

*Post-conflict Accountability in Historical and Contemporary Contexts for
Violations of International Humanitarian Law*

Digitally Derived Evidence to Prosecute Perpetrators of International Crimes *Applying the Leiden Guidelines*

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Outline

I. What is Digitally Derived Evidence (DDE)?

II. What are key evidentiary benefits and concerns re: DDE?

III. How can practitioners employ the “Leiden Guidelines on the Use of DDE in International Criminal Courts and Tribunals”?

About the DDE Project



Schweizerische Eidgenossenschaft
Confédération suisse
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Confederaziun svizra

The Leiden Digitally Derived Evidence (DDE) Project

Founded by KGF Director Dr. Robert Heinsch and Dr. Emma Irving

The Problem: Inconsistent approaches by the Courts & lack of common, international rules for DDE's collection, preservation, sharing, and treatment before accountability bodies.

The Goal: Outlining the ICL framework and extrapolating standards applicable to DDE in domestic courts, fact-finding missions, and international courts and tribunals.

- 3 years of research via the Leiden IHL Clinic
- Case summaries
- Extrapolating “best practices”

Project Outputs

- The DDE Database: Online repository
- The Leiden Guidelines on DDE: Final output at leiden-guidelines.com

I. What is DDE?

What is Digitally Derived Evidence?

a) Digital Evidence



What is Digitally Derived Evidence?



Al-Werfalli
Online Video Evidence

**Digital Evidence:
Photos and Videos**

What is Digitally Derived Evidence?



Aerial Imagery

Aerial images made available to the ICTY indicate that there was no disturbance of the site evident on 7 July 1995, but a new mound of earth present at the site on 27 July 1995.

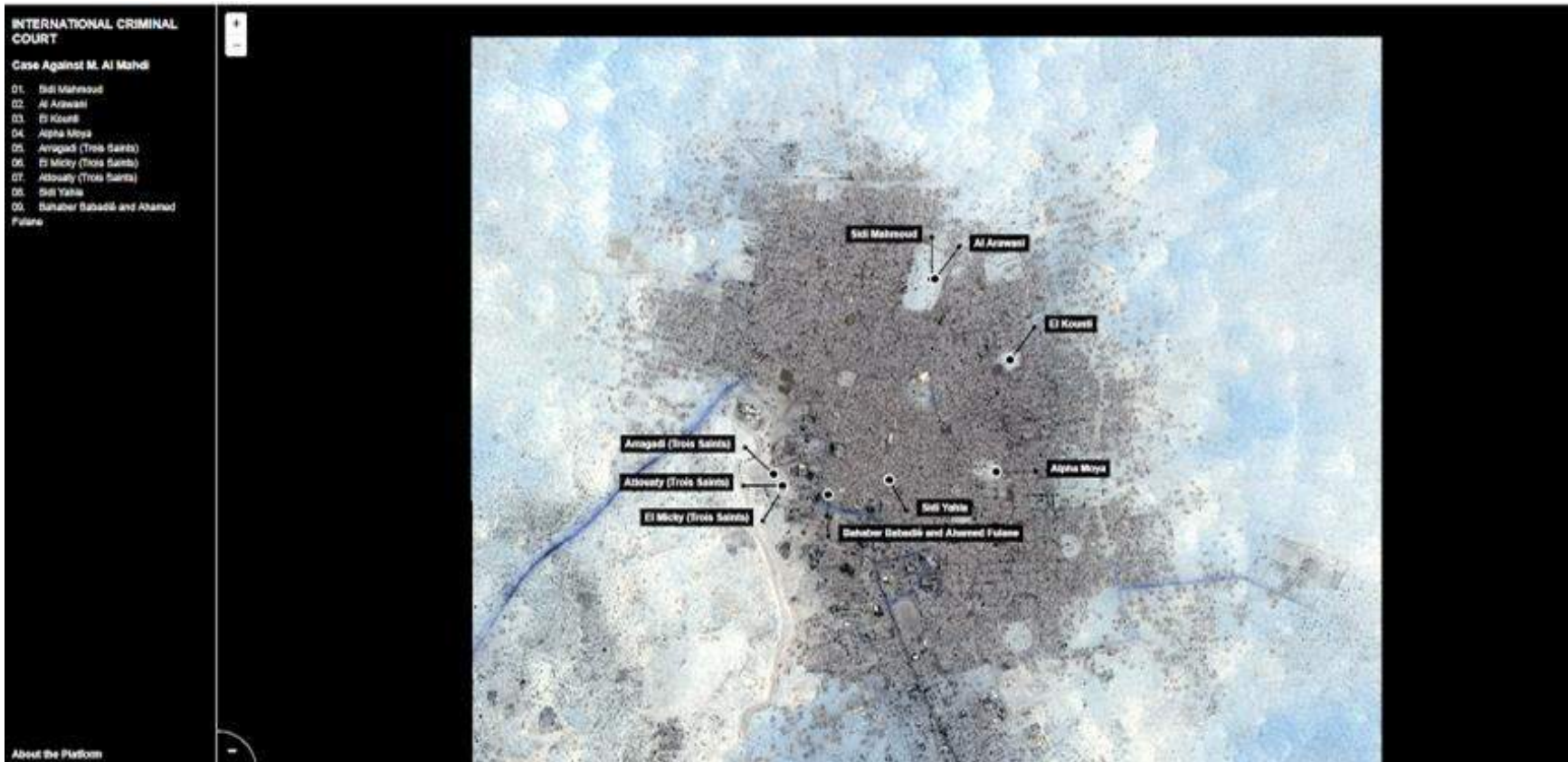
Digital Evidence: Aerial Images

Krstic
Investigator Dean
Manning, 'Srebrenica
Investigation:
Summary of Forensic
Evidence'



Universiteit
Leiden
Grotius Centre

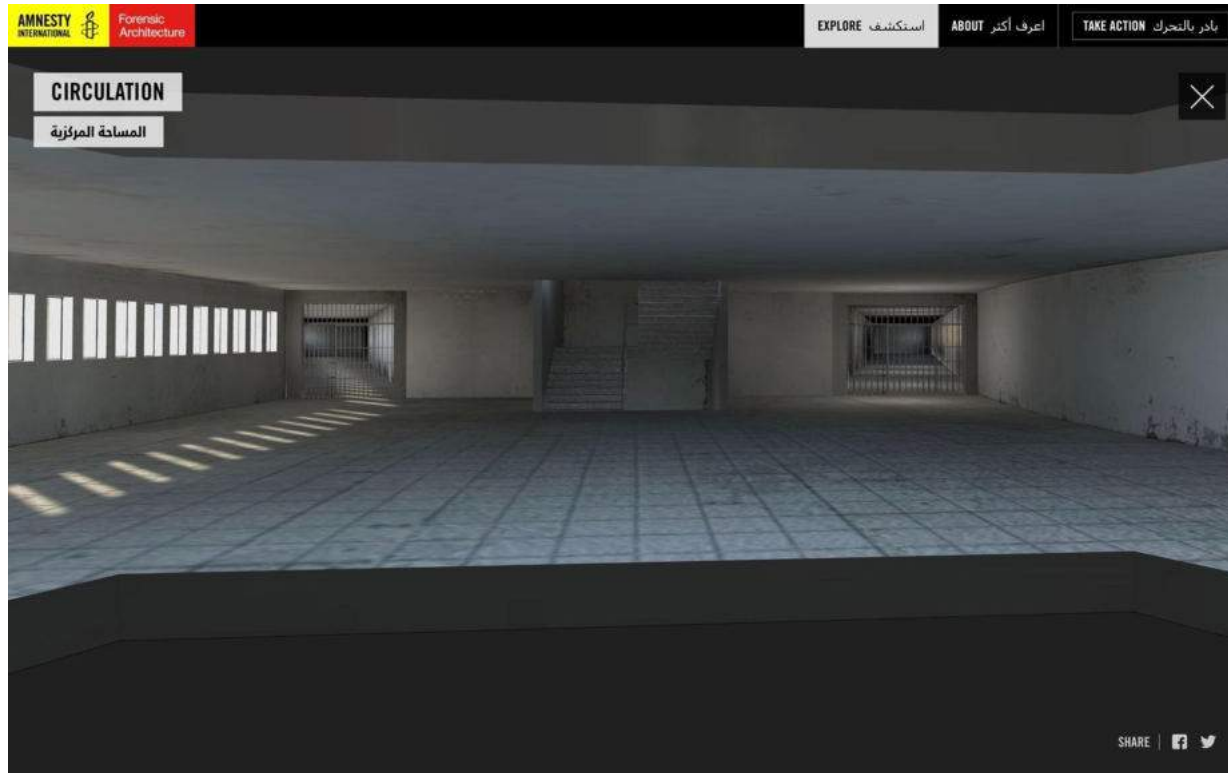
What is Digitally Derived Evidence?



**Digital Evidence:
Satellite Images**

Al-Mahdi
Situ Research Platform

What is Digitally Derived Evidence?

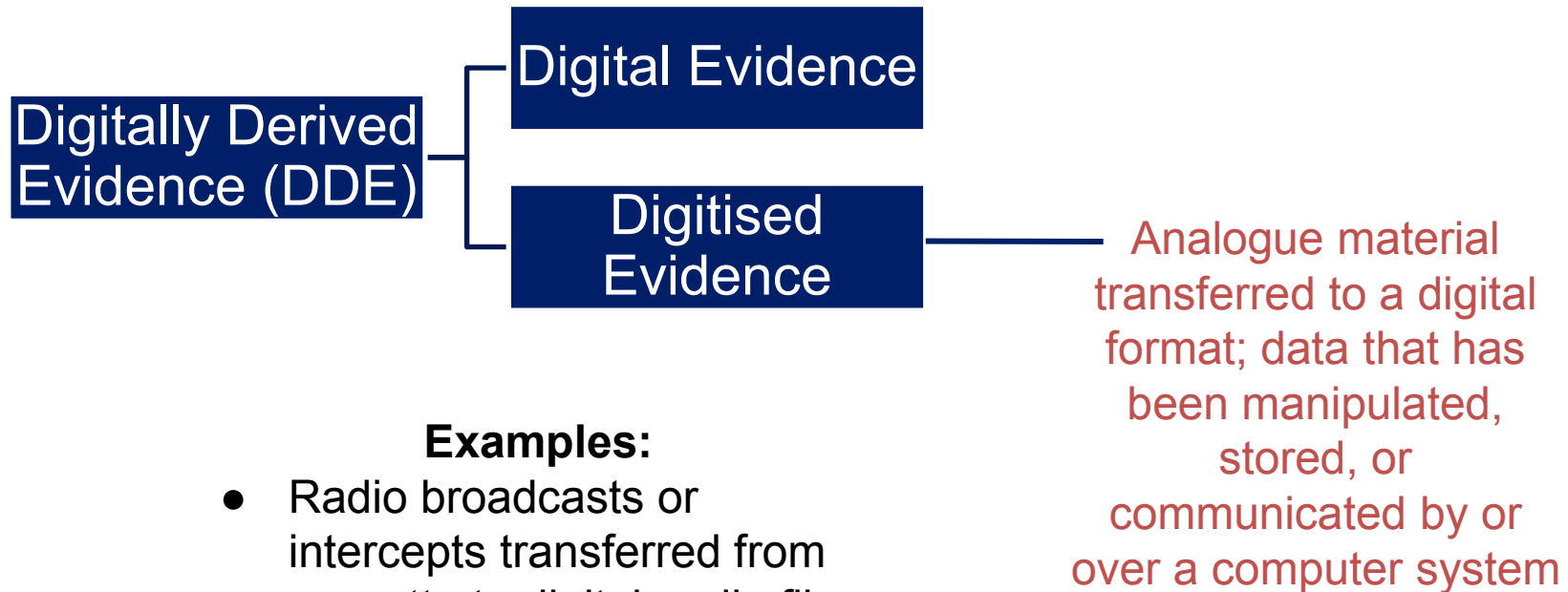


**Digital Evidence:
Digital
Reconstruction
Technology**

Amnesty International
Reconstruction of Syrian
Saydnaya Military Prison

What is Digitally Derived Evidence?

b) digitised evidence



Examples:

- Radio broadcasts or intercepts transferred from cassette to digital audio file;
- A printed photo scanned digitally.

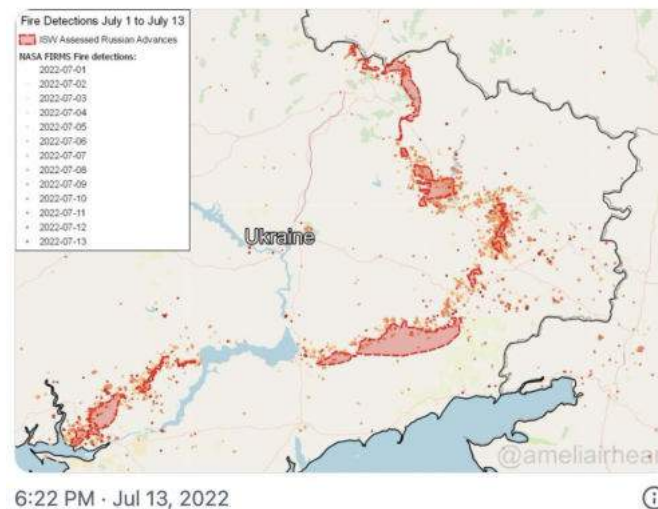
II. Key DDE evidentiary benefits and concerns

Key Evidentiary Benefits

- Unreliability of witness statements can be improved by use of DDE
- Accessible without entering unsecure / inaccessible area / State territory
- Provides a great deal of information and perspective:
 - Heat tracking a conflict via NASA Fire Data

Bellingcat, 'Scorched Earth: Using NASA Fire Data to Monitor War Zones', 4 Oct 2022, tweet by Amelia Smith dated 13 July 2022.
 - *'inter alia*: attacks against civilian objects, humanitarian assistance or peacekeeping missions; military infrastructure; and disturbances of the Earth's surfaces suggesting human activity, such as mass graves'.

KGF, Fact Finding Missions (2020) at 13.



Key Evidentiary Issues

- The smartphone/internet/TikTok era – also, the ‘deepfake’ era
- Online content companies’ algorithms removing DDE material
- Reliance on private companies/government willingness
- Voluminous potential evidence to sift through (CDRs, Syria, Ukraine)



Key Evidentiary Issues

- Need for technical experts/literacy
- Impact on fair trial rights
- Future technologies
- Non-uniformity across and within accountability fora



John Lund / Getty Images

III. Applying the Leiden Guidelines on the Use of DDE in International Criminal Courts and Tribunals

The Leiden Guidelines: an Overview (leiden-guidelines.com)

About the Project

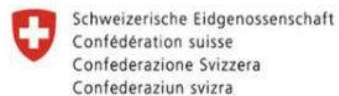
Leiden Guidelines on the Use of Digitally Derived Evidence in International Criminal Courts and Tribunals

The KGF research project on 'Digitally Derived Evidence' examines the different legal standards of evidence applicable at various national and international accountability fora in order to prosecute international crimes. The project was initiated in 2019 by [Dr. Emma Irving](#) and [KGF Director Dr. Robert Heinsch](#) and offered the opportunity for Leiden IHL Clinic students to contribute to the research.

This research project makes use of the expertise and infrastructure of both the [Kalshoven-Gieskes Forum on International Humanitarian Law](#) and its IHL Clinic as well as the [Grotius Centre for International Legal Studies](#) at Leiden University. The research is funded by the Federal Department of Foreign Affairs (FDFA), Switzerland.



Supported by:



**Guidelines**[Introduction](#)[A. Videos](#)[B. Photographs](#)[C. Aerial and Satellite Images](#)[D. Intercepts](#)[E. Call Data Records](#)[F. Audio Recordings](#)

A. Definition of DDE

The term 'Digitally Derived Evidence' was coined by the DDE Project to encompass both 'digital evidence,' which is material that has been "born-digital" in the sense of originating from a "computer environment," as well as 'digitized evidence,' which is analogue material that has been transferred to a digital format.² The concept is rooted in the following definitions:

International Bar Association (IBA)

'Digital and technologically derived evidence, which means evidence taken from and created by digital devices and via technology, such as cameras, satellites and other 'remote sensing technologies' [...] We distinguish digital evidence, created by digital technology and itself the record or trace of an action or event used for the purpose of proceedings, from the digitization of documents and records for the purpose of storing, organizing and presenting evidence, as for example, with the ICC's E-Court protocol.'³

Human Rights Center, University of California, Berkeley School of Law

'Digital evidence is data that is created, manipulated, stored, or communicated by any device, computer or computer system or transmitted over a communication system, that is relevant to the proceeding.'⁴

DDE therefore reflects evidence that originates from electronic or digital technology, as well as evidence that would normally fall under another category of evidence but has been copied or preserved by being converted into a digital form.

B. Methodology

Table of contents[A. Definition of DDE](#)[B. Methodology](#)[C. Structure of the Leiden Guidelines](#)[D. Scope of the Leiden Guidelines](#)

Guidelines

Introduction

A. Videos

B. Photographs

C. Aerial and Satellite Images

D. Intercepts

E. Call Data Records

F. Audio Recordings

A5. The Court can make an inference from the content of a video to the extent that it allows the Court to make a definite finding.

Keywords

relevance; inferences

Once a video's prima facie authenticity has been established, the video may be admitted as real evidence.³² If segments of a video are found to be inadmissible, the remainder of the information in the video may nevertheless be found to be admissible.³³ The ICTR Trial Chamber in *Karemera et al* admitted videos which depicted violence and killings in Rwanda, but disregarded any accompanying comments made by journalists in the videos.³⁴

Nevertheless, caution should be exercised when assessing a video since differences in personal perception may cause difficulties in reaching a definite finding.³⁵ It may not be possible to make a definite finding if a subject appears too briefly in the video.³⁶ The Trial Chamber in *Lubanga* was not able to make a definite finding on the depiction of alleged child soldiers in a video where children who could be under the age of 15 appeared for just two seconds in a video.³⁷

However, allowing for a wide margin of error, it is possible to make definite findings. The Court will rely on the video only to the extent that it can make a definite finding.³⁸ The ICC Trial Chamber in *Lubanga* relied on video evidence concerning child soldiers only to the extent that it could make a definite finding that it depicted children who were clearly under the age of 15.³⁹ A negative finding based on what was not shown in the video can also, in principle, be substantiated.⁴⁰ Pursuant to Rule 63(4) of the *ICC Rules of Procedure and Evidence*, there is no strict legal requirement that the video has to be corroborated by other evidence for the Court to be able to rely on it and establish a specific fact.⁴¹ The ICC Appeals Chamber in *Lubanga* affirmed that it was not unreasonable for the Trial Chamber to reach conclusions on the age of individuals based on the video evidence provided, given the absence of corroborating evidence.⁴²

A6. Videos can be admitted into evidence if relevance and prima facie authenticity is demonstrated by providing information about the date, the location, the events depicted, the author, the source, and/or the chain of custody.

Keywords

probative value; relevance; authenticity; chain of custody; admissibility

Pursuant to Article 69(4) of the *Rome Statute*, the Court may rule on the relevance or admissibility of any evidence.

Table of contents

Definition

A1. Instead of excerpts, videos should be submitted in their entirety.

A2. A video and its associated transcripts and translations must be seen as forming integral parts of the same evidence.

A3. Videos not in a working language of the Court should be translated into one of the working languages of the Court and made available to the Chamber and all parties within the time limit fixed by the Chamber.

A4. When a witness appears on a video that the party intends to tender into evidence, the video should be tendered through the witness during the examination-in-chief and not through the bar table.

A5. The Court can make an inference from the content of a video to the extent that it allows the Court to make a definite finding.

A6. Videos can be admitted into evidence if relevance and prima facie authenticity is demonstrated by providing information about the date, the location, the events depicted, the author, the source, and/or the chain of custody.

A7. Video evidence of interviews conducted during an armed conflict by a party to the conflict may not be objective and reliable and therefore low probative value may be attached to the video.

A8. The consent of witnesses and others affected by the work of the Court whose image is depicted in video evidence is required.



About the Project

Leiden Guidelines on the Use of Digitally Derived Evidence in International Criminal Courts and Tribunals

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PDF Downloads

The Leiden Guidelines may be downloaded in PDF format here:



[Leiden Guidelines on the Use of Digitally Derived Evidence in International Criminal Courts and Tribunals](#)

Additional Resources

The additional resources below are considered by the KGF to serve as the *travaux préparatoires* of the Leiden Guidelines. While the Leiden Guidelines are the main outcome of the DDE Project, the documents below are the research and analysis outputs conducted over the three-year course of the DDE Project. These documents serve to provide additional information and context for practitioners and scholars exploring the treatment of DDE before international criminal courts and tribunals, as well as in the context of fact-finding missions and in select national jurisdictions.

Case Law Resources



[Extrapolations from Case Law on the Use of Digitally Derived Evidence Before International Criminal Courts and Tribunals](#)



[Case Summaries: Analysis of Digitally Derived Evidence from the Jurisprudence of International Tribunals](#)

Legal Reports



[Prosecution of International Crimes Using Digitally Derived Evidence in National Courts](#)



[Digitally Derived Evidence in UN Human Rights Fact-Finding Missions: Approaches and Standards of Proof](#)



[Digitally Derived Evidence in International Criminal Law: Legal Framework and Practice](#)

Situating the DDE Guidelines among the Sources of ICL

Art. 21 ICC-Statute

1. *The Court shall apply:*

- (a) *In the first place, this Statute, Elements of Crimes and its Rules of Procedure and Evidence;*
- (b) *In the second place, where appropriate, applicable treaties and the principles and rules of international law, including the established principles of the international law of armed conflict;*
- (c) *Failing that, general principles of law derived by the Court from national laws of legal systems of the world including, as appropriate, the national laws of States that would normally exercise jurisdiction over the crime, provided that those principles are not inconsistent with this Statute and with international law and internationally recognized norms and standards.*

Situating the DDE Guidelines among the Sources of ICL

Article 21 (2) + (3) ICC

- 2. *The Court may apply principles and rules of law as interpreted in its **previous decisions**.*
- 3. *The application and interpretation of law pursuant to this article must be **consistent with internationally recognized human rights**, and be without any adverse distinction founded on grounds such as gender as defined in article 7, paragraph 3, age, race, colour, language, religion or belief, political or other opinion, national, ethnic or social origin, wealth, birth or other status.*

Key Evidentiary Concepts

*[F]or an item to be admitted into evidence it must satisfy the three-part test under which it must (i) be **relevant** to the case; (ii) have **probative value**; and (iii) be sufficiently relevant and probative as to outweigh any **prejudicial effect** its admission may cause. Further, [the] determination on the admissibility into evidence of an item has no bearing on the final **weight** to be afforded to it, which will only be determined by the Chamber at the end of the case when assessing the evidence as a whole.*

Prosecutor v Bemba (Decision on the admission into evidence of items deferred in the Chamber's "Decision on the Prosecution's Application for Admission of Materials into Evidence Pursuant to Article 64(9) of the Rome Statute" (ICC-01/05-01/08-2299)) ICC-01/05-01/08 (27 June 2013) TC [9].

Gaps filled by the Leiden Guidelines (e.g.):

1. How Best to Submit Evidence
2. Points That Go to Probative Value and Relevance
3. Corroboration, or Lack Thereof

Leiden Guidelines on:

1. How best to submit evidence

Full length vs. excerpts

A1: Instead of excerpts, videos should be submitted in their entirety.

Prosecutor v. Ntaganda: Defence sought to tender video excerpts “which provide context to the security situation[...]” following the arrival of armed forces.

Prosecution argued the excerpts were “too selective”. ([Decision on second Defence request for admission of evidence from the bar table](#)) ICC-01/04-02/06-136 (21 February 2018) (TC VI) [10].

The ICC Trial Chamber in *Ntaganda* admitted a full video broadcast instead of only the excerpts submitted by the Defence in order to provide context to the security situation portrayed by the video in its entirety.

Mirror Guideline:

F1: Instead of excerpts, audio recordings should be submitted in their entirety.

Prosecutor v Bemba: “As previously stated, the prosecution should provide recordings in full and not just excerpts of them [...]” (Public Redacted Version of “Decision on the Prosecution’s Application for Admission of Materials into Evidence Pursuant to Article 64(9)” of 6 September 2012) ICC-01/05-01/08-2299-Red (8 October 2012) (TC III) [122].

Leiden Guidelines on:

2. Points that go to probative value, relevance

Indicia of reliability: Date, time, location; author, source, chain of custody

B2. Photographs can be admitted into evidence if prima facie authenticity is demonstrated by providing information about the **date**, the location, the events depicted, the author, the source, and/or the chain of custody.

Prosecutor v Ntaganda: **[W]hen photographs are dated, the parties seeking admission should provide evidence from which the Court can conclude that the dates are correct and fall within the temporal scope of the charges.** (Decision on Prosecution's request for admission of documentary evidence) ICC-01/04-02/06-1838 (28 March 2017) (TC VI) [68].

The ICC Trial Chamber found that photos dated ambiguously (**such as '08/07 2003'**) or by a range (**'January-February 2003'**) “could have some relevance.” *Ibid.*

Leiden Guidelines on:

3. Corroboration

In the absence of corroborating evidence

A5: The Court can make an inference from the content of a video to the extent that it allows the Court to make a definite finding.

Prosecutor v Lubanga: Concerning videos purporting to depict child soldiers, the ICC trial Chamber “applied a large margin of error and made findings as to the age of the children only where the children were, in its assessment, “clearly” under the age of fifteen years.” (Judgment on the appeal of Mr Thomas Lubanga Dyilo against his conviction) ICC-01/04-01/06-3121-Red (1 December 2014) (AC) [218].

Pursuant to Rule 63(4) of the ICC Rules of Procedure and Evidence, there is no strict legal requirement that the video has to be corroborated by other evidence for the Court to be able to rely on it and establish a specific fact. The ICC Appeals Chamber in *Lubanga* affirmed that it was not unreasonable for the Trial Chamber to reach conclusions on the age of individuals based on the video evidence provided, given the absence of corroborating evidence.

In contrast, the *Lubanga* Trial Chamber rejected another video which showcased children who could be under the age of 15 for only 2 seconds, - too briefly to enable a definite finding. (Judgment pursuant to Article 74 of the Statute) ICC-01/04-01/06-2842 (14 March 2012) (TC I) [806], fn 2432.

Open Source DDE

The Leiden Guidelines on Open Source Media Broadcasts:

Guideline A6 (Video)

The reliability of an open source media broadcast from a well-known media source is bolstered by its public availability on the media outlet's official website. Other indicia of reliability include date of emission, images or voices of the interviewees, and media source logos on video broadcasts (particularly if they are continually displayed and uninterrupted).

Applying the Leiden Guidelines: Satellite

C3. Aerial and satellite images should be contemporaneous to the events they purport to be showing.

Keywords

relevance; contemporaneity

Where there exists an extensive period of time between when the images were taken and when the events occurred, and where testimony of a witness acknowledges that changes could have arisen between the occurrence of the event and the time at which the aerial images were taken,¹⁵ the ICC Trial Chamber in *Ntaganda* found that it is 'not in a position to establish beyond reasonable doubt' that what is shown on the image occurred as a result of the event under consideration.¹⁶ The Trial Chamber determined that images taken more than a month after an attack are 'of limited use to establish whether, and if so how, any destruction took place during the events that are subject to the charges'.¹⁷

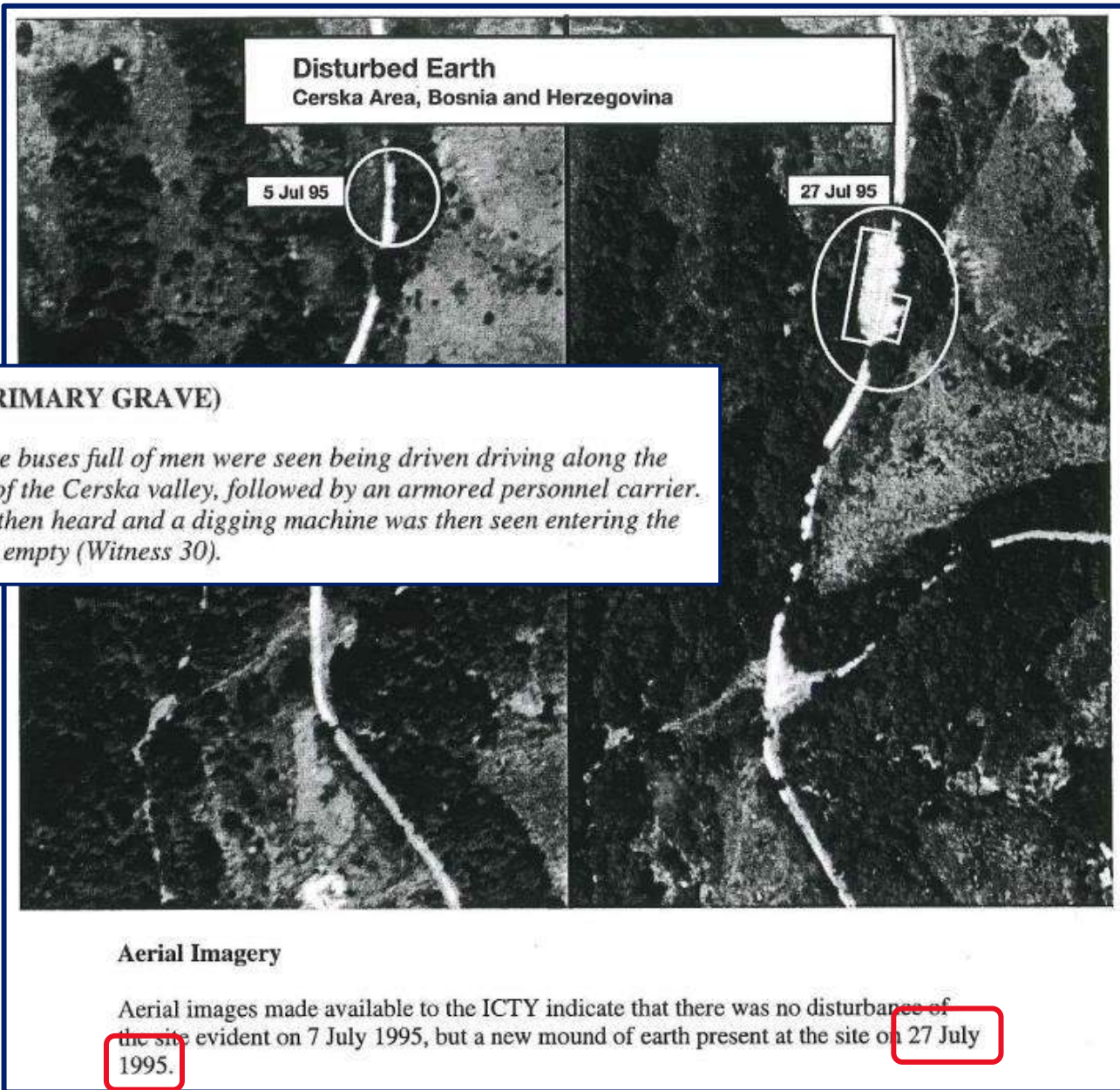
Applying the Leiden Guidelines: Satellite Images

Al Mahdi - Use of satellite imagery to show attack on Sidi Mahmoud mausoleum on 30 June 2012, among other UNESCO cultural sites.



1 / 2 Satellite imagery showing one of the nine mausoleums both before and after destruction.

SITU Research: ICC Digital Platform, Timbuktu, Mali



Dean Manning,
Srebrenica
Investigation:
Summary of
Forensic Evidence -
Execution Points
and Mass Graves
(16 May 2000)
00950901-
00951041, Annex
A, 9.

V. Practical Exercise

Hypothetical case: What are the Applicable Guidelines?

- Screengrab of Video from Youtube, now removed from the internet
- Of a person videotaping a missile strike in a populated urban area, speaking Ukrainian, translated into English by the OTP
- Date displayed in video is 4/6/2022; date posted on Youtube is 5 June 2022
- Corroborating evidence: Broadcast news reports of missile strike, and 1,000 other online videos from the missile strike

Thank you!

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Leiden Guidelines:

www.leiden-guidelines.com

KGF Leiden:

www.kalshovengieskesforum.com

IHL Clinic:

www.kalshovengieskesforum.com/ihl-clinic

IHL MOOC:

www.coursera.org/learn/international-humanitarian-law