Two Degree Grayscale Differential Method for Teeth Image Recognition

Abstract

This paper proposes a new method to find a specific tooth from the digital picture of multiple teeth. The two degree grayscale differential method can significantly simplify the pattern recognition process for teeth. Compared to the popular recognition method like PCA and HDM, this method is a lot more simple, runs faster and the identification rate is better. The new approach will reduce the traditional reliance on X-ray image to get information and make dental decision. The new approach is tested and will be used in the dental decision making
software to do preliminary dental advising for potential patients. An image of a molar is used as an example here; all other teeth can be processed the same way.

References

- Suprachaya Veeraprasit and Suphakant Phimoltares, “Hybrid Feature-Based Teeth Recognition system”, IEEE 2011.

**Index Terms**

Computer Science  
Computational Intelligence

**Keywords**

Image Recognition  
teeth image processing  
teeth recognition  
pattern recognition  
Matlab