

Title (en)  
DIGITAL IMAGE IMPROVEMENT THROUGH GENETIC IMAGE EVOLUTION

Title (de)  
DIGITALE BILDVERBESSERUNG DURCH EINE GENETISCHE BILDEVOLUTION

Title (fr)  
AMELIORATION D'IMAGE NUMERIQUE PAR EVOLUTION D'IMAGE GENETIQUE

Publication  
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Application  
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Abstract (en)  
[origin: WO0033207A1] Computer-implemented methods and systems for improving a digital image using genetic algorithms is provided. Child images are evolved from the digital image using either predefined template genotypes or genotypes created through evolution. A genotype includes a number of genes that may each alter an attribute of the digital image such as hue, brightness, contrast or color saturation. The evolution includes a selection process during which the child images are compared against a leader image and assigned a fitness rating. The fitness rating is used in the evolution of subsequent generations of child genotypes, with each child genotype producing an associated child image. The evolution process may continue through as many generations as is desired and an improved image may be selected at any time during the evolution. Genotypes may be saved as independent data files and applied as template genotypes to other digital images. The methods and systems of the present invention also provide for evolving a printer calibration genotype that is used to adjust the image for the printing characteristics of a calibrated printer.

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