



# Scientific Working Group on Digital Evidence

---

## Recommendations for Mobile Device Photography for Comparative Analysis

23-P-002-1.0

### Disclaimer Regarding Use of SWGDE Documents

SWGDE documents are developed by a consensus process that involves the best efforts of relevant subject matter experts, organizations, and input from other stakeholders to publish suggested best practices, practical guidance, technical positions, and educational information in the discipline of digital and multimedia forensics and related fields. No warranty or other representation as to SWGDE work product is made or intended.

SWGDE requests notification by e-mail before or contemporaneous to the introduction of this document, or any portion thereof, as a marked exhibit offered for or moved into evidence in such proceeding. The notification should include: 1) The formal name of the proceeding, including docket number or similar identifier; 2) the name and location of the body conducting the hearing or proceeding; and 3) the name, mailing address (if available) and contact information of the party offering or moving the document into evidence. Subsequent to the use of this document in the proceeding please notify SWGDE as to the outcome of the matter. Notifications should be submitted via the [SWGDE Notice of Use/Redistribution Form](#) or sent to [secretary@swgde.org](mailto:secretary@swgde.org).

From time to time, SWGDE documents may be revised, updated, or sunsetted. Readers are advised to verify on the SWGDE website (<https://www.swgde.org>) they are utilizing the current version of this document. Prior versions of SWGDE documents are archived and available on the SWGDE website.

### Redistribution Policy

SWGDE grants permission for redistribution and use of all publicly posted documents created by SWGDE, provided that the following conditions are met:

1. Redistribution of documents or parts of documents must retain this SWGDE cover page containing the Disclaimer Regarding Use.
2. Neither the name of SWGDE nor the names of contributors may be used to endorse or promote products derived from its documents.
3. Any reference or quote from a SWGDE document must include the version number (or creation date) of the document and also indicate if the document is in a draft status.

### Requests for Modification

SWGDE encourages stakeholder participation in the preparation of documents. Suggestions for modifications are welcome and must be submitted via the [SWGDE Request for Modification Form](#) or forwarded to the Secretary in writing at [secretary@swgde.org](mailto:secretary@swgde.org). The following information is required as a part of any suggested modification:

- a) Submitter's name
- b) Affiliation (agency/organization)
- c) Address



# Scientific Working Group on Digital Evidence

---

- d) Telephone number and email address
- e) SWGDE Document title and version number
- f) Change from (note document section number)
- g) Change to (provide suggested text where appropriate; comments not including suggested text will not be considered)
- h) Basis for suggested modification

## **Intellectual Property**

Unauthorized use of the SWGDE logo or documents without written permission from SWGDE is a violation of our intellectual property rights.

Individuals may not misstate and/or over represent duties and responsibilities of SWGDE work. This includes claiming oneself as a contributing member without actively participating in SWGDE meetings; claiming oneself as an officer of SWGDE without serving as such; claiming sole authorship of a document; use the SWGDE logo on any material and/or curriculum vitae.

Any mention of specific products within SWGDE documents is for informational purposes only; it does not imply a recommendation or endorsement by SWGDE.



# Scientific Working Group on Digital Evidence

---

## Recommendations for Mobile Device Photography for Comparative Analysis

### Table of Contents

1. Purpose.....	2
2. SWGDE Position.....	2
3. Considerations.....	2
4. Recommendations.....	2
5. References.....	3
6. History.....	4

Recommendations for Mobile Device Photography for Comparative Analysis

23-P-002-1.0

Version: 1.0 (3/15/2024)

This document includes a cover page with the SWGDE disclaimer.

Page 1 of 4



# Scientific Working Group on Digital Evidence

---

## 1. Purpose

The purpose of this document is to define the SWGDE position on the use of mobile device cameras to capture examination quality images of items where that image will be subjected to comparative analysis (e.g., latent prints). This document is specific to images captured by investigative organizations.

## 2. SWGDE Position

Although there have been advances in the quality of images captured by mobile device cameras, they are not all of the same quality. Mobile devices typically do not have the capability of traditional digital single lens reflex (DSLR) and mirrorless interchangeable lens cameras (MILC) used in advanced photography such as external removable flashes, interchangeable lenses, uncompressed or lossless file format options, etc. SWGDE recognizes there are instances where it may be necessary, in rare circumstances, to capture images on a mobile device camera and these images may still have limited acceptable uses. Examples of these circumstances include fleeting, or transient evidence or real-time investigative need due to an imminent public safety issue.

## 3. Considerations

- 3.1. Prior to purchasing or utilizing existing issued organization mobile devices inspect the specifications of the mobile device and consult the department photographers and comparative examiners for a quality assessment.
- 3.2. A personal mobile device should not be used.
- 3.3. Consult your organization guidelines for image transfer and storage.

## 4. Recommendations

If the only digital image capture method available is a mobile device, the following conditions should be met:

- 4.1. Any image captured should conform to all organization requirements and/or best practices [1], [2].
- 4.2. The camera should be set to the highest quality setting without any filters applied.
- 4.3. If the mobile device's camera settings allow it, the highest aperture and lowest ISO should be utilized.

**Recommendations for Mobile Device Photography for Comparative Analysis**

23-P-002-1.0

Version: 1.0 (3/15/2024)

This document includes a cover page with the SWGDE disclaimer.

Page 2 of 4



# Scientific Working Group on Digital Evidence

- 4.4. Place an approved scale with item identifier next to the evidence item and on the same plane as the detail to be captured.
- 4.5. Align the sensor plane parallel to the impression.
- 4.6. The item being photographed should be adequately lit. Specific lighting techniques should be used [3].
- 4.7. Ensure that subject matter details are in focus.
- 4.8. The mobile device's native focal length should be used (i.e. 1x) and it is not recommended to use the zoom feature; whether it be the wheel feature or, "pinch to zoom".
- 4.9. The image shall not be altered on the mobile device.
- 4.10. The image should be moved to agency storage as soon as possible and in the original format.
- 4.11. The image quality (e.g., resolution, size) should not be reduced when transferring it from the mobile device. Files transferred via email, text, or vendor application have a potential to degrade the image resolution and should be avoided, or tested to confirm there is no degradation prior to the transfer.
- 4.12. The image's metadata should be preserved and not altered or deleted.
- 4.13. Notes should be made in the case record to reflect that the image was captured on a mobile device and the circumstances that required its use.

## 5. References

[1] Scientific Working Group on Digital Evidence, "Photographic Equipment and Infrastructure Recommendations".

<https://www.swgde.org/documents/published-by-committee/photography>

[2] Scientific Working Group on Digital Evidence, "Digital Image Compression and File Formats Guidelines".

<https://www.swgde.org/documents/published-by-committee/photography>

[3] Scientific Working Group on Digital Evidence, "Lighting Techniques for Forensic Photography".

<https://www.swgde.org/documents/published-by-committee/photography>



# Scientific Working Group on Digital Evidence

## 6. History

Revision	Issue Date	History
1.0 DRAFT	1/9/2023	Reworked various sections and updated title of previous published document (SWGDE Mobile Device Photography for Comparative Analysis Position Paper), which will be replaced by this document.
1.0	6/13/2023	Additional work to all sections. Recommend to archive original position paper and publish mobile Device Photography for Comparative Analysis as new document.
1.0	8/7/2023	Formatted for posting after SWGDE membership voted to release as a Draft for Public Comment.
1.0	2/26/2024	Editorial changes made based on internal SWGDE member comments.
1.0	3/7/2024	Formatted for posting after SWGDE membership voted to release as a Final Publication.