

Altered and Forged Documents

Alteration – The intentional modification of a genuine document after its creation, affecting its content, appearance, or structure. Backdating, Erasures, Substitution are common forms. For example, adding a line to an invoice to increase the amount owed. Practitioners examine ink flow, paper fibers, and pressure marks to detect changes. Challenges include distinguishing natural wear from deliberate alteration, especially when multiple alterations are present.

Backdating – The practice of assigning a date to a document that precedes its actual creation, often to meet legal or contractual deadlines. Related terms: Chronology, Timestamp, Forgery. A common scenario involves a contract signed after a deadline but dated earlier. Examination focuses on ink drying patterns, paper aging, and printer logs. Difficulty arises when the document is reproduced using authentic dated stationery, obscuring the deception.

Blank Forgery – The creation of a completely false document that appears authentic, typically using counterfeit paper, ink, and signatures. Associated concepts: Counterfeit, Facsimile, Exemplar. An example is a forged passport produced from scratch. Analysts compare the suspect document to known authentic exemplars, assess security features, and perform chemical analysis of inks. The primary challenge is the high quality of modern security elements that can mislead superficial inspection.

Canvas – A flexible backing material used in the production of certain legal documents, such as certificates or deeds, that may be altered by stretching or folding. Linked terms: Paper Composition, Surface Texture, Document Integrity. Alterations may involve re-stitching to hide modifications. Examination includes fiber analysis and microscopy to detect inconsistencies in weave patterns. The challenge is that canvas can naturally degrade, mimicking signs of tampering.

Charcoal Analysis – A technique for identifying charcoal residues left by erasures or alterations on paper. Related methods: Spectroscopy, Microscopy, Ink Analysis. When a pencil line is erased, microscopic charcoal particles may remain, revealing the original writing. Practitioners use infrared illumination to visualize these residues. Limitations include the difficulty of detecting charcoal on heavily inked or colored surfaces.

Chemical Alteration – The deliberate use of chemicals to modify ink, paper, or security features, often to obscure or create text. Associated terms: Ink Bleaching, Solvent Exposure, Paper Re-sizing. An example is the application of a bleaching agent to fade original ink before overwriting. Detection relies on chromatography and spectroscopic methods to identify residual chemicals. Challenges include distinguishing intentional chemical treatment from environmental exposure.

Composite Document – A document assembled from parts of multiple originals, often to fabricate a seemingly continuous record. Related concepts: Cut-and-Paste, Splicing, Document Assembly. For instance, a forged employment record might combine genuine pages from different years. Examination includes edge matching, fiber orientation, and consistency of watermark placement. The difficulty lies in detecting

subtle mismatches when high-quality adhesives are used.

Counterfeit – The unauthorized reproduction of a document with the intent to deceive, typically involving replication of security features. Linked terms: Forgery, Replication, Security Elements. Counterfeit currency is a classic example. Analysts assess paper composition, printing techniques, and embedded security threads. Modern counterfeits often employ sophisticated printing technologies, making detection increasingly complex.

Crossed-out – The act of marking over existing text to nullify or modify it, often using a pen or marker. Related terms: Erasure, Overwrite, Ink Penetration. A crossed-out clause in a contract may indicate an attempted amendment. Investigation focuses on underlying ink layers, pressure patterns, and any residual marks beneath the crossing. Challenges include differentiating intentional crossing from casual annotation.

Document Authentication – The process of verifying a document's origin, integrity, and authenticity using forensic techniques. Associated terms: Exemplar Comparison, Provenance, Validation. Authentication may involve handwriting comparison, ink dating, and paper analysis. Practical applications include courtroom evidence admission and corporate due diligence. The principal challenge is the subjectivity inherent in some comparative methods, necessitating rigorous standardization.

Document Examination – The systematic analysis of written, printed, or electronic documents to identify alterations, forgeries, or authenticity. Related concepts: Forensic Document Examination, Comparative Analysis, Instrumental Methods. Examiners employ visual inspection, microscopy, and chemical testing. Applications range from legal disputes to fraud investigations. Challenges involve maintaining objectivity and managing the vast variety of document types and technologies.

Document Imaging – The capture of high-resolution images of a document for analysis, preservation, or presentation. Linked terms: Digital Microscopy, Lightbox, Image Enhancement. Techniques such as multispectral imaging reveal hidden features like indented writing. Practical use includes courtroom exhibits and remote expert consultations. Limitations include the potential loss of subtle physical cues not captured digitally.

Document Integrity – The overall condition of a document, reflecting the absence of unauthorized alterations and the preservation of original features. Associated terms: Chain of Custody, Preservation, Tamper-evidence. Integrity assessments consider paper condition, ink stability, and security elements. In legal contexts, proving integrity can be decisive. The challenge lies in differentiating natural degradation from deliberate tampering.

Document Replication – The production of a duplicate document that closely mimics an original, often for illicit purposes. Related terms: Facsimile, Counterfeit, Reproduction. High-quality printers can replicate typography and layout. Examination focuses on subtle differences in printing methods, such as dot gain or toner distribution. Advanced replication may incorporate authentic security features, complicating detection.

Document Restoration – The process of repairing or conserving a damaged document to preserve its informational content, while maintaining forensic integrity. Linked concepts: Conservation, Preservation,

Non-destructive Testing. Restorers may use adhesives or humidification to flatten creases. For forensic purposes, restoration must avoid obscuring evidence of prior alterations. Challenges include balancing preservation with the need for analytical transparency.

Document Verification – The confirmation that a document meets specific standards or criteria, often through comparison with known authentic samples. Related terms: Validation, Authentication, Exemplar. Verification may involve checking serial numbers, watermarks, and signature consistency. In banking, verification of checks is routine. Difficulties arise when documents lack reliable reference exemplars or when security features are ambiguous.

Document Watermark – A translucent design embedded within paper fibers, visible when held to light, used as a security feature. Associated terms: Paper Composition, Security Feature, Light Transmission. Watermarks can indicate the paper's origin and batch. Examination includes transmitted light microscopy to compare watermark patterns. Counterfeiters may attempt to replicate watermarks, but subtle fiber differences often betray the forgery.

Edge Casting – The phenomenon where a document's edge is altered, such as by trimming or adding material, to conceal or create content. Related concepts: Splicing, Page Insertion, Edge Matching. A trimmed page may hide a forged signature. Analysts assess fiber continuity and edge irregularities using microscopy. The challenge is that high-quality trimming can produce near-seamless edges, requiring careful examination.

Embossing – The creation of raised designs on paper or cardstock, often as a security feature or decorative element. Linked terms: Blind Emboss, Raised Print, Security Feature. Embossed seals on legal documents authenticate origin. Examination involves tactile assessment and side-lighting to detect inconsistencies. Counterfeit embossing may lack the precise depth or pattern fidelity of genuine embossing.

Erasures – The removal or obliteration of existing text or graphics from a document, typically using mechanical or chemical means. Associated terms: Erasure Detection, Ink Removal, Scraping. Erasures may be performed with erasers, solvents, or abrasion. Detection techniques include infrared imaging, microscopy, and chemical analysis of residual inks. Challenges increase when erasures are performed carefully to avoid leaving detectable traces.

Exemplar – A known authentic sample of a document, signature, or handwriting used for comparative analysis. Related concepts: Reference Material, Control Sample, Baseline. Exemplar comparison is fundamental in forensic document examination. Practitioners must ensure exemplars are truly representative and uncontaminated. The main difficulty is obtaining reliable exemplars when the suspect has limited or no authentic samples.

Facsimile – A reproduction of a document that aims to duplicate its visual appearance, often used for archival or distribution purposes. Linked terms: Copy, Duplication, Reproduction. Facsimiles may be generated via photocopying or digital scanning. In forensic contexts, distinguishing a facsimile from an original is essential, requiring analysis of paper, ink, and printing artifacts. High-quality facsimiles can mimic many original features, complicating detection.

Forgery – The creation of a false document with the intent to deceive, encompassing alterations, counterfeit productions, and simulated signatures. Associated terms: Alteration, Counterfeit, Deception. Classic examples include forged contracts or forged diplomas. Detection employs a combination of visual inspection, instrumental analysis, and comparative methods. The challenge lies in the evolving sophistication of forgers employing advanced technologies.

Handwriting Analysis – The study of an individual's writing characteristics to determine authorship or detect alterations. Related concepts: Signature Comparison, Graphology, Stroke Dynamics. Examiners evaluate letter formation, pressure, slant, and rhythm. Applications include verifying signatures on legal documents. Limitations arise from natural variability in a person's writing and the potential for skilled imitation.

Ink Analysis – The chemical and physical examination of ink to identify its composition, age, and possible alterations. Linked terms: Chromatography, Spectroscopy, Ink Dating. Techniques such as thin-layer chromatography separate pigment components, while Raman spectroscopy provides molecular fingerprints. Ink analysis can reveal if a document has been altered after a certain date. Challenges include the vast diversity of modern inks and the potential for overlapping ink layers.

Ink Dating – The determination of the time period during which ink was applied, based on its chemical changes over time. Associated terms: Ink Degradation, Chronology, Forensic Dating. Methods involve measuring solvent evaporation, pigment oxidation, or polymerization levels. Ink dating can establish whether a signature predates a legal event. Accuracy may be limited by environmental factors affecting ink aging.

Ink Flow – The pattern of ink deposition as a pen or printing device moves across a substrate, influencing line quality and thickness. Related concepts: Pen Pressure, Stroke Variation, Ink Transfer. Irregular ink flow can indicate a forgery or a hurried alteration. Examination includes microscopic inspection of line edges and ink feathering. Variability in flow due to instrument wear adds complexity to analysis.

Ink Transfer – The phenomenon where ink from one surface is unintentionally deposited onto another, often creating ghost images or secondary marks. Associated terms: Impression, Indentation, Ghosting. Ink transfer can reveal hidden writing, such as a signature pressed onto a blotter. Detection utilizes oblique lighting and microscopy. Challenges include differentiating intentional transfer from accidental smudging.

Interline – The space between lines of text on a document, which may be altered to add or remove information. Linked terms: Line Spacing, Text Insertion, Layout Modification. Adding a new line within the interline region can conceal the alteration. Examination focuses on baseline consistency, ink distribution, and any perturbations in line spacing. The subtlety of interline changes often requires precise measurement tools.

Laser Printer – A non-impact printing device that uses laser-generated electrostatic images and toner to produce text and graphics. Related terms: Toner, Fusing, Print Artifacts. Laser-printed documents may be forged by manipulating printer settings or using counterfeit toner. Forensic analysis looks for toner particle size, fusing patterns, and micrometric dot structures. The diversity of printer models creates a broad spectrum of possible artifacts.

Lightbox – An illuminated surface used to enhance the visibility of document features, such as watermarks, indentations, or translucencies. Associated concepts: Transmitted Light, Contrast Enhancement, Document Inspection. Lightboxes aid in revealing hidden alterations without damaging the document. Practical use includes examining signatures on carbon copies. Limitations include the inability to detect alterations that do not affect light transmission.

Lineation – The arrangement and consistency of lines on a document, including spacing, alignment, and justification. Linked terms: Typography, Layout, Formatting. Inconsistent lineation may indicate inserted or deleted text. Examination involves measuring line spacing, baseline uniformity, and justification patterns. Challenges arise when forgers replicate the original lineation using advanced typesetting software.

Microprinting – Extremely small printed text or patterns, often used as a security feature that is difficult to reproduce accurately. Related terms: Security Feature, Fine Detail, Counterfeit Detection. Genuine microprinting may be visible only under magnification. Examination uses high-magnification microscopy to verify the presence and fidelity of microprinted elements. Counterfeit attempts may produce blurred or incomplete microprinting, serving as a detection point.

Modification – Any change made to a document after its original creation, encompassing additions, deletions, or alterations of content or format. Associated terms: Alteration, Editing, Tampering. Examples include adding a clause to a contract after signing. Detection relies on a combination of visual, microscopic, and chemical techniques. The challenge is that subtle modifications can be expertly concealed, requiring comprehensive analysis.

Paper Analysis – The examination of paper characteristics, such as fiber composition, thickness, and manufacturing marks, to determine origin and detect alterations. Linked concepts: Fiber Microscopy, Paper Dating, Watermark Detection. Paper analysis can reveal if a document was created at a different time than claimed. Practical application includes verifying the authenticity of historical documents. Complexity arises from the wide variety of paper types and the evolution of manufacturing processes.

Paper Composition – The makeup of a paper sheet, including the types of fibers, fillers, and additives used. Related terms: Cellulose, Rag Content, Synthetic Fibers. Different compositions are characteristic of specific eras or manufacturers. Forensic comparison involves microscopy and chemical assays. Challenges include the overlap of compositions across different production periods, requiring supplemental evidence.

Paper Aging – The natural or accelerated deterioration of paper over time, influencing its color, brittleness, and chemical composition. Associated terms: Acidic Degradation, Oxidation, Conservation. Aging patterns can help estimate a document's age and detect newer additions. Examination includes measuring pH, assessing discoloration, and analyzing fiber breakdown. However, environmental factors can accelerate or retard aging, confounding chronological assessments.

Paper Watermark – A design embedded within the paper during manufacturing, visible when transmitted light passes through. Linked concepts: Security Feature, Fiber Arrangement, Light Transmission. Watermarks are used to verify authenticity of legal and financial documents. Detection employs transmitted light microscopy and comparison with known watermark catalogs. Sophisticated counterfeit watermarks may

mimic placement but often lack precise fiber density.

Pen Pressure – The force applied by a writing instrument during the act of writing, affecting ink deposition and stroke characteristics. Related terms: Stroke Dynamics, Ink Flow, Handwriting Characteristics. Variations in pen pressure can be indicative of a particular writer or reveal forgeries where pressure patterns differ. Examination uses pressure-sensitive tablets or microscopic analysis of ink thickness. Interpreting pressure variation can be subjective, requiring expert experience.

Photocopy – A reproduction of a document created using photographic or digital imaging processes, often resulting in reduced quality compared to the original. Associated concepts: Copy Artifact, Resolution Loss, Duplication. Photocopies may be used to conceal alterations by providing a clean version. Forensic analysis compares grain structure, toner distribution, and edge definition to differentiate a photocopy from an original. High-resolution copiers can produce near-original quality, increasing detection difficulty.

Print Analysis – The study of printed document features, such as dot patterns, line quality, and typographic characteristics, to identify printing technology and detect forgeries. Linked terms: Dot Gain, Raster Imaging, Print Artifacts. Examination may involve scanning electron microscopy to view toner particles. Applications include verifying the authenticity of printed contracts or certificates. Challenges stem from the proliferation of high-quality printing devices that can replicate many original features.

Print Forgery – The illicit creation of a printed document that imitates an authentic version, often using similar printing techniques and materials. Related concepts: Counterfeit, Reproduction, Security Feature Replication. For example, a forged bank statement printed on a high-resolution laser printer. Detection focuses on subtle differences in dot size, spacing, and toner distribution. Sophisticated forgers may employ identical printers, making detection reliant on minute forensic cues.

Signature Analysis – The evaluation of a signature's unique characteristics, including stroke order, pressure, and slant, to determine authenticity. Associated terms: Handwriting Examination, Graphology, Signature Comparison. Examiners compare questioned signatures with known exemplars, looking for inconsistencies. Practical use includes verifying signatures on checks and contracts. Challenges include natural variation, skilled imitation, and the limited number of reference signatures.

Stencil – A template used to reproduce letters or shapes consistently, often employed in fraudulent document creation. Linked concepts: Template, Replication, Uniformity. Stencils can produce identical lettering across multiple documents, suggesting systematic forgery. Examination may reveal uniform pressure patterns or identical ink distribution across repeated characters. Detecting stencil use is difficult when high-quality materials are employed.

Stippling – A technique involving the application of small dots to create shading or texture, sometimes used to obscure alterations. Associated terms: Dot Pattern, Ink Distribution, Concealment. In forged documents, stippling can mask erased text. Microscopic analysis can differentiate intentional stippling from natural ink grain. The challenge is that some authentic printing processes also produce dot patterns, requiring careful discrimination.

Substitution – The replacement of an original portion of a document with a fabricated or altered segment.

Related concepts: Splicing, Page Replacement, Content Swap. Examples include swapping a genuine signature page with a forged one. Detection involves examining edge continuity, fiber orientation, and watermark alignment. Sophisticated substitution may involve matching paper batches, making detection reliant on subtle inconsistencies.

Switched Pages – The act of exchanging pages within a multi-page document to alter its meaning or content. Associated terms: Page Substitution, Document Assembly, Tampering. In legal contracts, a switched page can change obligations. Examination includes checking page numbering, binding marks, and paper characteristics for continuity. Challenges increase when swapped pages are from the same printing run, requiring detailed comparative analysis.

Typewriter – A mechanical device that produces characters by striking inked typebars onto paper, leaving distinct impression patterns. Linked concepts: Impact Printing, Typewriter Font, Ribbon Ink. Typewritten forgeries may be identified by analyzing the uniformity of strike impressions and the characteristic “typewriter” font. Examination includes measuring strike depth and ink distribution. The variety of typewriter models and fonts adds complexity to comparative analysis.

Watermark Detection – The process of identifying and evaluating watermarks within paper to assess authenticity. Related terms: Paper Watermark, Transmitted Light, Security Feature. Techniques include transmitted light microscopy, UV illumination, and digital imaging. Detection aids in verifying the origin of documents such as passports or certificates. Challenges arise when counterfeit watermarks are created using sophisticated printing methods that mimic genuine patterns.

Wax Seal – A traditional security feature involving melted wax applied to a document, often bearing a stamped emblem. Associated concepts: Impression, Seal Authentication, Historical Document. Examination includes assessing wax composition, imprint clarity, and aging characteristics. Wax seals can be forged using modern polymeric waxes, requiring chemical analysis to differentiate authentic from counterfeit. The subtle variations in seal wear over time can also obscure authenticity judgments.