

HUMAN RIGHTS CENTER

UC Berkeley School of Law



DIGITAL VERIFICATION CORPS STUDENT SUMMIT

Evaluating the First Year of University-Based
Open Source Investigations for Human Rights



Participants in the first Digital Verification Corps Student Summit at UC Berkeley in June 2017.

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Open Source Investigations for Human Rights

26–29 June 2017

Human Rights Center
School of Law
University of California, Berkeley

HUMAN RIGHTS CENTER

The Human Rights Center at the University of California, Berkeley, School of Law conducts research on war crimes and other serious violations of international humanitarian law and human rights. Using evidence-based methods and innovative technologies, we support efforts to hold perpetrators accountable and to protect vulnerable populations. We also train students and advocates to document human rights violations and turn this information into effective action.

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I. INTRODUCTION

THIS REPORT PRESENTS major points of discussion and analysis from the first global student conference on open source human rights investigations, hosted by the University of California, Berkeley's Human Rights Center and Amnesty International, 26–29 June 2017, at UC Berkeley. More than 50 people participated, including students from human rights centers at the University of Pretoria, University of Essex, University of Toronto, and UC Berkeley who are part of Amnesty International's Digital Verification Corps. Also attending were experts in open source investigations, cybersecurity, international criminal law, and journalism.

The international summit marked the start of a new era in open source human rights investigations on college campuses, where students are trained to use digital techniques to find and verify information related to potential human rights abuses and potential war crimes. At this seminal moment, students came together with global experts to take stock of the first year and lay groundwork for the future. The summit objectives included:

- Evaluating the first year of university-based investigations and beginning to build a model that can be shared with other campuses to facilitate efficient scaling.
- Advancing student verification, discovery, and presentation skills.
- Building community and collaboration among students from campuses worldwide.
- Convening leaders to discuss next steps.

The Human Rights Center's Alexa Koenig and Eric Stover and Amnesty International's Scott Edwards welcomed participants to the summit during opening night festivities. Participants then enjoyed dinner and live music by Alexey Berlind and band on the Bowles Hall lawn, with a view of the Golden Gate Bridge.

Day-one of the summit focused on hearing students present their work, including what they had achieved, and critiquing everything from training to communication to collaboration. The second day featured presentations from pioneers in open source investigations in order to help students and leaders take their work to the next level. The third day enabled students to build community through a sightseeing tour of San Francisco and DVC leaders to discuss governance and next steps for replicating the model worldwide.

Participants stayed in the historic Bowles Hall on the eastern ridge of the UC Berkeley campus and sessions were held at Bowles Hall and at Berkeley Law.

Open Society Foundations provided funding to make the summit possible. Additional core support to the Human Rights Center was provided by the Oak Foundation and the Sigrid Rausing Trust. Amnesty International receives funds from the Swedish Postcode Lottery for the Digital Verification Corps.

II. BACKGROUND

UC BERKELEY'S Human Rights Center launched its Human Rights Investigations Lab in September 2016 in conjunction with Amnesty International's Digital Verification Corps (DVC) to document and verify human rights violations and potential war crimes. The DVC included the University of Essex, University of Pretoria, and soon expanded to the University of Toronto. The University of Cambridge will join the DVC at the start of the 2017 academic year and participated in the Summit as an observer.

Amnesty International experts have trained, instructed, and mentored students at each of these campuses on how to use cutting-edge, open source research methods to verify information (photographs, video footage, satellite imagery and social media posts, for example); use tech tools and open source methods to discover new information for use in human rights advocacy, news stories, and legal cases; store and archive verified information and reports related to potential war crimes, crimes against humanity, and genocide as potential evidence for international trials; and build resilience to watching disturbing and potentially traumatizing user-generated content.

Students in UC Berkeley's Human Rights Investigations Lab have also been trained by Paul Myers of the BBC on digital discovery techniques; Kim Bui of NowThis and formerly of Reported.ly on additional verification and discovery methods; and Felím McMahon, an investigator at the International Criminal Court, who worked with students on investigative techniques for legal cases.

Over the past year, students in the Digital Verification Corps have worked on projects related to Syria, Yemen, Egypt, Cameroon, Sudan, Democratic Republic of the Congo, and elsewhere around the world. Using Slack messaging, students collaborate with Amnesty International experts and with students located on other campuses globally. Students have Beta-tested platforms developed by Meedan called Check and Keep to collaboratively verify and archive information.

Additionally, students at UC Berkeley, through their Human Rights Investigations Lab, are conducting open source investigations to contribute to specific legal cases for the Center for Justice and Accountability and the International Human Rights Law Clinic at UC Berkeley, among other partners. Berkeley students are also contributing to Documenting Hate, a ProPublica project to document the rise in hate speech and hate crimes in the United States since the 2016 election.

The university-based DVC labs draw on the expertise of the diverse and multilingual students and faculty found on university campuses around the world as well as the skills and knowledge of journalists from organizations that have been pioneers in the field of open source investigations, including Storyful, Bellingcat, and Reported.ly.

In this first year, these open source labs often felt like start-ups, full of great uncertainty and possibility. Because most campuses had few resources, the work was ultimately very student-driven, which



served to develop student leaders and shape a culture of innovation.

This summit was designed to give students and professionals working on open source investigations—from Berkeley to Berlin to Pretoria—an

opportunity to meet face-to-face for the first time, share experiences, evaluate and strengthen the project, build community, design a governance model, and determine next steps, including potential replication.

III. DAY 1: EVALUATION

DAY-ONE OF THE SUMMIT focused on successes and challenges from the project's first year. Students presented their work in plenary and later debriefed in small groups. The goal was to elicit an honest reflection on successes and challenges.

Campus Highlights—Year One

Sam Dubberley, Digital Verification Corps (DVC) director, opened the session with an overview of the accomplishments of the DVC since its launch in September 2017. He said that shortly after the first intensive training at UC Berkeley, students contributed open source research for a high-level Amnesty International report. He noted his surprise at how rapidly students were brought up to speed on verification and open source investigation techniques and how quickly they could make a meaningful contribution to human rights reporting.

In all, Dubberley reported that the DVC conducted 25 projects across four campuses between September 2016 and June 2017. At UC Berkeley alone, students contributed approximately 6,000 working hours in the project's first nine months.

The geographic area covered by the DVC in year one included: Australia, Yemen, Sudan, Libya, Bahrain, Cameroon, Syria, Ivory Coast, United Arab Emirates, Democratic Republic of Congo, Morocco, Egypt, Guinea, and the United States

Research themes spanned the right to assembly, torture, conflict, extrajudicial execution, and arms sales.

Dubberley noted a few specific successes and challenges:

- **THE DRC ELECTION PROJECT** included students “following the sun” around the world and collaborating on a project that included discovery, verification, and reporting. More than 100 pieces of content were checked over three days, and, in particular, the arrests of several protesters in Goma were geolocated, enabling Amnesty to issue an urgent appeal for their release. Challenges for the project included a lack of access because nobody was on the ground in DRC and Internet shutdowns hindered the use of WhatsApp.
- **FRENCH ARMS IN SAUDI ARABIA** were geolocated and verified by students for an Amnesty France report to the French government. Challenges included the fact that the project was only desk-based research and that there were uncertain time frames for verification and uncertain locations.
- **CAMEROON TORTURE VIDEOS:** Students were able to geolocate where Cameroonian military combat units were performing torture thus directly contributing to an Amnesty International Report entitled Cameroon's Secret Torture Chambers.
- **MANUS ISLAND REFUGEE DETENTION CENTER:** Students received content via Australian activists from refugees in the Manus



Island Center about a shooting at the camp and were asked to verify when it happened and to geolocate the incident. Amnesty International's report led the Papua New Guinea and Australian authorities to change their narrative about the events.

The DVC and Human Rights Investigations Lab at UC Berkeley were highlighted in the *New Scientist*, PBS NewsHour, San Francisco Chronicle, Opendemocracy, East Bay Times, and ABC 7 Bay Area. UC Berkeley's Public Affairs also wrote a story and created a video about the summit. See [Appendix III](#) for a complete list of news stories and links.

Student Reports from Year One

UC Berkeley

Approximately 40 students joined UC Berkeley's Lab in Fall 2016 and 60 in Spring 2017. The team includes students with significant language and discipline diversity, with both undergraduate and graduate students. In addition to its DVC projects, Berkeley has been working on two legal cases with public interest law firms, prompting the development of more intensive protocols for confidentiality and cybersecurity. The team is also working with ProPublica on its Documenting Hate project, with the Syrian Archive, and with NGOs focused on Burma.

Three students from Berkeley's French-Egypt arms sales DVC project presented lessons they felt

would benefit all students going forward. Those lessons include:

- Take a step back to consider your specific role in the project's workflow. What is your individual responsibility as a team member in the project? What is the content's context?
- Keep calm when researching online and getting "nowhere." Remember to record all of your steps and keep in mind that what you *don't find* is as important as what you *do find*.
- Don't be discouraged if you don't find the information you're seeking right away. To this end, work with a partner or team because another set of eyes is always useful.
- Remember that you don't always have to start from square one on an open source verification project. Use news reports and social media to provide context and don't dismiss information because it's not verified. Use what is available as a starting point and then corroborate the information further.

Berkeley students also presented highlights and lessons learned from their first legal project. The Latin American legal team, consisting of 10 students, was charged with using open sources to build a network of individuals involved in a high-profile murder case. Given concerns related to revealing information about the perpetrators, this project involved a heightened level of cybersecurity. To that end, the team used "burner computers" for online browsing

and a set of “air-gapped” computers for analysis that kept information separate from the rest of Berkeley’s Human Rights Investigations Lab. They developed new methods for file sharing, encryption, and information storage that will serve the lab going forward with other sensitive legal cases.

The legal team experimented with new systems for information gathering and sharing. For example, they created a template for note taking that enabled each student to see what everyone was working on individually and to share information.

The team also used innovative approaches to seeking information from Facebook, Twitter, and Google that revealed connections among mutual friends related to the perpetrators in the case. Students recorded what their team members were able to find and also what they were *not* able to find and created detailed reports. The students wanted to ensure that the information they had gathered would be shared appropriately with a new batch of students working on the case in subsequent semesters—building upon each other’s work and not reinventing the wheel.

In sum, in addition to developing basic discovery and verification skills the Latin American team learned to 1. keep detailed notes; 2. divide tasks to improve teamwork; 3. maximize the strengths of each individual; 4. allocate time efficiently; and 5. create opportunities for outside social connection to strengthen community.

University of Essex

The University of Essex team noted a “steep learning curve” when it launched its DVC in October 2016. Eventually the team learned to take in the small details required for verification and to realize that verification is time consuming. Sometimes, they say, you need to step away and ask for help.

The Essex team learned to cultivate teamwork so that the workload was well distributed. They noted the importance of considering how much the team could handle and to look at the strengths and

weaknesses of individual team members when assigning projects.

Essex students said to “remember the big picture” about the end goal of the work, but also to be cognizant of when to stop. One Essex student said that after spending days conducting open source discovery on a project, the team couldn’t find anything. When advised to stop, it was disheartening, but ultimately a good lesson.

Essex students emphasized the importance of practice. They said that geolocation is hard, but requires a process of “learning by doing.” The more you do, the better you become. They also said to “mix it up,” meaning to look at different, unexpected information related to a project when stuck.

In order to increase collaboration among universities and provide a reference for new members, Essex created a “Beginner’s Guide for the DVC.” The guide, soon to be released, includes universal verification methods and other research techniques.

University of Pretoria

Pretoria’s DVC team started with an email from Amnesty’s Sam Dubberley to the director of the Centre for Human Rights at the University of Pretoria. The Centre, founded in 1986 and a recipient of UNESCO and African Commission awards, was initially focused on addressing apartheid in South Africa but has since broadened its work to all of Africa. It is a “hybrid organization” because it is academic but also an NGO.

Amnesty came to Pretoria to train students for its DVC in October 2016. Students learned how to verify basic videos and photographs and how to geolocate them. This type of work was new for the Center for Human Rights, a group of students and faculty who say they were not particularly tech savvy. Students say the DVC enables them to “feel like we have an impact not just theoretically, but practically.”

Pretoria’s DVC has divided into groups of two and pursued work on Cameroon (verifying videos



where civilians were being arrested and tortured) as well as some limited work on Syria and Gabon.

The students said the strength of their team is their language diversity, which includes French, Arabic, Portuguese, and English. They noted that they improved their personal tech skills over the course of the year. One of the team's challenges is in balancing schoolwork with DVC demands—especially because the team is not very big. Additionally, although Pretoria's team includes students pursuing undergraduate, master's, and Ph.D. degrees, they are all law students and therefore lack disciplinary diversity.

Pretoria's future objectives include trying to incorporate new members from other disciplines. They will seek more training, develop better communication and synergy with project managers and other university teams, and continue to put “faces to the names” of other students and professionals.

University of Toronto

The University of Toronto's Digital Verification Corps is housed in the International Human Rights Program. The newest DVC member, the Toronto team has recently launched with eleven students. The students completed successful work on projects in Syria (which was the team's first attempt at verification work), Bahrain, Western Sahara (in collaboration with Berkeley), Niger, Yemen, and Egypt. The team is currently strategizing about how to expand and train members.



Student Evaluation Sessions

Students from each of the participating campuses joined four discussion groups to evaluate their work in 2016/2017 and brainstorm ways to improve impact and collaboration. Experts and professionals from the summit sat in on the discussions but mostly observed. Students focused on four topics: training, storytelling, resiliency, and collaboration.

Training

Amnesty International conducted the lion's share of verification training on DVC campuses in 2016/2017, typically over a span of three days. Amnesty's Sam Dubberley and other experts also provided additional training via Skype throughout the semester. Berkeley brought in additional trainers to build skills throughout the year with an emphasis on discovery and report building. Here are some of the takeaways:



On the type and timing of training

Students found it useful when they could practice new skills during the training to get immediate feedback. They said that having feedback (especially during training or at the beginning of a project) helps them understand areas of weakness and ways to improve. Students suggested that follow-up training be conducted about two weeks after the first round of training in order to solidify skills and enable students to ask pertinent questions within the context of specific projects. Students suggested more frequent Skype sessions with experts.

Students noted that a student-led “train the trainers” model is valuable for several reasons. First, when veteran students train new students, the trainers reinforce and improve mastery of their own skills. Second, the students receiving the training may be more comfortable turning to student trainers with questions.

Regardless of the model, students said training should be standardized and based on a consistent training document that provides lessons, tips, and tricks on verification work. (This type of document is currently in the works at Essex.) Some suggested that training sessions be recorded and shared with other universities.

Additional training in the following areas is needed:

- Discovery
- Geolocation (videos on geolocation would be helpful)
- Special methodologies that correspond to special projects assigned by Amnesty International and other NGO partners and clients
- Organization and management (workflow practices and organization structures)

- Software skills (including using data visualization techniques or tools to organize and display information.)
- Digital literacy (ensuring that everyone has basic training on how to use a computer, how to use Chrome and Chrome extensions, etc.)
- Cybersecurity (enabling students to feel more comfortable working on social media)

Storytelling/Impact

In 2016/2017, with some exceptions, the stories about the open source labs on university campuses were written by journalists or staff at the Human Rights Center or at Amnesty International. At the summit, other potential outputs were discussed, the benefits and pitfalls of storytelling and social media, and the need of students to better understand the impact of their work. Here are some of the takeaways:

Establish clarity on the final product

Students expressed a desire to know the end goal for an assigned DVC project at the outset. For example, they want to know if the verification work is for a report and if so, will it be public? Where will it be presented?

To this end, students suggested creating a uniform intake form for each project that would state the objective for the student work and also indicate the overall goal of the work (i.e. to release a report, lay groundwork for legal action, etc.) This form could also indicate whether additional student reporting or storytelling related to the work is appropriate, what degree of confidentiality is required (if any), establish clear objectives, dictate the point of contact for questions, and provide some background on the relevant country and conflict.

Students said they would like to write stories, op-eds, blogs and even create interactive timelines about the work they are doing. This type of storytelling serves multiple purposes—educating the public, raising awareness, generating funds, etc.—and makes students feel part of something larger. Students also want to publish stories online (or on



social media) to educate others about open source techniques and the impact of open source work globally.

Students also would like more clarity about the impact of their work and some acknowledgement for what they accomplish. For example, if they verified information for an Amnesty report, they would like to be acknowledged verbally by a researcher or even within the report. This external validation strengthens student commitment to the project for several reasons. First, students want to have an impact and to *know they have an impact* in order to continue devoting time and energy to a project. Public validation also helps students to build a resume/portfolio, which they want and need for graduate school or jobs. Finally, validation mitigates the possibility of secondary trauma by highlighting the ultimate purpose of the work.

Utilize social media

The Digital Verification Corps could use social media more expansively to publicize its findings. As each social media platform targets a different audience for engagement, we might use them differently. For example, the DVC might create a DVC Instagram account or Snapchat account to post stories. It's possible that the DVC could collaborate with BuzzFeed or another media source that is already on Snapchat to do a featured story. The DVC might also create a Facebook account for the DVC or use Amnesty International's preexisting account

to publish more about the DVC's work. (Amnesty staff clarified that because Amnesty is so large, it takes time and effort to get the institutional channel to post and therefore may be more efficacious to establish our own page.)

Other ideas for storytelling included creating a podcast, such as 5 x 5; establishing a Medium channel for the DVC or posting student pieces to Lemming Cliff, Berkeley's Human Rights Center, or Amnesty Medium channels; and creating a separate DVC website for publishing case studies and reports from student work, as with UC Berkeley's Documenting Hate project.

Some of the potential concerns and pitfalls related to DVC storytelling include issues around confidentiality and domain. For example, what does Amnesty want to share publicly before a report is issued? Also, who has the rights to a story (e.g. students who are investigating the situation or Amnesty researchers or frontline organizers)? Ultimately, questions related to storytelling and outputs may be unanswerable until a more permanent DVC structure is established.

Vicarious Trauma & Resiliency

Throughout 2016 and 2017, Amnesty International provided DVC students with resiliency training to reduce the potential for secondary trauma related to viewing difficult user-generated content. Students discussed this training and what could be improved to mitigate the psychological effect of this work. Here are some of the takeaways.

Providing students with more resources and training to take care of their mental health

Students from the University of Essex said they received in-person resiliency training, which helped them to feel emotionally prepared to take on the open source research. They said the training brought their team closer together and helped them to feel more comfortable talking to one another if they had issues related to the work. Students agreed that this type of in-person resiliency training (instead of

Skype trainings) should be held at the other DVC universities as well. All resiliency training should consider both discovery and verification work as discovery often leads students to stumble upon emotionally difficult content.

Some said that if the resiliency and mental health events are not mandatory, fewer students may attend—and possibly the students who most need to attend will opt out.

In addition to the training format, students noted the importance of timing. The Essex training happened two months after students had started Digital Verification Corps research and they said this was not ideal. Other students said training should happen at the onset of work *as well as* mid-way through the semester when students have more of a context and a better sense of personal pressure points. A communicative culture around resiliency should be established so that students don't feel awkward about discussing their feelings. Teachers and mentors should raise questions about resiliency and mental health periodically because sometimes students are unaware that they are affected by the work. For example, a student may not be sleeping well or may be sleeping an inordinate amount and not realize that either is connected to their DVC work.

Some students said that after the initial training, they would like to have regular check-in meetings throughout the school year. Inviting a therapist to lead small groups or to conduct mid-semester training or facilitated discussions could be effective. Campuses could also select "resiliency" mentors who are seasoned DVC students to be resources.

Some suggested that mindfulness training specifically designed for handling the emotional intensity associated with open source human rights investigations could benefit students.

Although more awareness about potential secondary trauma is important for the DVC, it was also noted that not all stress or distress constitutes vicarious trauma and that emotional reactions to distressing content are a normal aspect of the work.

Create a social bond and trust amongst teams and across DVC groups

Apart from training, students noted that building community is essential for mental health and resilience. This may come in the form of regular social gatherings for entire teams or sub-groups. At Berkeley, students found that social gatherings had originally been planned around “happy hours,” which wasn’t always as accessible for undergraduates. Berkeley students expressed a desire for more outings in nature, such as hikes or picnics, while also noting the need to be sensitive to students with limited mobility. Students said that they appreciated the “detox” channel on Slack that enabled people to post funny, off-topic videos and photos and encouraged others to use it more. A question arose about social media and whether a Facebook page should be established for the DVC. Some said this would build community and “give faces to names,” but others felt that it could be a negative intrusion on private lives. It was suggested that a Facebook page be created and that students could *opt-in* if they wanted to participate and opt out at any time.

Mental health advice

Students shared tips and tricks for handling content as follows:

- Make sure students know early on that they do not need to push through the trauma.
- Encourage students to take breaks when needed. University of Essex students said that they don’t work at their homes and they don’t work for more than seven hours at a time on research, noting that they feel it is more productive to complete an hour every day than seven hours in one day.
- Make sure that students know they can talk to one another. This will only happen if you build trust and foster compassion with students and professionals in the lab.
- Students appreciated when Amnesty and other partners informed them about graphic content before they viewed content.

- Create a culture that discourages viewing content at night (especially before bed).
- Have a buddy system. When a student struggles with trauma, their verification partner can be there to talk with them or to flag graphic content.
- Crush the stigma about asking for help when it comes to mental health.

Collaboration

In 2016/2017 students at universities in Berkeley, Essex, Toronto, and Pretoria loosely collaborated through Amnesty International via a Slack Channel on specific projects. At the summit, students discussed ways to strengthen collaboration among schools and with other partners. Here are the takeaways:

Use inter-campus resources effectively

Students suggested generating an inter-campus spreadsheet where DVC student information is centralized. The spreadsheet might include each student’s major, discipline, past projects, and language skills as well as a head shot to increase community among campuses. A general (not project-specific) Slack channel could be created for inter-campus communication.

Students suggested holding an onboarding Skype session at the onset of each project where all students and partners involved in a project could discuss the project summary, objectives, workflow, and logistics as well as delegate tasks. This process would enable students to become familiar with team members across campuses and provide opportunities to better tap individual disciplinary, tech, and language skills. It would also allow lead researchers (whether from Amnesty or other organizations) to verbally express the project objectives and proposed outcomes and to answer questions.

Addressing translation challenges

One of the most vexing problems for the DVC has been language capacity. While many languages



are spoken among students (approximately 18 in Berkeley’s lab alone), there’s often a need for less common languages and dialects. When recruiting students for the teams, language and tech skills should be a priority.

Students also suggested collaborating with language studies departments on their campuses. While this could increase capacity, it could also pose other challenges related to ethics and safety. For example, recruiting native speakers, especially those who return to their countries in conflict zones, could make them vulnerable. Another solution might be partnering with or establishing DVC hubs at universities in regions where human rights work is being conducted—for example in the Middle East or in central Africa—and creating partnerships between universities in the global north and south.

Students said that it is important to keep in mind that not all students who know a certain language want to serve as translators all of the time and shouldn’t be pigeonholed into that role as, in certain regions with certain languages, there is the risk of having to watch a higher proportion of violent or distressing content.

Standardization and uniformity

While the open source work on campuses has been fast-paced and exciting, uniformity has suffered. Students noted that standardization is critical to collaboration—so that a student from Berkeley can pick up where a student from Pretoria leaves off on a certain project and vice versa. The areas that are most pressing include: report structure, common terminology, tagging, and naming.

Alumni Engagement

After a year of establishing programs, four universities have generated alumni—and many of those alumni don’t want to leave the work. To continue to engage alumni, students suggested creating an alumni roster or database that lists alumni skills (such as discipline and languages) and the projects that they worked on. Alumni would *opt in* to this type of list or database so as not to burden those who have moved on. A voluntary Slack channel could be a vehicle for current students to pose questions to alumni. Alumni could also be invited to DVC groups for training purposes or agree to serve as mentors. The only potential pitfall is that engagement by too many seasoned and active alumni could undermine the student-driven nature of the projects.

IV. DAY 2: TRAINING and DAY 3: COMMUNITY BUILDING, GOVERNANCE, AND NEXT STEPS

THE SECOND DAY of the summit was devoted to presentations by pioneers in the fields of open source investigations and cybersecurity. Links to video of each talk are provided (except for the ICC talk, due to security concerns).

Eliot Higgins, founder, Bellingcat

Eliot Higgins, founder of Bellingcat and a Human Rights Center research fellow, is a global pioneer in the field of open source investigations. His methods are emulated by journalists and human rights researchers around the world. As much as Higgins is revered by those who seek to use open sources to document the truth, he is targeted by governments and other actors who want to discredit his work in order to dilute the impact of his reports.

Higgins was invited to deliver the keynote address on the opening night of the summit as well as to kick off the first day of training. He walked participants through two Bellingcat investigations in order to illuminate his process of discovery, verification, and reporting.

Some of the takeaways from his talk include:

- **CROWDSOURCE:** Remember the power of crowdsourcing for fast geolocation and verification.
- **FOLLOW THE MEDIA:** In verification, follow social media posts across the time and space of an incident to establish timelines and routes.



- **LEARN TO NOTICE THE SMALL DETAILS:** Practice recognizing minute details that can provide information on time or location, i.e. gasoline prices.
- **BEWARE OF FALSE IMAGERY:** Governments, news agencies, and social media users can publish old images or alter new ones to construct a false narrative.

Felim McMahon, investigator, International Criminal Court

Felim McMahon is an International Criminal Court investigator who conducts open source investigations. He recently led the ICC's successful investigation into war crimes in Mali in a case that included painstaking verification of digital evidence. McMahon, who helped pioneer the practice while a journalist at Storyful, is now a global leader in open source legal investigations. He was invited to the

summit to share his experience in using open source methods to support legal investigations and to walk participants through the details of a legal analysis. He shared his insights in a talk entitled “Anatomy of an Investigation II,” which highlighted the key differences between journalistic discovery and verification and legal discovery and verification.

Some of the takeaways from McMahon’s talk include:

- **REMEMBER THE IMPORTANCE OF VIDEO:** When so much other evidence is being collected (interviews, physical evidence, etc.), the importance of a video may fall away. However, it can still be critical to include as part of the formal analysis for impact and presentation.
- **VERIFY ALL DOCUMENTS:** Content analysis facilitates the discovery of mistakes made by legal investigators by testing assumptions. Every document used in court must be verified; thus, having verification skills is critical to successful practice.
- **ADVOCATE:** The most important use of an open source investigation is often advocacy, not legal application. Advocacy can help generate the political will needed to facilitate successful prosecutions. Such investigations can be used to frame and change narratives and put pressure on states to cooperate.
- **CONSIDER THE DIGITAL DIVIDE:** Will an emphasis on digital materials and digital communication more generally affect which voices are heard and which cases are brought to court?

Malachy Browne, story producer, New York Times

Malachy Browne is a story producer at the New York Times who has pioneered investigative eyewitness journalism. He recently published high-profile stories about the use of chemical weapons in Syria and the beating of protesters by armed Turkish security forces in DC. An original member of Storyful, Browne’s talk focused on video analysis

and presentation. He walked participants through elements of his recent New York Times pieces. A video of his talk can be found [here](#).

Some of his key takeaways included:

- **DEBUNK DOMINANT NARRATIVES:** Remember the importance of challenging and/or debunking the dominant narrative or story as a way to test assumptions and maximize the reliability of information.
- **MAKE INFORMATION ACCESSIBLE:** Make the information you want to present approachable for your specific audience. Use timelines, on-screen cues, and crisp graphics to optimize a computer screen’s “real estate.”
- **CATALOGUE:** Organize information into chapters to help your audience digest that content.
- **DISTILL:** Think critically about what information to include. Consider what is unnecessary for journalistic purposes and what evidence speaks for itself.
- **CONSIDER AUDIENCE DEMOGRAPHIC AND CONTEXT:** When should you post content for specific time zones? In what languages should you post? What level of verification expertise does each audience have?
- **ENGAGE SOCIAL MEDIA AND MARKETING:** Thank users for any crowd sourced efforts. Use tight cuts of any content on social media. Create response threads.

Bill Marczak, postdoctoral researcher and cybersecurity expert, UC Berkeley

Bill Marczak is an expert in cybersecurity and privacy. He spoke to participants about basic security measures that can be taken to protect information and privacy and shared insights into the mindset of hackers. A video of Marczak’s talk can be found [here](#).

Some of the key takeaways from his talk include:

- **BE AWARE:** The “wiretaps” of today are the hackers who have to interact with you to gain access to your computer. They have to

trick you into complying, so be aware when this kind of social engineering is happening.

- **KNOW THE RATIONALE FOR SPYING:** Why would a hacker want to spy on you? “You are as interesting as the most interesting person you know.”
- **DON'T BE “FREE”:** Make yourself expensive to hack by updating your devices, using two-factor authentication, setting strong passwords, not automatically clicking on links or attachments, and being careful about the information you share online.
- **ENGAGE IN THREAT MODELING:** Conduct a basic analysis to understand the realistic threats to you and/or your project. Digital security is always connected to physical security.

Gavin Sheridan, founder, Vizlegal

Gavin Sheridan, one of the founders of Storyful, is an expert on the use of Freedom of Information Acts (FOIA) around the world. His startup [Vizlegal](#) is providing access to open source information and investigative methodologies. Sheridan spoke about basic philosophies and best practices associated with establishing an open source investigations lab, sharing key insights from Storyful. A video of his talk can be found [here](#).

Some of the key takeaways include:

- **BOIL YOUR PROJECT DOWN:** Go to first principles and work from there. What are we doing? What happened? Who did it? Where did it happen?
- **FACILITATE COMMUNICATION:** Encourage open communication among all team members. Over-communication is key (i.e. Google Hangouts running 24/7). This builds camaraderie and enhances training capacity between all core and remote team members.
- **EMBRACE YOUR INNER NERD:** Control the technology. Don't let it control you.



- **DON'T LEAVE ANYONE BEHIND:** Everyone must have the same level of skill as everyone else. Training never ends, and skill “focuses” are only brought to the table once everyone has reached the default skill level. Hierarchies prevent innovation.
- **CHECK, PUBLISH, ALERT:** The check, publish, alert process deepens training by allowing veterans to check new recruits and facilitates “handholding” to get them to the default level of skill.
- **PRIORITIZE TEAMWORK:** Bring everyone to the same skill level. If someone on your team isn't performing, they might be happier not being in it.
- **INNOVATE:** Know what products or known processes could be used or created to reduce tasks and clicks for humans.

THE THIRD DAY OF THE SUMMIT involved a trip to San Francisco for students to sightsee and develop connections across campuses, while leaders and professionals discussed potential governance structures, how to facilitate global replication, and identified critical next steps for year-two of university-based open source investigations.

V. SUMMIT TAKEAWAYS

1. DESIGN AND IMPLEMENT A GOVERNANCE

STRATEGY: In evaluating the first year, it became clear that the Digital Verification Corps needs a governing body and structure. Discussion among students during the summit raised questions that require centralized decision-making, staffing, workflow, replication, communication/branding, and resources. Related to the question of governance is the question of replication. How, where and when will new labs develop? Will universities in the global south be given precedence? If so, how will resources be shared to ensure that efforts succeed? These questions feed into the need for a replication strategy that will ultimately be determined by a governing body. Leaders took up these questions and made a plan for next steps.

2. STANDARDIZE TO FACILITATE COLLABORATION:

Students and faculty expressed a desire for greater collaboration across campuses and emphasized that collaboration hinges on standardizing forms, workflow, training, communication, and to some degree, structure. Especially with a transient student population, it's important for one student to be able to pick up where another left off. Because of the fast and furious development of the DVC in 2016/2017, some of the uniformity fell by the wayside. However, many efforts are in the works to make the DVC more efficient and potentially collaborative. The University of Essex will soon publish a "Beginner's Guide to the DVC" that will provide a

basis for standardizing training and workflow. UC Berkeley has developed an intake form and a verification form and is in the final stages of designing a handbook that addresses issues like student incentivizing, mentor structures, ethical practice, cybersecurity, non-disclosure agreements, and other structural issues.

3. DETERMINE DIGITAL TOOLS: The DVC and Human Rights Investigations Lab at Berkeley have worked closely with tech partners to beta test new tools and platforms over the past year. As the DVC and Berkeley's lab gain notoriety, multiple tech innovators are coming forward to pitch collaboration. The summit surfaced critiques and opinions about what is working and what's needed vis-à-vis technology. The DVC urgently needs to determine a process for selecting tech partners and tools and decide what will be used on DVC campuses in 2017/2018.

4. INCREASE COMMUNICATION: Participants highlighted the importance of proactive communication among all partners. Communication improves collaboration and also feeds into a sense of impact, especially for students. Specific ideas for enhanced communication included an intake form and/or an initial on-boarding session for each project over Skype or a similar platform to allow students in different countries to discuss objectives and workflow face to face. Also needed is clear communication from Amnesty and other partners about the end-goal of student

assignments as well as public acknowledgement, when possible, for completed work.

5. ORGANIZE ANNUAL STUDENT SUMMITS:

Participants expressed an overwhelmingly positive reaction to this first summit and left with a desire to organize an annual event that rotates

among DVC campuses. An annual face-to-face meeting among students, faculty, leaders, and experts will provide an opportunity for ongoing evaluation and training as well as strategizing about collaboration, governance, replication, and more. Rotating campuses will also potentially energize the host university.

VI. CONCLUSION

THIS FIRST GLOBAL OPEN SOURCE student summit at UC Berkeley marked the beginning of a new era in human rights investigations, one in which the expertise and energy of students is tapped worldwide. The summit brought together students and faculty from five university teams at varying stages of development, all seeking to improve and build upon their work. The students and faculty learned from each other and from the experts who pioneered open source investigations as journalists and court investigators. Participants had a chance to air and document reflections on

what worked and what needs improvement in order to craft a blueprint for future work. The first two days of evaluation and training led to a third day of discussion to design a governance structure to facilitate collaboration and replication in thoughtful, productive ways. By meeting in person and having time to socialize, participants accomplished what would be exponentially more difficult otherwise: building a collaborative, global, university-based community of open source human rights investigators at universities worldwide.

AUTHORS AND CONTRIBUTORS

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APPENDIX I

DIGITAL VERIFICATION CORPS STUDENT SUMMIT—AGENDA

MONDAY, JUNE 26: WELCOME DAY

5:30 TO 6:30 PM: Welcome Reception
LOCATION: Bowles Hall Lounge

6:30 TO 8:00 PM: Picnic Dinner
(pick up food in dining hall)
LOCATION: Bowles Hall Lawn
ACTIVITY: Dinner, live music, and
group photo on the lawn

TUESDAY, JUNE 27: DEBRIEF DAY

8:00 TO 9:00 AM: Breakfast
LOCATION: Bowles Dining Hall

9:00 AM: Welcome and Introductions
LOCATION: Bowles Hall Lounge

9:30 AM: Year in Review: initial objectives,
highlights, accomplishments
LOCATION: Bowles Hall Lounge

10:00 AM TO 12:00 PM: DVC Projects
LOCATION: Bowles Hall Lounge
STUDENT PRESENTATIONS (20 MINUTES EACH)

- Pretoria
- Berkeley I
- Essex
- Toronto
- Berkeley II

12:00 TO 1:00 PM: Lunch
LOCATION: Bowles Dining Hall

1:00 TO 1:30 PM: Year-One Debrief
LOCATION: Bowles Hall Lounge
SURVEY RESULTS

1:30 TO 3:30 PM: Breakout Groups: Berkeley Law
rooms 10, 107, 111 and 123

- Collaborations
- Psychosocial
- Trainings
- Public Outputs and Storytelling

3:30 TO 4:30 PM: Report-back from Breakout Groups
LOCATION: Bowles Hall Lounge

4:30 TO 5:30 PM: Break

5:30 TO 6:30 PM: Reception and Keynote
LOCATION: Bowles Hall Lounge
ACTIVITY: Keynote speaker Eliot Higgins, Bellingcat

6:30 TO 8:00: Dinner
LOCATION: Bowles Dining Hall

WEDNESDAY, JUNE 28: TRAINING DAY

8:00 TO 9:00 AM: Breakfast
LOCATION: Bowles Dining Hall

9:30 TO 10:45 AM: Anatomy of an Investigation
LOCATION: Bowles Hall Lounge
TRAINER: Eliot Higgins

11:00 AM TO 12:15 PM: Anatomy of an Investigation II
LOCATION: Bowles Hall Lounge
TRAINER: ICC Investigator

12:30 TO 1:30 PM: Lunch
LOCATION: Bowles Hall Dining Hall

1:30 TO 3:00 PM: Video Explainers
LOCATION: Berkeley Law Room 110
TRAINER: Malachy Browne

3:15 TO 4:15 PM: Cybersecurity
LOCATION: Berkeley Law Room 110
TRAINER: Bill Marczak

4:15 TO 4:30 PM: Break

4:30 TO 5:30 PM: Storyful: Building a global UGC newsroom from scratch. Lessons and ideas in tech and skills
LOCATION: Berkeley Law Room 110
TRAINER: Gavin Sheridan

5:40 TO 6:10 PM: Wrap Up and Next Steps
LOCATION: Bowles Hall Lounge

6:10 TO 6:30 PM: Break

6:30 TO 8:00 PM: Dinner
LOCATION: Dining Hall

**THURSDAY, JUNE 29:
SIGHTSEEING AND PLANNING DAY**

STUDENTS:

8:00 TO 9:15 AM: Breakfast
LOCATION: Bowles Dining Hall

9:30 AM: Shuttle pick up for San Francisco trip

9:30 AM TO 4:30 PM: Sightseeing activities and lunch in San Francisco

FACULTY AND PROFESSIONALS:

8:00 TO 9:00 AM: Breakfast
LOCATION: Bowles Dining Hall

9:30 AM: Discussion and Planning for Year-Two
LOCATION: Bowles Hall Library

12:30 PM: Lunch
LOCATION: Bowles Dining Hall

1:30 TO 3:30 PM: Discussion and Planning for Year-Two (continued)
LOCATION: Bowles Hall Library

3:30 TO 4:00 PM: Break

4:00 PM: Wrap up and Next Steps
LOCATION: Bowles Hall Library

APPENDIX II

DIGITAL VERIFICATION CORPS STUDENT SUMMIT—ROSTER

SUMMIT CHAIRS: Alexa Koenig, Executive Director, Human Rights Center, Sam Dubberley, Manager, Digital Verification Corps

Calum Agnew	University of Toronto, Student
Fredrik Aahsberg	University of Essex, Student
Abi Ashenafi	University of Pretoria, Student
Hannah Bagdasar	UC Berkeley, Student
Alexey Berlind	Human Rights Center, Programs Administrator and Events Coordinator
Ed Bice	Meedan, Founder
Malachy Browne	New York Times, Senior Story Producer
Kim Bui	NowThis, Editor at Large
Alison Cole	New York University, Adjunct Professor
Jenna Dolecek	University of Essex, Student
Sam Dubberley	Amnesty International, Digital Verification Corps Manager
Alix Dunn	The Engine Room, Executive Director
Elizabeth Eagen	Open Society Foundations, Program Officer
Scott Edwards	Amnesty International, Senior Advisor
Henrietta Ekefre	University of Pretoria, Student
Michael Elsanadi	UC Berkeley, Student
Kody Emanuels	UC Berkeley, Student
Mayra Feddersen	UC Berkeley, Student
Martha Fiehn	UC Berkeley, Student
Nicole Forougi	Archer
Conor Fortune	Amnesty International, Deputy Head of News and Media
Lindsay Freeman	Human Rights Center, International Criminal Lawyer
Karin Goh	UC Berkeley, Student
Alexandra Gonzalez	UC Berkeley, Student
Mark Groenendijk	University of Essex, Student

Tatum Halligan	UC Berkeley, Student
Monica Haulman	UC Berkeley, Student
Eliot Higgins	Bellingcat, Founder
Olivia Iannelli	University of Essex, Student
Alex Kang	UC Berkeley, Student
Alexa Koenig	Human Rights Center, Executive Director
Christoph Koettl	Amnesty International, Senior Analyst
Andrea Lampros	Human Rights Center, Communications Director
David Latt	UC Berkeley, Student
Johann Laux	UC Berkeley, Doctoral Researcher
Michelle Lee	UC Berkeley, Student
Dana Levine	UC Berkeley, Student
Nickie Lewis	UC Berkeley, Student
Alice Ma	Archer, Founder
Matthew Mahmoudi	University of Cambridge, The Whistle Project, Program Lead
Tokollo Makgalemele	University of Pretoria, Student
Bill Marczak	UC Berkeley, Postdoctoral Researcher
Milena Marin	Amnesty International, Senior Innovations Campaigner
Alexandria Matic	University of Toronto, Student
Ella McPherson	University of Cambridge, Lecturer in the Sociology of New Media and Digital Technology
An Xiao Mina	Meedan, Director of Products
Daragh Murray	University of Essex, Professor
Samer Muscati	University of Toronto, International Human Rights Program Director
Bryan Nunez	Open Society Foundations, Program Officer
Michael Nyarko	University of Pretoria, Student
Adebayo Okeowo	University of Pretoria, Doctoral Student and DVC Coordinator
Bethanie Pascutto	University of Toronto, Student
Nushin Sarkarati	Center for Justice and Accountability, Staff Attorney
Gavin Sheridan	VizLegal, Founder
Michael Sproule	University of Toronto, Student
Samaruddin Stewart	Stanford University, John S. Knight Fellow
Eric Stover	Human Rights Center, Faculty Director
Andrea Trewinnard	UC Berkeley, Student
Tom Trewinnard	Meedan, Director of Development
Erica Williams	University of San Francisco, Analyst
Tom White	Human Rights Center, Advisory Board
Haley Willis	UC Berkeley, Student

APPENDIX III

HUMAN RIGHTS INVESTIGATIONS LAB AND DIGITAL VERIFICATION CORPS MEDIA IN 2016/2017

“UC Berkeley students work to authenticate photos, videos from conflict zones,” *ABC 7 News*, July 13, 2017.

“World’s next generation of human rights investigators meets at Berkeley,” *UC Berkeley News*, June 28, 2017.

“As ‘fake news’ flies, UC Berkeley students verify and document,” *The Mercury News*, June 27, 2017.

“UC Berkeley program seeks to help prosecute war criminals,” *San Francisco Chronicle*, April 14, 2017.

“How the Internet Can Help Stop Human Rights Abuse,” interview with Alexa Koenig by Chris Riback, *Working Capital Review*, March 28, 2017.

“A New Generation of Human Rights Investigators Turns to High-Tech Methods,” *PBS Newshour*, Feb. 13, 2017

“Human rights squad detects abuses in social media images” *New Scientist*, Nov. 11, 2016.



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