



ЦИФРОВЫЕ  
ТЕХНОЛОГИИ  
И ПРАВО

# Digital Technologies and Law

## 1<sup>st</sup> International Scientific and Practical Conference

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Kazan - 23 September 2022

# The use of biometrical signatures for the detection of forgery in Document Examination



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# Document Examination/Forensic Graphology

What is all about ?

- Expertise dealing with handwriting and signatures in their classic form of 'pen and paper' documents on 'wet ink'.
- Digitalization has created an expansion of various forms of digital documents though, which demand a different analysis' approach.
- Digital documents are not always analyzed by the traditional document examination method based on the comparison (comparative method).

Among the methodological mentalities of approach we have to mention :

- Graphology
- Document Examination
- Graphometry (or biometrical signature in its modern form)

# Graphometry or biometrical signature

Method of measurement of particular traits and elements of handwriting.

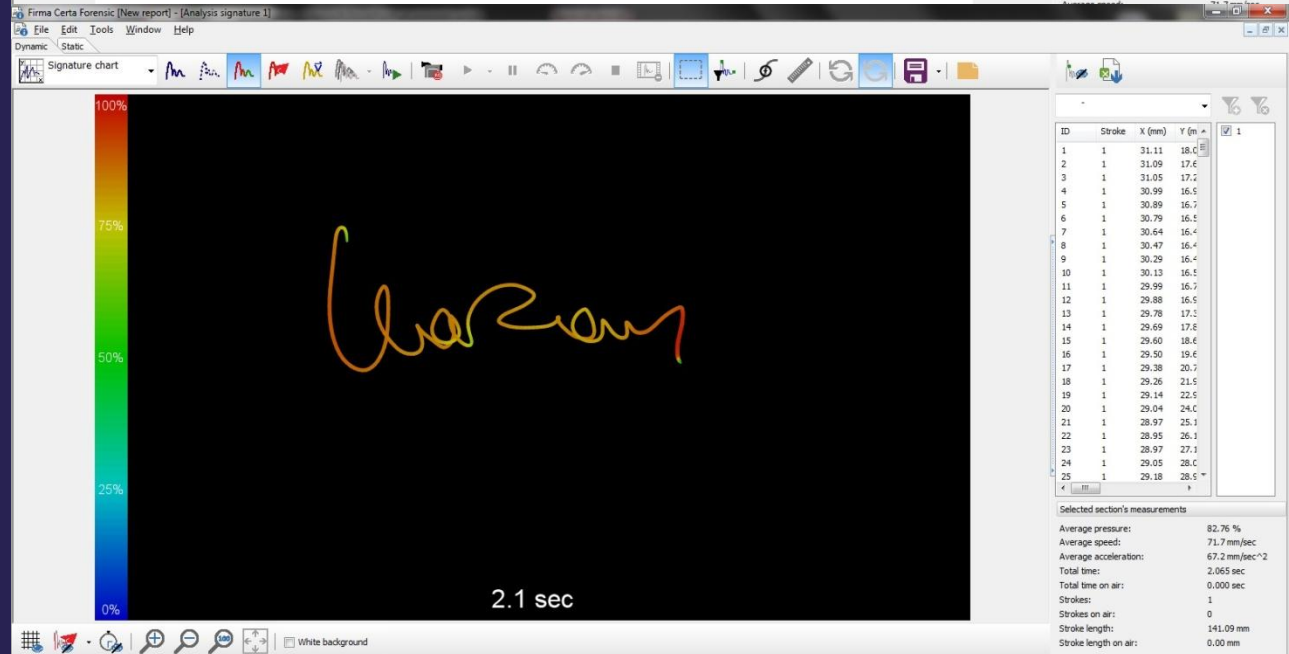
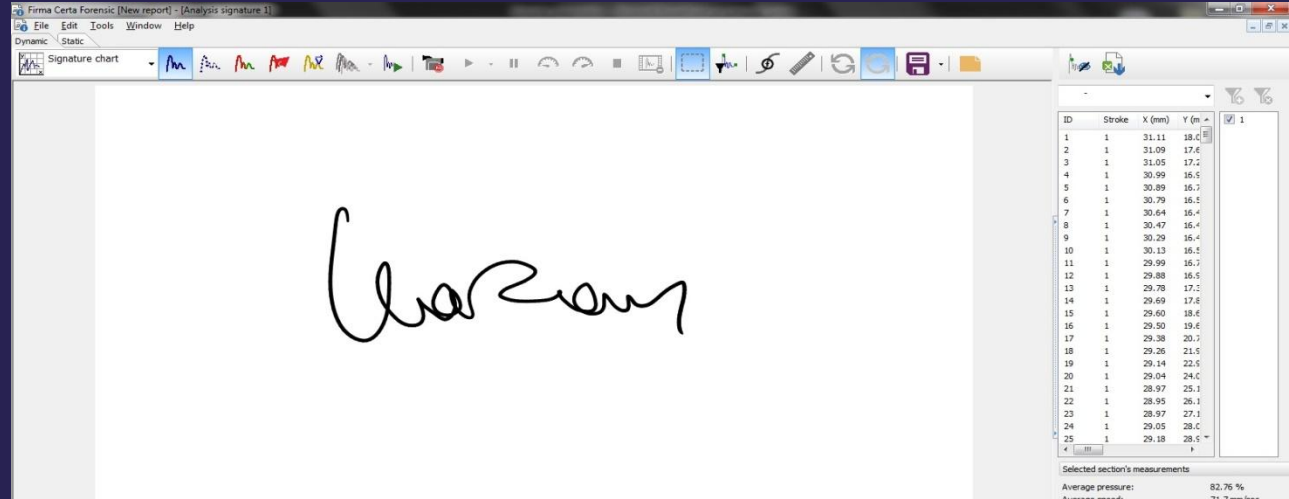
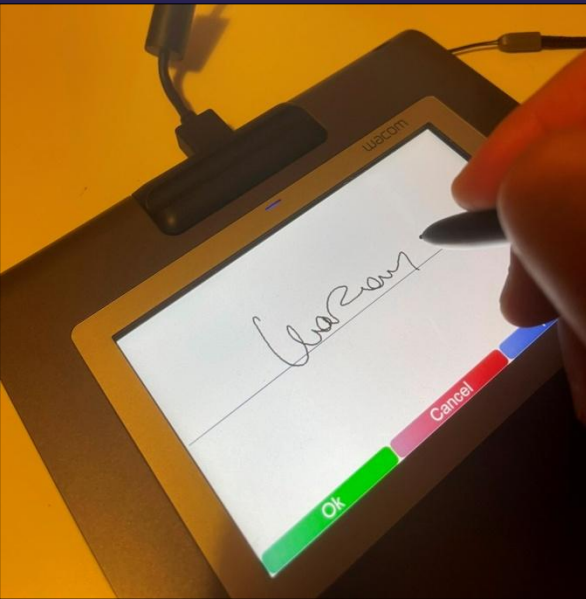
**It is the method applied on the famous Dreyfus case (1894) in a traditional methodological conception, which was incomplete (Graphometric system of Bertillion).**

**In the modern era technology has given the opportunity to replace the classic paper by 'digital paper' (tablets), where we use a specific type of magnetic pen, in order to sign documents.**

## Characteristics

- It is not a digital document
- It is a digitally produced normal signature
- It does not create any trace on the surface of the tablet, but, according to the software it can leave a digital trace which is magnetically transmitted
- Its legal entity depends on the law provision of every state
- It can be graphologically examined by the use of particular s/ws

# Procedure of handwriting production



# Cases of forgery

Digital forgery or classic application

- Digital forgery in cases of 'stolen' genuine biometric signatures (hacking)
- Forgery by imitating a signature in its biometric application
- Forgery by imitating a signature in a classic 'pen and paper' form

# **How can a biometric signature be applied to forgery detection ?**

- ‘Pen and paper’ handwritings are produced before a criminal procedure has started**
- Biometric signature is a quite new system of signing. It is possible that there will be no biometric specimens for comparison**
- Comparison between ‘digital’ and traditional signatures**
- Qualitative characteristics of traditional signatures**
- Qualitative characteristics of digital signatures**

# Is a comparison possible ?

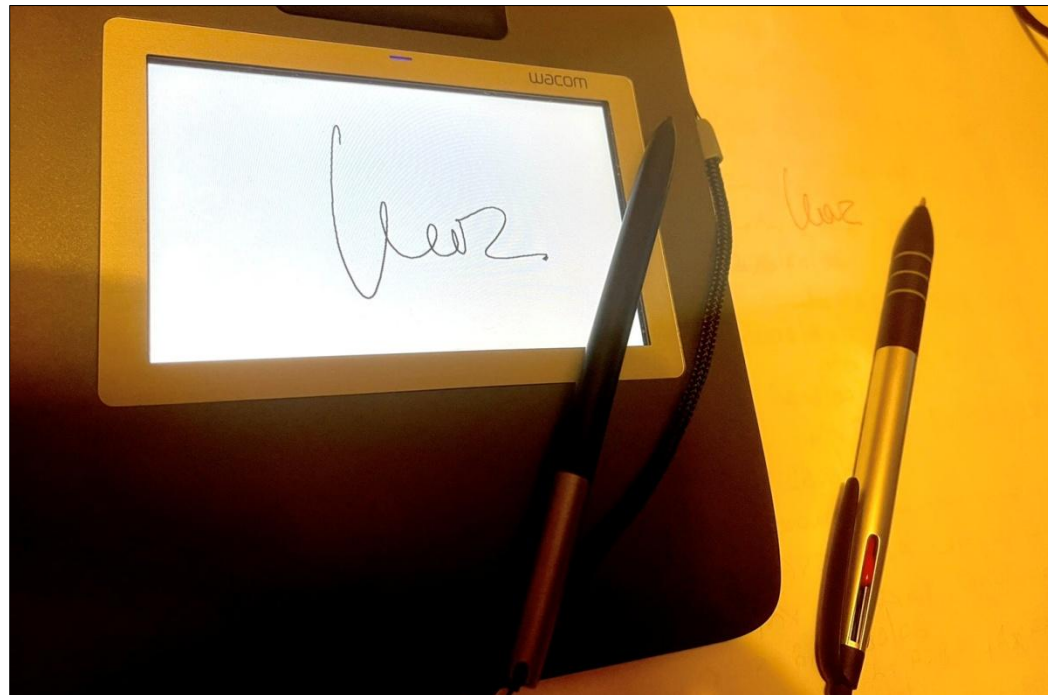
'Hybrid' biometrical signatures

- Apparatus with 'hybrid' digital pen
- Double production of the same signature
- Does it give a scientific comparative basis?



# Where can we apply biometric signature in Law

- In cases of forgery suspects should provide a writing sample
- By using the 'hybrid' mode, we can collect objective graphical data, which help us identify better the graphical characteristics of traditional 'pen and paper' specimens.



# Thank you for your attention!

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