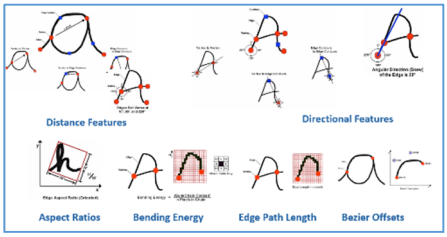
FLASH ID: Empowering Document Examiners

Sciometrics has developed a revolutionary tool to aid Document Examiners called Forensic Language-Independent Analysis System for Handwriting Identification (FLASH ID). This powerful tool for document comparison and evaluation is designed to assist examiners in comparing questioned documents against known writer document samples, and previously received questioned documents. FLASH ID offers the possibility to reduce case backlog and increase match rates for questioned documents.

FLASH ID Benefits

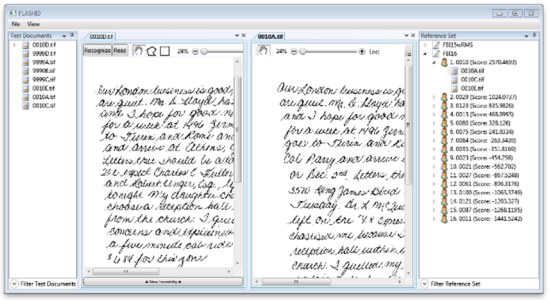
- **Optimizes examiner time** by focusing on making decisions from ranked candidates instead of manual searching.
- **Provides enhanced visualization tools** to aid analysis, decision making, and documentation.
- **Supports Reference Database** management, including support for multiple reference set databases.

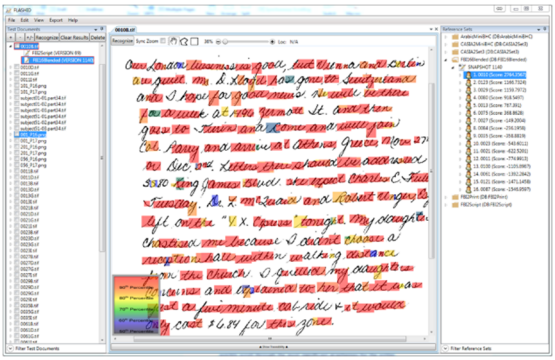
FLASH ID is a fully functional software application that automatically identifies writers by their handwriting. FLASH ID is language independent and has been tested on over 20 different languages. FLASH ID works by maintaining a database of information derived from "reference" handwriting and determines whether a new writing specimen matches any of the writings in the database. FLASH ID operates on a conventional personal computer platform—including laptops.



Reference documents that have been loaded into FLASH ID are segmented into words and characters which are further segmented into basic graphical forms called "graphemes." Graphemes may be parts of characters, whole characters or groups of characters. Graph matching algorithms at the core of the technology compare the graphemes, first, by their topology and second, by their geometric features. Topology includes the structure of graphs in terms of their edges and vertices—links and nodes—and their quantity and connectivity. Geometric features measure the shapes of curves, angles and distances among graph components. FLASH ID computes nearly 200 measurements of the sample writing. FLASH ID uses Linear Discriminant Analysis (LDA) to automatically select the set of measurements that best characterize the subject's writing.

Questioned documents subjected to biometric analysis are scanned and passed to FLASH ID as image files. Once the image has been captured, FLASH ID distills the biometric content from the handwriting, compares this content to the reference database, computes scores representing biometric similarity and compiles the results in a ranked list of all the writers in the database. The writer at the top of this list bears the strongest similarity to the writer of the captured specimen.





FLASH ID offers a one-to-many identification using a Competitive Matrix scoring method. The Competitive Matrix works by testing the questioned document against numerous pair-wise comparisons between every writer in the database and a fixed "test bed" of writers. FLASH ID is able to make comparisons with questioned documents as small as ¼ page of writing. Reference samples can be effectively matched with as little as one page of writing. FLASH ID requires no document markup or tracing of characters.

FLASH ID offers a comprehensive suite of visualization tools to assist the examiner in making their determination, including side-by-side viewing and an innovative "heat map" of writing similarity. In addition, FLASH ID provides complete functionality to build and maintain reference databases, including the ability to make updates, rollback changes, and backup, restore, and clone the database. FLASH ID operates on Windows 7 and above and requires Microsoft SQL Server.

FLASH ID is commercially available and can be purchased along with setup, training, and support services.