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# REPORT ON DIGITALLY DERIVED EVIDENCE USED IN UN HUMAN RIGHTS FACT-FINDING MISSIONS

APPROACHES AND STANDARDS OF PROOF

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**REPORT ON  
DIGITALLY DERIVED  
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STANDARDS OF PROOF**

Report



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## I. Introduction

Actors engaged in human rights fact-finding are charged with documenting violations of international law committed in situations of armed conflict or protracted violence. In so doing, these actors collect large amounts of information from a range of sources, including witnesses, field missions, and reports from NGOs and international institutions. Some of this information derives from digital sources, such as digital cameras, computers, and the internet. This report focuses on this latter type of information—referred to here as digitally derived evidence (DDE)—and examines how it has been approached by human rights fact-finders in their work. The working definition of DDE used in this report is ‘information and data of value to an investigation that is stored on, received, or transmitted by an electronic device’.<sup>1</sup> Of particular interest are the questions of how and when DDE will be deemed to satisfy the standards of proof employed by human rights fact-finding missions.

The term ‘human rights fact-finding mission’ is a broad term that can encompass a range of governmental and non-governmental actors. Here, the term is used narrowly, with ‘human rights fact-finding mission’ being shorthand for entities, established by UN organs, mandated to investigate violations of international human rights, humanitarian, and criminal law. This focus follows from that of the broader research project of which this report is part, and which examines the use of DDE by international accountability mechanisms. While the use of DDE by non-governmental organisations, advocacy groups, private investigative groups, and so on, is a topic worthy of research, it falls outside of the scope of the present project, which centres on international inter-governmental bodies.

All of the human rights fact-finding missions whose reports were analysed for this analysis were established by either the Office of the High Commissioner of Human Rights (OHCHR) or by the Human Rights Council (HRC). Different terminology has been used in naming human rights fact-finding missions, including ‘Commission on Inquiry’, ‘Fact-Finding Mission’, and ‘Group of Eminent Experts’. These terms are subsumed under the general label of ‘human rights fact-finding missions’ for the purpose of this report. Fact-finding missions can also be established by other

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<sup>1</sup> Aric W. Dutelle, *An Investigation to Crime Scene Investigation* (3rd edn, Jones and Bartlett Learning 2017) 374.

UN organs—including the General Assembly and the Security Council—but as the reports of such missions have not yet mentioned DDE, they are not discussed here.

In undertaking the research for the present report, one additional non-UN entity was also of significant interest. The International Humanitarian Fact-Finding Commission (IHFFC) is an expert body established by Article 90 of the Additional Protocol I to the Geneva Conventions to respond to incidents in relation to international humanitarian law (IHL).<sup>2</sup> The goal in establishing this Commission was to promote respect for IHL by inquiring into incidents of alleged violations. States can only be subjects of an IHFFC enquiry if they have accepted its competence by means of a voluntary declaration, and if they have consented to an enquiry in a given instance.<sup>3</sup> Furthermore, the Commission's findings will only be published if all parties to the conflict agree.<sup>4</sup> Consequently, there are currently no publicly available documents to examine, meaning that its work could not form part of this report.

To gain an understanding of how human rights fact-finding missions approach DDE in their work, an analysis was undertaken of mission reports where DDE was used. As of August 2020, this totalled a number of ten reports. Figure 1 lists these reports, alongside a summary of the types of DDE mentioned therein. It is to be expected that upcoming reports from current and future human rights fact-finding missions will continue to make use of DDE. In September 2020 the fact-finding mission on the Bolivarian Republic of Venezuela released its report into recent events in that country. The publication of this report fell outside of the research timeline for the current analysis, but given the internet and social media penetration in Venezuela, it is expected that DDE played an important role in that report, and readers are encouraged to consider it.

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<sup>2</sup> The International Humanitarian Fact-Finding Commission  
<<https://www.ihffc.org/index.asp?Language=EN&page=home>> accessed 10 September 2020.

<sup>3</sup> Robert Heinsch, 'The Future of the International Humanitarian Fact-Finding Commission: A Possibility to overcome the Weakness of IHL Compliance Mechanisms?' in Dražan Djukić and Niccolò Pons (eds), *The Companion to International Humanitarian Law* (Brill Nijhoff 2018) 83.

<sup>4</sup> *ibid* 88.

Figure 1

<b>Reports</b>	<b>DDE used</b>
‘Report of the detailed findings of the independent commission of inquiry established pursuant to Human Rights Council Resolution S21/1’ (24 June 2015) A/HRC/29/CRP.4 (hereinafter: 2015 OPT Mission)	Satellite imagery; video and photo materials; social media content; phone and audio data records
‘Report of the OHCHR Investigation on Sri Lanka’ (16 September 2015) A/HRC/30/CRP.2 (hereinafter: 2015 Sri Lanka Mission)	Satellite imagery and UAV footage; video and photo materials
‘Investigation by the Office of the United Nations High Commissioner for Human Rights on Libya: detailed findings’ (23 February 2016) A/HRC/31/CRP.3 (hereinafter: 2016 Libya Mission)	Videos; social media content
‘Detailed findings of the commission of inquiry on human rights in Eritrea’ (8 June 2016) A/HRC/32/CRP.1 (hereinafter: 2016 Eritrea Mission)	TV interview; podcast
‘Report of the Independent International Commission of Inquiry on the Syrian Arab Republic’ (2 February 2017) A/HRC/34/64 (hereinafter: 2017 Syria Mission)	Satellite imagery; video and photo materials
Rapport final détaillé de la Commission d’enquête sur le Burundi (12 September 2018) A/HRC/39/CRP.1 (hereinafter: 2018 Burundi Mission)	Videos and photo materials; social media content; phone and audio data records
‘Report of the detailed findings of the Independent International Fact-Finding Mission on Myanmar’ (17 September 2018) /HRC/39/CRP.2 (hereinafter: 2018 Myanmar Mission)	Satellite imagery; video and photo materials; social media content

‘Report of the Commission on Human Rights in South Sudan’ (21 February 2019) A/HRC/40/CRP.1 (hereinafter: 2019 South Sudan Mission)	Satellite imagery; video and photo materials; social media content
‘Report of the detailed findings of the independent international Commission of inquiry on the protests in the Occupied Palestinian Territory’ (18 March 2019) A/HRC/40/CRP.2 (hereinafter: 2019 OPT Mission)	Satellite imagery; video and photo materials; social media content
‘Report of the Group of Eminent International and Regional Experts as submitted to the United Nations High Commissioner for Human Rights’ (9 August 2019) A/HRC/42/17 (hereinafter: 2019 Yemen Mission)	Social media content; video and photo materials
‘Report of the Independent International Commission of Inquiry on the Syrian Arab Republic’ (2 July 2020) A/HRC/44/61 (hereinafter: 2020 Syrian Mission)	Social media content; video and photo materials; satellite imagery
‘Comprehensive report of the Group of Eminent International and Regional Experts on Yemen’ (14 September 2020) A/HRC/45/6 (hereinafter: 2020 Yemen Mission)	Social media content; video and photo materials

The remainder of this report is comprised of two sections followed by a conclusion. The first of these sections (section 2) outlines how human rights fact-finding missions go about investigating violations of international law: in other words, their methodology. The same section then discusses the standard of proof to which fact-finding missions work. With this general framework in mind, the following section (section 3) considers how different types of DDE fit within fact-finding methodology, and when DDE will be deemed to meet the necessary standard of proof for a particular fact-finding mission. Section 3 discusses three types of DDE: videos and photographs, satellite imagery, and content derived from social media.

## II. Fact-Finding Methodologies and Standards of Proof in General

Understanding how human rights fact-finding missions approach and use DDE first requires an understanding of how fact-finding missions approach their work generally. Each fact-finding report begins with an introductory section where the mission explains the methodology followed and the standard of proof to which the mission worked. These two notions will be considered in turn.

### A. Methodology

The term ‘methodology’ denotes the manner in which a human rights fact-finding mission conducts their investigation to fulfil their mandated purpose. Early on in the investigation process, a fact-finding mission must develop an ‘investigation plan’, which sets out key methodological points: what needs to be investigated according to the mandate, who will carry out the investigation, and how the investigation will be conducted.<sup>5</sup> More particularly, the investigation plan involves identifying what information is already known, what information still needs to be gathered, what the potential sources of information are, and what the process of gathering information will be.<sup>6</sup> As the scope and circumstances of each mandate will be different, the methodology must be tailored to each specific report. A description of the methodology forms part of a fact-finding mission’s final report.

A fact-finding mission’s methodology will be governed by certain overarching principles. Guidance issued by the OHCHR stipulates that UN fact-finding missions must ensure that their methods of work “conform to the principles and standards of the Charter of the United Nations and international law”.<sup>7</sup> By ‘international law’ the guidance refers particularly to international human rights law, humanitarian law, criminal law, and refugee law. In addition to this requirement, fact-finding missions must ensure adherence in their work to a number of overarching principles and standards, including ‘do no harm’, ‘independence’, ‘impartiality’, and ‘confidentiality’.<sup>8</sup>

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<sup>5</sup> OHCHR, ‘Commissions of Inquiry and Fact-Finding Missions on International Human Rights and Humanitarian Law: Guidance and Practice’ (2015) UN Doc HR/PUB/14/7 (hereinafter OHCHR Guidance and Practice) 38.

<sup>6</sup> *ibid* 39.

<sup>7</sup> OHCHR Guidance and Practice (n 5) 33.

<sup>8</sup> *ibid* 33-34.

In some reports, the methodology section provides an overview of the sources of information the human rights fact-finding mission made use of, such as witness interviews, news reports, and so on. In more recent reports, the different sources are divided into ‘primary’ and ‘secondary’ sources of information (although different terms are often used).<sup>9</sup> Primary sources might include confidential interviews with witnesses, publicly available admissions of relevant facts by a governmental authority, and the direct observations of investigators on field missions. Secondary sources, by contrast, might include second-hand witness testimonies, information provided by NGOs, and descriptions of patterns of conduct contained in public reports and submissions. How a source is categorised is relevant for the question of whether the standard of proof is reached.

## B. Standard of Proof

It is generally accepted that human rights fact-finding bodies are not bound by the ‘beyond reasonable doubt’ standard of proof.<sup>10</sup> Fact-finding missions generally function under challenging circumstances, and their limited mandate, shortage of time and their lack of enforcement abilities means that they are not in a position to reach the same standards of examination that are expected of judicial bodies.<sup>11</sup> Due to this flexibility, the fact-finding mission is able to set its own proof threshold, which can be adjusted on a case-by-case basis.<sup>12</sup>

In general, the words used for characterising the standard of proof are indicative of where the evidentiary bar has been set. For example, high evidentiary thresholds can be identified when terms such as ‘no doubt’ or ‘unquestionable’ are used, whereas lower thresholds have been communicated by phrases such as ‘reasonable to presume’ or simply ‘credible evidence’.<sup>13</sup> In

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<sup>9</sup> In some reports, fact-finding missions use the term ‘direct information’ or ‘first-hand information’ rather than ‘primary information’. In these cases, the term ‘secondary information’ is not used, and instead information that doesn’t qualify as primary/direct/first-hand is referred to as ‘corroborating information’ or simply ‘information’ (for example, the 2018 Myanmar Mission report and 2019 South Sudan Mission report). However, given the close similarity between what is described as ‘direct’ in some reports and as ‘primary’ or ‘first-hand’ in others, this distinction is not afforded significance for the purpose of this brief.

<sup>10</sup> Morten Bergsmo (ed), *Quality control in fact-finding* (Torkel Opsahl Academic EPublisher 2013) 19.

<sup>11</sup> Stephen Wilkinson, ‘Standards of Proof in International Humanitarian and Human Rights Fact-Finding and Inquiry Missions’ (*Geneva Academy of International Humanitarian Law and Human Rights*, 2011) 46 <<https://www.geneva-academy.ch/joomlatools-files/docman-files/Standards%20of%20Proof%20in%20Fact-Finding.pdf>> accessed 4 June 2019.

<sup>12</sup> Liu Daqun, ‘Quality Control in Truth and Reconciliation Processes’ in Morten Bergsmo (ed), *Quality control in fact-finding* (Torkel Opsahl Academic EPublisher 2013) 146.

<sup>13</sup> *ibid* 341-342.

practice, human rights fact-finding bodies have most commonly adopted the ‘reasonable grounds to believe’ threshold to reach their conclusions, and this seems to have become the norm. The reports on Palestine, South Sudan and Burundi explicitly mention that using the ‘reasonable grounds to believe’ standard of proof has become a ‘consistent practice’ of UN fact-finding bodies.<sup>14</sup> All of the reports examined for this report adopted the reasonable grounds to believe standard.

In explaining the meaning of the reasonable grounds to believe threshold, the 2016 Libya Mission stated that the standard is satisfied when the information collected is consistent with other material and would lead a “reasonable and ordinarily prudent person” to believe that certain incidents occurred.<sup>15</sup> This wording is also seen in other reports.<sup>16</sup>

In many of the examined reports, the missions stipulated that the standard of proof is met when information is sufficiently corroborated. Corroboration is approached differently for primary and secondary sources of information. Information from a primary source can be corroborated by other primary information and/or secondary information. Once corroborated, it can be cited as support for a factual or legal finding. Information from a secondary source cannot, without an associated piece of information from a primary source, support a factual or legal finding. In other words, if the only information a human rights fact-finding mission has about an incident comes from secondary sources, then it cannot reach the standard of proof of reasonable grounds to believe.

Having discussed this background information on the working methods of human rights fact-finding missions, this report will now turn to examine how methodology and standard of proof operate when the information at hand is digitally derived.

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<sup>14</sup> OHCHR, ‘Report of the detailed findings of the independent international Commission of inquiry on the protests in the Occupied Palestinian Territory’ (Fortieth session, 18 March 2019) UN Doc A/HRC/40/CRP.2 (hereinafter OHCHR OPT) para 16; OHCHR, ‘Report of the Commission on Human Rights in South Sudan’ (Fortieth session, 21 February) UN Doc A/HRC/40/CRP.1 (hereinafter OHCHR South Sudan) para 11; OHCHR, ‘Rapport final détaillé de la Commission d’enquête sur le Burundi’ (Thirty-ninth session, 12 September 2018) UN Doc A/HRC/39/CRP.1 (hereinafter OHCHR Burundi) para 16.

<sup>15</sup> OHCHR, ‘Investigation by the Office of the United Nations High Commissioner for Human Rights on Libya: detailed findings’ (Thirty-first session, 15 February 2016) UN Doc A/HRC/31/CRP.3 para 11.

<sup>16</sup> For example see OHCHR OPT (n 14) para 17; OHCHR South Sudan (n 14) para 14.

### III. Fact-Finding Methodologies and Standards of Proof in Relation to Digitally Derived Evidence

For different types of DDE, this section discusses how the DDE has been used by human rights fact-finding missions, where the DDE can be placed within the methodology of the missions, and when the DDE was considered to meet the standard of proof of ‘reasonable grounds to believe’. The types of DDE discussed in this section are videos and photographs (see below A.), satellite imagery (B.), and content derived from social media (c.). This selection is based on the prevalent forms of DDE found in the human rights fact-finding mission reports.

#### A. Videos and Photographs

The use of video and photographs as a source of information can be observed in almost all of the examined reports. The purpose of their use within the reports varied depending on the context.

##### 1. The particular use of videos and photos

The 2019 OPT Mission report used video, in part, for the purpose of providing background information on the demonstrations in the context of which the violence took place. For example, videos are cited to support the fact that a demonstration in Malaka, Gaza City, “was mostly peaceful, featuring musical, cultural and political events [...] The Commission did not find evidence that demonstrators carried weapons or that the separation fence was breached or damaged”.<sup>17</sup> This was relevant to the findings that followed that the Israeli Security Forces’ (ISF) response towards demonstrators was disproportionate and unlawful.<sup>18</sup>

The 2018 Myanmar Mission used a photo of a leaflet dropped by the Myanmar military in the Tanai Township to provide background information on two emblematic incidents that occurred in Kachin and Shan States during the reporting period. The purpose of the photo was to help

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<sup>17</sup> OHCHR OPT (n 14) para 424.

<sup>18</sup> OHCHR OPT (n 14) para 425.

illustrate how the hostilities, and the conduct of the military in particular, gave rise to gross human rights violations.<sup>19</sup>

Photographs have been used by human rights fact-finding missions to confirm factual allegations concerning a particular event. For example, the 2015 OPT Mission received photos in connection with the bombing of a house, including photos showing relevant injuries to civilians, that led it to conclude that the house had been completely destroyed by the impact of a bomb.<sup>20</sup> The 2018 Burundi Mission used video to support findings about violations at a particular location. The Mission refers to videos posted on social media showing blood stains outside an alleged secret detention location in a section of the report dealing with arbitrary execution and other deprivations of the right to life.<sup>21</sup>

Videos have at times been closely connected to the legal findings of a mission. The 2019 OPT Mission used videos in their assessments that Palestinian demonstrators did not pose an imminent threat of death or serious injury to the ISF, and that therefore, their targeting was unlawful under international human rights law.<sup>22</sup> For example, videos were used to show that journalists were clearly wearing PRESS jackets and, as they posed no threat, were not legitimate targets.<sup>23</sup> Videos were also used to show where an individual was standing at the time they were shot. Individuals can be seen in videos standing at a distance from the separation fence (the fence between Gaza and Israel where ISF members were located), supporting the finding that they did not pose a threat when targeted.<sup>24</sup> The same Mission used video evidence to discredit a false narrative presented by the ISF. The ISF claimed that they had targeted a 16-year-old for his ‘previous activities’, however

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<sup>19</sup> OHCHR, ‘Report of the detailed findings of the Independent International Fact-Finding Mission on Myanmar’ (Thirty-ninth session, 17 September 2018) UN Doc A/HRC/39/CRP.2 (hereinafter OHCHR Myanmar) para 306-309.

<sup>20</sup> HRC, ‘Report of the detailed findings of the independent commission of inquiry established pursuant to Human Rights Council Resolution S21/1’ (Twenty-nine session, 24 June 2015) UN Doc A/HRC/29/CRP.4 para 136.

<sup>21</sup> OHCHR Burundi (n 14) para 257.

<sup>22</sup> See OHCHR OPT (n 14) 14-36 for a discussion of the legal frameworks at play in the context of the Great March of Return in the Occupied Palestinian Territory.

<sup>23</sup> *ibid* para 535.

<sup>24</sup> OHCHR OPT (n 14) 110, 112, 145-6, 147, and 157.

a clip surfaced showing a man in close proximity to him ‘exhorting the crowd’, thereby presenting an alternative narrative that this man was the intended target.<sup>25</sup>

Another instance where videos are closely connected to legal findings can be seen in the 2015 Sri Lanka Mission report. The Mission reviewed video and photographic materials, some found on the mobile phones of Sri Lankan soldiers, which depict offensive treatment of dead female bodies. Some of the bodies appear to be members of the Liberation Tigers of Tamil Eelam, others appear to be civilians.<sup>26</sup> The Mission indicated that the material could substantiate allegations of the war crime of outrages on personal dignity.<sup>27</sup>

## 2. Role of videos and photos in fact-finding methodology

Having discussed *how* videos and photographs have been used by human rights fact-finding missions in their reports, it is time to examine where these materials fit in the fact-finding methodology.

### *a) “primary information”*

Some fact-finding missions specifically indicate that video and photographic material will be considered a source of ‘primary information’, provided they have been authenticated.<sup>28</sup> In this sense, authenticated videos and photos are placed at the same level as ‘interviews of victims or eyewitnesses with direct knowledge of the issues and incidents’.<sup>29</sup> Not all missions have been this detailed, and instead simply noted that videos and photos were part of the body of information considered. Where videos are listed as a primary source, an important question that arises concerns the meaning of authentication, as this is often not elaborated upon by the fact-finding missions (in one instance, the 2019 OPT Mission simply indicated that a video had been “authenticated by the Commission” without further detail<sup>30</sup>).

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<sup>25</sup> *ibid* 123-4.

<sup>26</sup> OHCHR, ‘Report of the OHCHR Investigation on Sri Lanka’ (OISL) (Thirtieth session, 16 September 2015) UN Doc A/HRC/30/CRP.2 (hereinafter OHCHR Sri Lanka) para 323-325.

<sup>27</sup> *ibid* para 325.

<sup>28</sup> See OHCHR OPT (n 14) para 19; OHCHR Myanmar (n 19) para 13; OHCHR South Sudan (n 14) para 17.

<sup>29</sup> *ibid*.

<sup>30</sup> OHCHR OPT (n 14) 159.

b) *“checked again secondary information”*

The 2019 Myanmar Mission did provide some information, indicating that videos and photos were “checked against secondary information assessed as credible and reliable, including the organizations’ raw data or notes, expert interviews, submissions and open source material. The Mission’s internal expertise included human rights and law, sexual and gender-based violence, psychology and child psychology, military affairs and forensics, and specialist advice was sought in digital verification”.<sup>31</sup> According to this statement, the authentication of video or photographic material involved its corroboration with other credible and reliable information, as well as digital verification by specialists.

The OHCHR guidance is useful in trying to understand the notion of authentication. It states that the authentication of a video or photographic materials requires at least the name of the source, their reliability, as well as the validity of the information assessed through corroboration.<sup>32</sup> Where feasible, the guidance also stresses the importance ‘for the investigator to view the photographs or videos in the presence of the witnesses and to ask them to explain the contents’.<sup>33</sup>

While no report has delved into depth about how digital verification is conducted in practice, the OHCHR seems acutely aware of the possibility of altering and editing videos and photographs. The 2019 OPT Mission underlined how Israeli officials relied on misleading or edited videos to paint a dead Palestinian medic as a terrorist supporter. For example, an interview where the medic mentioned wanting to act as ‘human shield for injured demonstrators’ was cut short and edited to make it appear that the medic wanted to be a human shield for Hamas.<sup>34</sup> A video allegedly showing the medic throwing a gas canister with a subtitle tying her to Hamas was also shared.<sup>35</sup> Those examples show that human rights fact-finding missions do account for possible manipulations.

Assuming a video or photo can be authenticated, it can be treated as a primary source of information. As such, it is capable of being corroborated by information from other primary

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<sup>31</sup> OHCHR Myanmar (n 19) para 22.

<sup>32</sup> OHCHR Guidance and Practice (n 5) 42.

<sup>33</sup> *ibid* 45.

<sup>34</sup> OHCHR OPT (n 14) para 664.

<sup>35</sup> *ibid* para 662.

sources as well as from secondary sources, and in this way meet the standard of proof of ‘reasonable grounds to believe’.

*c) Witness testimonies corroborating videos and photos*

In reaching the standard of proof, witness testimonies have been an important way of corroborating videos and photos—or seen from another perspective, videos and photos have been an important way of corroborating witness testimonies. A member of the 2019 OPT Mission indicated in an interview that videos were corroborated by at least three witness statements.<sup>36</sup> The photos mentioned above (in connection with the bombing of a building) received by the 2015 OPT Mission were considered alongside witness testimonies,<sup>37</sup> as was the video of blood stains outside an alleged secret detention centre discussed by the 2018 Burundi Mission. Even photos taken by on-site investigators dispatched by the fact-finding mission do not stand alone—photos documenting the aftermath of the ransacking of a school were considered alongside witness testimonies by the 2019 South Sudan Mission.<sup>38</sup>

*d) Video material corroborated by other types of DDE*

In some instances, video material appears to be corroborated by other types of DDE. The 2015 OPT Mission used a combination of videos and satellite images to support their suggestion that buildings near the Green Line were being destroyed.<sup>39</sup> As will be discussed below, satellite imagery is also considered a primary source of information.

*e) Preliminary Conclusion*

Photos and videos have become an important part of the investigative process for human rights fact-finding missions. Care is taken to ensure they are fully authenticated, and once authenticated, corroborated by other material.

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<sup>36</sup> Emma Irving, ‘Finding Facts on Facebook: Social Media in the Work of Human Rights Fact-Finding Bodies’ in Morten Bergsmo and Carsten Stahn (eds) *Quality Control in Fact-Finding* (2<sup>nd</sup> edn, TOAEP 2020) 531.

<sup>37</sup> OHCHR, ‘Report of the detailed findings of the Commission of Inquiry on the 2014 Gaza Conflict’ (Twenty-nine session, 24 June 2015) UN Doc A/HRC/29/CRP.4 (hereinafter OHCHR Gaza Conflict) para 136.

<sup>38</sup> OHCHR South Sudan (n 14) para 782.

<sup>39</sup> OHCHR Gaza Conflict (n 37) para 281.

## B. Satellite Imagery

The advantages of using satellite imagery for human rights fact finding are many, and for this reason it often features in mission reports. Analysing satellite imagery may be preferable to ground observations for a range of reasons, including because local government or armed groups undermine the investigation, because the security situation is untenable, or because of physical inaccessibility.<sup>40</sup>

### 1. Examples of using satellite imagery

In addition to these advantages, satellite imagery can provide a great deal of information. Such imagery can show, *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.<sup>41</sup>

#### a) 2015 Sri Lanka mission: presence of military infrastructure

Examples of satellite imagery being used to support findings concerning the presence of military infrastructure can be found in the 2015 Sri Lanka Mission report. Quoting a report from the United Nations Panel of Experts, the Mission noted that 'there is compelling evidence that the [Sri Lankan Army] established, maintained and updated throughout the last five months of the conflict, an operational military capability to fire substantial quantities of artillery munitions into areas heavily populated with IDPs and specifically the No Fire Zones'.<sup>42</sup> Similarly, it also assessed that 'based on information from satellite images and witness testimonies, [the Mission] does not believe that the LTTE had military positions within Mullivaikkal and Valayarmadam hospitals'.<sup>43</sup> In addition to military infrastructure, satellite imagery can provide an indication of the types of weapons used, as was the case in the 2015 OPT Mission report, where on the basis of satellite imagery buildings were found to have been destroyed by 'laser guided air dropped munitions'.<sup>44</sup>

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<sup>40</sup> Study from the European Space Agency, *Evidence from space: use of space-derived earth observation information as evidence in judicial and administrative proceedings* (27 April 2012) Doc ESA-ISPL/EO76/Final para 36.

<sup>41</sup> E.D Macauley, 'The Use of EO Technologies In Court By The Office Of The Prosecutor Of The International Criminal Court' in Ray Purdy and Denise Leung (eds) *Evidence from Earth Observation Satellites* (Nijhoff 2013) 228.

<sup>42</sup> OHCHR Sri Lanka (n 26) para 762.

<sup>43</sup> *ibid* para 872.

<sup>44</sup> OHCHR Gaza Conflict (n 37) para 224.

### *b) 2015 OPT Mission: assessment of damage*

When investigating damage to towns, villages, and buildings, satellite imagery can play a role in supporting a fact-finding mission's assessment of the damage. The 2015 OPT Mission used satellite imagery to support its finding that many buildings near the Green Line in the area of Shuja'iya, Gaza, had been destroyed.<sup>45</sup> The 2019 South Sudan Mission used satellite images to assess that approximately 7,345 structures were damaged or destroyed over a given time period in areas of Unity State.<sup>46</sup> In the report of the 2018 Myanmar Mission, satellite imagery played an important role in supporting the finding that crimes against humanity had been committed in Rakhine State. Through "analysing satellite imagery and witness account, the Mission has established widespread, systematic, deliberate, organized and targeted destruction, mainly by fire, of Rohingya-populated area across the three townships of northern Rakhine State".<sup>47</sup> The report features a lengthy section in which the mission compares satellite imagery from before and after alleged attacks on Rohingya-populated areas. The findings from this section support the finding that the contextual elements for crimes against humanity were present.

## 2. Role of satellite imagery in fact-finding missions

Following these examples of how satellite imagery is used by human rights fact-finding missions, it is time to consider how such imagery can be located within the fact-finding methodology and when the imagery will be deemed to satisfy the standard of proof of reasonable grounds to believe.

### *a) Mostly primary information*

When it comes to methodology, satellite imagery is mostly identified as primary information. As was the case with video and photographs, not all human rights fact-finding mission reports have a methodology section detailed enough to draw the distinction between primary and secondary information, but those that do categorise satellite imagery as primary information. To qualify as such, the imagery must originate from "reliable sources"<sup>48</sup> or must have been authenticated.<sup>49</sup> While the methodology sections of the reports do not provide a list of reliable sources or an indication of when satellite imagery will be considered authentic, in practice human rights fact-

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<sup>45</sup> *ibid* para 281.

<sup>46</sup> OHCHR South Sudan (n 14) para 715.

<sup>47</sup> OHCHR Myanmar (n 19) para 959.

<sup>48</sup> OHCHR South Sudan (n 14) para 17; OHCHR Myanmar (n 19) para 13.

<sup>49</sup> OHCHR OPT (n 14) para 19.

finding missions often rely on imagery from the United Nations Institute for Training and Research – Operational Satellite Applications Programme (UNITAR-UNOSAT), which is the “Centre of excellence for geographic information and satellite imagery analysis to support the United Nations system and its member states”.<sup>50</sup> The 2018 Myanmar Mission relied on satellite imagery analysis made by Human Rights Watch, describing it as ‘credible satellite imagery analysis’.<sup>51</sup>

*b) Corroboration by other pieces of primary information*

Even when authenticated and/or from a reliable source, satellite imagery must still be corroborated by other pieces of primary information or with secondary information in order to satisfy the reasonable grounds to believe standard of proof. In a section of its report, the 2015 OPT Mission explained that its finding concerning attacks on a particular area were buttressed by satellite imagery, witness statements, video and photo documentation, media and Israeli Defense Force sources, as well as UNITAR-UNOSAT assessments.<sup>52</sup> It is common for a particular assessment to be based on a different sources of information, such as a victim or witness testimony, and in turn corroborated with relevant satellite imagery. For example, the 2015 Sri Lanka Mission corroborated witness testimony, alleging that the Putumattalan hospital and the United Nations hub was shelled, with satellite imagery.<sup>53</sup>

**C. Content Derived from Social Media**

Content posted to social media by a range of different actors has emerged as a significant source of information for human rights fact-finding missions and those working in accountability generally. As described in the OHCHR's Guidance and Practice, the use of social media has become central in modern conflict situations and provides “a window” into the lives and experiences of “ordinary”.<sup>54</sup> Individuals experiencing violence can take to social media to share their stories, which can assist fact-finding missions in establishing what took place and what violations may have occurred.

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<sup>50</sup> UNITAR-UNOSAT, “UNOSAT Brief Satellite Applications for Human Security” (UNITAR, 2011) <[https://reliefweb.int/sites/reliefweb.int/files/resources/UNOSAT\\_Brief\\_Sat\\_App\\_for\\_Human\\_Sec\\_2011\\_0.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/UNOSAT_Brief_Sat_App_for_Human_Sec_2011_0.pdf)> accessed 3 June 2019.

<sup>51</sup> OHCHR Myanmar (n 19) para 661.

<sup>52</sup> OHCHR Gaza Conflict (n 37) para 260.

<sup>53</sup> OHCHR Sri Lanka (n 26) para 849.

<sup>54</sup> OHCHR Guidance and Practice (n 5) 48.

## 1. Type of social media

The type of content posted to social media includes photos, videos, and text. There is, therefore, overlap between the present section and section III.A on videos and photographs. Indeed, a number of the examples in section III.A.1 of how videos and photos were used by human rights fact-finding missions concern material posted to social media. In particular, the 2019 OPT Mission relied on social media content to an extensive amount. Videos and photos were used in the report to support a range of factual findings, and according to an interview with a member of the Mission, approximately 95% of the videos used were found on social media. Videos and photos obtained from social media are not categorized differently from the same content obtained from other sources, when it comes to the methodology of fact-finding missions. If authenticated, they are considered primary information. There may be differences in the process by which photos and videos are authenticated, in the sense that the process may be more rigorous than for material provided, for example, directly by a witness who themselves took the photo or made the video. The corroboration required to reach the standard of proof may also be more exacting. Beyond this however, social media videos and photos are not treated according to different rules by human rights fact-finding missions.

## 2. “Text content”

A category of social media content that merits separate discussion is text content. For example, the 2019 OPT Mission referred to official and unofficial Facebook pages and posts of individual protesters to determine if the character of the ‘Great Return March’ demonstrations was peaceful or not.<sup>55</sup> This was significant because it spoke to the legal rules that would apply to the use of force against demonstrators. The Mission also examined private and public Facebook groups that encouraged the use of incendiary kites and the burning of tires by demonstrators.<sup>56</sup> Text content from social media was also relied on by the 2018 Myanmar Mission. Throughout the report, there are numerous references to Facebook posts from pages connected with military and government figures. As one example, to support its finding that a climate of impunity existed surrounding the perpetration of crimes by soldiers, the Mission cited a Facebook post that contained an official statement from the Commander-in-Chief of the Myanmar military.<sup>57</sup> The 2019 Yemen Mission

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<sup>55</sup> OHCHR OPT (n 14) para 195-211.

<sup>56</sup> *ibid* para 436.

<sup>57</sup> Myanmar (n 19) para 1545.

used social media text content to a different end, namely to establish individuals' membership of and placement within the government and military hierarchy.<sup>58</sup>

From a methodology standpoint, these uses of social media text content are interesting. Both the 2019 OPT Mission and the 2018 Myanmar Mission identify “publicly available admissions of relevant facts” by state authorities or parties to the conflict as primary information.<sup>59</sup> The 2019 Yemen Mission report only states that open-source material was examined (under which social media content would fall), without further detail.<sup>60</sup> The OPT and Myanmar missions do not clarify whether social media posts from accounts affiliated with the State or with parties to the conflict would qualify as ‘publicly available admissions of relevant facts’. If this were the case, they could be understood as primary information, and corroborated accordingly. If not, it is not clear how this material fits in the methodology of human rights fact-finding missions. In any case, the corroboration requirement for all types of information would continue to apply, although it is less clear under what conditions the standard of proof would be met.

### 3. Need for rigorous corroboration

The need for rigorous corroboration is clearly understood by human rights fact-finding missions when it comes to social media content. The 2019 OPT Mission report contains an entire section dedicated to “Misinformation amid the Great March of Return”. Focusing on three different situations where inaccurate information was spread on different social media platforms, it underlined the dangers of sharing edited videos and of targeted harassment against wrongly identified perpetrators.<sup>61</sup>

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<sup>58</sup> OHCHR, ‘Situation of human rights in Yemen, including violations and abuses since September 2014’ (Forty-second session, 9 August 2019) UN Doc A/HRC/42/17 (hereinafter OHCHR Yemen) 22.

<sup>59</sup> OHCHR OPT (n 14) 19; OHCHR Myanmar (n 19) 13.

<sup>60</sup> OHCHR Yemen (n 58) para 6.

<sup>61</sup> *ibid* para 655-683.

#### **IV. Conclusion**

An understanding of the value of DDE for investigating violations of international human rights, criminal, and humanitarian law is now well embedded in the practice of human rights fact-finding missions. As these missions continue their work, and as new missions are mandated, the challenge is to appropriately locate DDE within the methodology of fact-finding methodology and develop clear and transparent protocols for when such information will be considered to meet the standard of proof.

This analysis has examined reports of human rights fact-finding missions in order to understand how DDE has been used in these reports, where DDE is placed within the methodologies adopted by the missions, and when DDE can be said to have reached the standard of proof. Three categories of DDE were examined: videos and photographs, satellite imagery, and content derived from social media. As regarding videos, photographs, and satellite imagery, the practice of human rights fact-finding missions is well developed; for content derived from social media, approaches are still developing. There appears to be a clear understanding of the opportunities and difficulties posed by DDE of this type, but the precise role and place of social media content is still being developed. With the launch of the Berkeley Protocol on Digital Open Source Investigations, in partnership with the OHCHR, there is now a good grounding for the development of a consistent, transparent, approach.

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