Commercialization of Medical Image Analysis

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The motivation for most researchers in medical image analysis is to develop technology that can benefit the patients, but in practice very few methods makes it all the way to widespread clinical use. The talk describes the main obstacles on this road to utility, using concepts from the book Biodesign by Zenios et al. [1].

For illustration is used the BoneXpert product, a CE-marked medical device, www.BoneXpert.com, which is a pure-software image analysis device that automatically determines the bone age of a child from a digital X-ray of the hand. Bone age expresses how far the child has advanced in its maturation (pubertal development), and parents typically request a bone age assessment of their child to predict its adult height. BoneXpert is based on active appearance models which are briefly described and compared to non-rigid registration. The product has been licensed and installed as an integral part of picture archiving and communication systems (PACS) in 30 hospitals across Europe (including six in Germany).

References

1. Zenios S, Makower J, Yock P, et al. Biodesign: The Process of Innovating Medical Technologies. Cambride University Press; 2010.