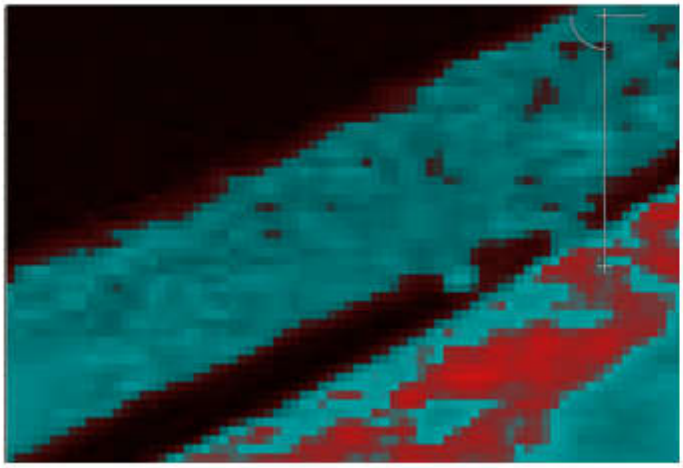
The advantage of the method is based on the concept laminar retinal (Onda: Newton and Maxwell) and (corpuscle: Planck, Einstein): "Scientific Photograph Neophisical Biology and Art ". The retinal laminar concept expressed in a wavelength of 10-350 nm variations own color with 350 nm for violet, 750 for red and greater than 750 for the infrared. The pixel becomes a measurement converter, where it measure its density, quantity, position, form, characteristics, etc., that is the evaluation Most importantly for our method subsequently, a transformation. For it is essential, for the moment one, or a skilled operators tomography optical coherence, biology and pathology of retina and neofísica. (We are working today, many difficulties in software that is useful to different situations).

RESULTS

The future is promising, and we no longer term; the enormous advantages, because to perform future biopsy noninvasive retina. We are currently working in two laboratories, Digital exclusive retina Pathology, (First internationally) with many difficulties and hopes with the results so Today obtained. Our unit is centrally the pixel. (Figure 1), with we obtained the vascular pattern and measurement of realy vascular morphology.



Histological Optical Digital Biopsy (result) and Meassure of Choroideal Vascular cannel (great vessels)



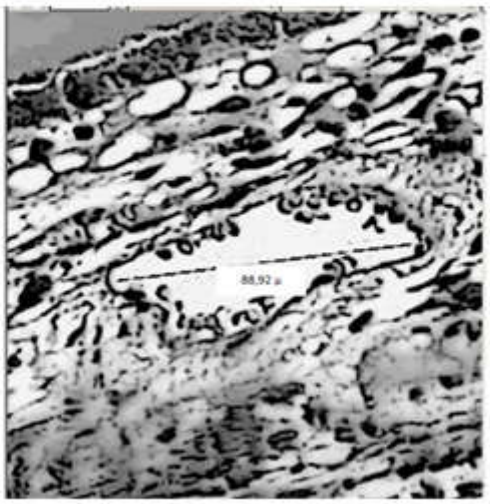


Figure 1. Detection of choroideal vascularization with pixelometric theories

DISCUSSION

On diffuse arteriolar narrowing, it was considered important to study the normal retinal vascular pattern as a preliminary to serial observations on the vascular changes in patients undergoing treatment for different pathologies. The arteriovenous ratio is obviously useless as a guide to arteriolar calibre unless two vessels of a comparable order of division are selected, but it has been shown that this is difficult, edious, and often impossible by casual ophthalmoscopy, or even by retinal photography. We present a new method of imaging process, with pixelometricstudies, for comparable histophisiological dates.

REFERENCES

Frédéric De Leeuw, Anne Latrive, Odile Casiraghi, Malek Ferchiou, Fabrice Harms, Claude Boccara, Corinne Laplace-Builhé, 2014. Optical biopsy on head and neck tissue using full-field OCT: a pilot study. Proc. SPIE 8926, Photonic Therapeutics and Diagnostics X, 892626 (March 4, 2014); doi: 10.1117/12.2036959

Jams G. Fujimoto, Costas Pitris, Stephen A. Boppart, Mark E Brezinski. Optical Coherence Tomography: An Emerging *Technology for Biomedical Imaging*

Mark E. Brezinski, Gary J. Tearney, Stephen A. Boppart, Eric A. Swanson, James F. Southern, and James G. Fujimoto, 1997. Optical Biopsy with Optical Coherence Tomography: Feasibility for Surgical Diagnostics. *Journal of Surgical Research,* 71, 32–40.

Wojtkowski, M., Bajraszewski, T., Gorczynska, I., *et al.* 2004. Ophthalmic imaging by spectral optical coherence tomography. *Am. J. Ophthalmol.,* 138: 412.

Zárate Jorge Oscar, Pelayes David, Folgar Martin, Lacarta Guillermo, 2015. Alvarado Miguel. Optical Digital Biopsy: Sub cellular Identification and Update of Technology.

Open Science Journal of Bioscience and Bioengineering. Vol. 2, No. 2, pp. 29-32.

Zárate, J.O. 2013. Optical Digital Biopsy.Brush strokes and pixels in the wonderful Latinamerican iconography. *Patología,* 51(3):206-9.

Zárate, J.O. 2014. Digital optical biopsy. Possible extension to no other ophthalmic tissue. Patología Rev Latinoam 52:246-247.

Zarate, J.O. 2014. The pixelometría. New non-Euclidiangeometry, biologicalimportance. Patologia (Mex)

Zárate, J.O. *et al.* 2015. Optical Digital Biopsy: Uveal Choroidal Melanoma: Case Report and Update of Technology. *Open Science Journal of Clinical Medicine,* Vol. 3, No. 2, pp. 59-63.

Zarate, J.O., Pelayes, D. and Singh, A. 2012. Optical digital biopsy. A new method of tissue and cell identification with ophthalmic applications. Patología., 50(3):179-181.

****