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DECLARATION OF GORDON MACPHERSON

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2. IEEE is a neutral third party in this dispute.

3. I am not being compensated for this declaration and IEEE is only being reimbursed for the cost of the article I am certifying.

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5. I make this declaration based on my personal knowledge and information contained in the business records of IEEE.

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8. The article below has been attached as Exhibit A to this declaration:

A.	I.J. Cox, et al.; "Secure spread spectrum watermarking for multimedia", IEEE Transactions on Image Processing, Vol. 6, Issue 12, December 1997.

9. I obtained a copy of Exhibit A through IEEE Xplore, where it is maintained in the ordinary course of IEEE's business. Exhibit A is a true and correct copy of the Exhibit, as it existed on or about September 6, 2022.

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11. I.J. Cox, et al.; "Secure spread spectrum watermarking for multimedia" was published in IEEE Transactions on Image Processing, Vol. 6, Issue 12. IEEE Transactions on Image Processing, Vol. 6, Issue 12 was published in December 1997. Copies of this publication was made available no later than the last day of the publication month. The article is currently available for public download from the IEEE digital library, IEEE Xplore.

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13. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

I declare under penalty of perjury that the foregoing statements are true and correct.

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This paper presents a secure (tamper-resistant) algorithm for watermarking images, and a methodology for digital watermarking that may be generalized to audio, video, and multimedia data. We advocate that a watermark should be constructed as an independent and identically distributed (i.i.d.) Gaussian random vector that is imperceptibly inserted in a spread-spectrum-like fashion into the perceptually most significant spectral components of the data. We argue that insertion of a watermark under this regime makes the watermark robust to signal processing operations (such as lossy compression, filtering, digital-analog and analog-digital conversion, requantization, etc.), and common geometric transformations (such as cropping, scaling, translation, and rotation) provided that the original image is available and that it can be successfully registered against the transformed watermarked image. In these cases, the watermark detector unambiguously identifies the owner. Further, the use of Gaussian noise, ensures strong resilience to multiple-document, or collusional, attacks. Experimental results are provided to support these claims, along with

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Published in: IEEE Transactions on Image Processing (Volume: 6 , Issue: 12, December 1997)

Page(s): 1673 - 1687

INSPEC Accession Number: 5778746

Date of Publication: December 1997

DOI: 10.1109/83.650120

Publisher: IEEE

ISSN Information:

PubMed ID: 18285237

Authors

References

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