

ABSTRACTS

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Fast Fourier Transformation (FFT) for Paper Image Transmission as a Tool for Identification and Differentiation—Method Validation

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The aim of this paper is to validate the paper differentiation method using Fast Fourier Transform (FFT). This method allows for visualization of a specific mesh pattern left by the production line machines during paper manufacturing. With this method it is possible to determine whether two compared sheets originate from the same source (the manufacturer), or not (from different batches of the same product or from different manufacturers). During the validation process, which aimed to confirm the method's effectiveness and identify its limitations, a total of over 2500 comparisons were made of FFT paper samples. The samples were obtained from sheets of paper from the same manufacturer, as well as from different sources. Two algorithms were used for obtaining and comparing FFTs during the research. The obtained results indicated the high efficiency of the Fast Fourier Transform used, in both confirming and refuting the common origin of the compared sheets of paper.

Document examination, paper comparison, Fast Fourier Transform (FFT)

Technical Note: Visual Acuity and Myopic Near Point

Tobin A Tanaka

Myopia, colloquially referred to as near sightedness, is commonly explained as a reduced ability to discern objects at a distance, this is actually only a partial explanation. The near point of an observer with myopia permits superior visual acuity of small features and details when viewed at a short distance with the unaided eye.

Common visual acuity tests, such as the Snellen eye chart, do not directly address the ability to view small objects with the unaided eye. The myopic eye can view small details of handwriting and certain document features such as microprinting at a close distance without the use of magnifiers.

An overview of myopia is provided along with an explanation of common visual acuity eye charts, near point and corrective lenses prescriptions.

A Survey of “t-h” Joins in the Definite Article and Other Wording

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A simple classification for the methods of joining letter “t” to letter “h” in lower-case handwriting was developed and used to gather data on “th” joins in the definite article and in other wording. The frequency of occurrence of each category of join was obtained in the two environments. The results suggest that the two environments are largely the same in respect of this classification of this feature.

A SECOND LOOK AT SIGNATURE STANDARDS¹

Ordway Hilton

