

IA2: Typewriters and Other Machine Impressions

I. INTRODUCTION

While a typewriter prints with machine-like precision, this precision varies under different conditions. Use, as with any mechanical device, may cause wear and damage to the working parts that can lead to the appearance of individual defects in the work of a machine. The particular combination of these defects may lead to the identification of a typewriter or the identification of two typed products as having been produced using the same machine.

II. INSTRUMENTATION

Magnification loop, stereo microscope, comparison microscope, adequate lighting and typewriter alignment grids, rulers and image enhancing software (See Appendix VI).

III. MINIMUM STANDARDS & CONTROLS

See Appendix I.

IV. EXAMINATION PROCEDURE

The following method is only a basic guideline for the examination of evidence submitted for typewriting comparison. The actual comparison may include, but is not limited to, the following method. The actual order in which the procedure is carried out is up to the individual examiner.

A. Typewriter submitted for comparison:

1. If the typing system is electronic, it may be necessary to retrieve any stored data from the submitted machine before proceeding further.
2. Note and record the following settings and machine characteristics, as they were when the typewriter was received:
 - a. Margins
 - b. Tabs
 - c. Vertical Spacing
 - d. Horizontal spacing if the machine can be adjusted
 - e. Ribbon settings both vertical and lateral
 - f. Type of typing element used
 - g. Typestyle
3. Take the appropriate samples for comparison noting possible machine defects that may lead to defects in the final product. Some examples would include the following:
 - a. Paper slippage that may lead to lines that are not evenly spaced or parallel
 - b. Worn or improper ribbon operation affecting printed impression
 - c. Defective operation of margin stops
 - d. Improper platen or typeface adjustment causing characters to be "off their feet"
 - e. Rebounding of characters

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f. Dirty typeface

B. Questioned and known typewritten material submitted for comparison:

1. For all known and questioned typewritten material submitted, examine class and individual characteristics, which would include but are not limited to the following:
 - a. Horizontal and vertical spacing
 - b. Type of typing element used
 - c. Typestyle
 - d. Ribbon type
 - e. Correction method
 - f. Justification
 - g. Multi-strike or bold type
 - h. Insertions and/or additions
 - i. Variation in the spacing between letters and lines
 - j. Typeface defects
 - k. Alignment defects
 - l. Individual characteristics of the typist
2. After the suspect typewriter(s) and/or typewritten material has been examined independently, a side-by-side comparison can be conducted to determine whether or not similarities and/or differences exist between the two bodies of typing.
3. Weigh the significance of the similarities and differences noted.

C. Alteration and Interlineations

1. The questioned typewriting should be examined for consistency in spacing, alignment, typestyle, ribbon type and overall format.
2. The questioned document(s) should also be examined for chemical and/or mechanical erasure (see Altered and Obliterated Documents SOP).

D. Readable carbon transfer ribbon examination:

1. Attempt to locate any questioned text or corrections on the item(s).
2. If the questioned text is located, examine the characters using a comparison microscope to attempt to make a fracture pattern and paper fiber impression match.

E. Render conclusions based on examinations conducted in report form.

1. Identification – The examination revealed significant agreement in the individual characteristics with no inexplicable differences.
2. Elimination – The examination reveals significant differences in the individual and/or class characteristics present.
3. Qualified Opinion – If the examination reveals limiting factors in the differences or similarities present a qualified opinion may be rendered. Qualified opinions must include the limiting factors in the report.
4. Inconclusive – If the examination reveals significant limiting factors then an opinion of no conclusion can be reached may be reported. Inconclusive opinions must include the limiting factors in the report.

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REFERENCES

1. ASTM E 1658-04, *Standard Guide for Expressing Conclusions for Forensic Document Examiners*
2. ASTM E 2494-07, *Standard Guide for Examination of Typewritten Items*
3. Conway, J., *Evidential Documents*, Banerstone House: IL. 1978, pp 109-134.
4. Hilton, O., *Scientific Examination of Questioned Documents*; Elsevier: New York, NY, 1982; Chapters 11-14.
5. Harrison, Wilson R., *Suspect Documents*; Nelson-Hall: Chicago, IL, 1981, Chapter 84.
6. Osborn, Albert S., *Questioned Documents*: Patterson Smith: Montclair, NJ, 1978, Chapter 32.
7. Kelly, J. S., Lindblom, B. S., *Scientific Examination of Questioned Documents*, Taylor & Francis Group, Boca Raton, FL, Chapters 14 through 18 and 27.
8. Questioned Document Section Article Library

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Approval

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