



## Questioned Documents Section – 2006

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### **J3 Examining the Minor Printing Screen-Dots and Micro-Printing Features by Using the USB Interface Microscope**

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After attending this presentation, attendees will understand the function of the USB microscope and how it is used to examine the minor features of different kinds of printed materials and other related documents.

This presentation will impact the forensic science community with a new concept of following the progress of the computer and digital science new technology, the questioned document identification technology also has been connected intensively to the computer related equipment and special computer soft program. If the USB interface microscope becomes popular in questioned document identification work, traditional methods may no longer be adopted and fade away gradually.

In most cases involving printing materials identification, an examiner comparing the minor differences of the screen-dots, micro-printing, and other specific features from the questioned printing evidence to the genuine specimen can usually determine the authenticity of the questioned printing evidence. Traditionally, by using the different kinds of microscopes available in the laboratory, most document examiners can do the job very well. However, if the examination is conducted outside the laboratory or at the crime scene, identification work may be interrupted.

This presentation is going to describe a specific portable USB interface microscope which, unlike the traditional microscope, does not need direct or alternating current or a battery. This microscope was designed to connect a notebook PC by USB interface. The enlarge ratio can be adjusted from 30X to 1000X simply by changing the lens. The examiner can capture the enlarged image directly to the PC monitor by using the specially designed software. The result of the side by side comparison work can be obtained and printed out immediately.

Experimental results in many real cases show that the USB interface microscope not only can be used to provide instant side by side comparisons, but also can be used to obtain an instant report or chart. This presentation will describe the functions and processing methods of the microscope.

#### **Screen-Dots, Micro-Printing, USB Microscope**