

Journal of Conventional Weapons Destruction

Volume 23
Issue 3 *The Journal of Conventional Weapons
Destruction Issue 23.3*

Article 3

January 2020

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Recommended Citation


Bialystok, Sandra (2020) "A Twenty-Minute Walk Through Fallujah: Using Virtual Reality to Raise Awareness about IEDs in Iraq," *Journal of Conventional Weapons Destruction*: Vol. 23 : Iss. 3 , Article 3. Available at: <https://commons.lib.jmu.edu/cisr-journal/vol23/iss3/3>

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A Twenty-Minute Walk Through Fallujah:

Using Virtual Reality to Raise Awareness about IEDs in Iraq

by Sandra Bialystok, Ph.D. [GICHD] | Photos © Felix Gaedtke



In January 2018, filmmakers from the studio NowHere Media travelled to Fallujah, Iraq, with the objective of creating a virtual reality (VR) experience to explain how improvised explosive devices (IEDs) are impacting people's safe return home. In just a few days, they met dozens of people, all of whom had stories to tell. And then they met Ahmaied—an Iraqi father who had returned home with his family about a year earlier. Ahmaied told them about the tragic accident that had happened just a few months prior when his two older sons entered a neighbor's home to collect wood and set off an IED. Both young men lost their lives in the explosion.

Working with a translator from the region and a local crew, and with Ahmaied's permission, NowHere Media and the Geneva International Centre for Humanitarian Demining (GICHD) created the immersive VR experience *Home After War* to tell his story. Using a technique called photogrammetry, NowHere scanned Ahmaied's home by taking thousands of still pictures that were then reproduced to create a room-scale version of his home in the VR environment. This means that when the viewer puts on a VR headset, the impression is that one is actually in Ahmaied's home in Fallujah: one step taken in real life translates into one step taken in Ahmaied's home. More dramatically, in what resembles a hologram effect, Ahmaied appears within his virtual home and tells his story. He invites the viewer inside, and as users walk through the space, peeking around corners and even standing on his roof, they hear about what happened to Ahmaied's family.

This experience came out of the Oculus VR for Good Creators Lab.¹ The Oculus VR for Good initiative pairs not-for-profit organizations with VR filmmakers, providing them with the resources they need to make experiences that shed light on pressing social issues that are presented to a

large, global audience. The GICHD was selected to participate in the program in 2017, and the GICHD, NowHere Media, and Oculus used the opportunity to focus on the growing challenges that IEDs pose to re-development and civilian safety in Iraq.

In August of 2018, *Home After War* had its world premiere at the Venice International Film Festival. The Venice Festival was one of the first high-profile film festivals to include VR experiences in their official competition. Seven months later, *Home After War* travelled to Austin, Texas, where it enjoyed its North American debut at the South by Southwest Festival (SXSW). At this event, *Home After War* won the jury award in the category of "Best Use of Immersive Arts."

Now, just over a year after its official release, there has been time to analyze and reflect on the impact that *Home After War* has had thus far. This article explores some of this influence, not just in the mine action sector but also more widely. It then looks at the ways in which VR might be used by the sector moving forward.

VR: The Empathy Machine

In 2015, VR was nicknamed "the ultimate empathy machine" by Chris Milk,² a film producer who worked with the United Nations to create the experience *Clouds Over Sidra*.³ The term *empathy machine* was most likely initially coined by film critic Roger Ebert years earlier when he wrote that "film is the most powerful empathy machine in all the arts,"⁴ and for better or worse, this moniker has been widely associated with VR over the past four years. Although many working in VR today are uncomfortable with this term, it is easy to understand why others gravitate toward this shorthand for describing a medium where state-of-the-art cameras can film in 360 degrees and state-of-the-art headsets allow users to shut themselves off from the current reality and become immersed in another place or time period. Because of this fully-immersive,

completely-foreign space, the technology tricks our brains into thinking that we are actually present in this new reality. And by extension, we open ourselves up to the possibility of empathizing with those we meet in these virtual spaces.

Measuring Impact

To capitalize on the empathy-building potential of VR, *Home After War* was created for two target audiences: the general public and decision makers in mine action. Tailoring the story to a general audience was logical given the scope of the project. At film festivals and international VR conferences, guests have been transported to Iraq to meet one person whose life was turned upside down by an IED. By telling Ahmaied's personal story, there is the potential to raise awareness about how the mine action sector is confronting the growing challenge of IEDs in the region. To support this message, a GICHD advisor was present in Venice, Italy and in Austin, Texas, to speak with guests about the current situation in Iraq, explain more about IEDs, and generally answer any questions that might arise after completing the experience.

place, GICHD exhibited at two high-profile events for the mine action community: the *Anti-Personnel Mine Ban Convention (APMBC) Seventeenth Meeting of States Parties*, 26–30 November 2018, and the 22nd International Meeting of Mine Action Directors and U.N. Advisors, 5–8 February 2019, both held at the United Nations in Geneva. Decision makers and leaders—representatives from embassies, missions, and other U.N. agencies—more generally were also able to view *Home After War* at the United Nations Visitors Centre in New York, when the piece was included in the UNMAS exhibition *Safe Ground* for six weeks in spring 2019. Among other mine action events, the piece was also exhibited at a Swiss Army Humanitarian Mine Action event, Humanity and Inclusion's 25th anniversary *Pyramide de chaussures* in Lyon and Paris, and at a public open house of the German Federal Foreign Office.

Defining an audience and presenting it with a new communication tool is one thing; however, measuring the effect of that tool is another matter entirely. While it is possible and relatively straightforward to record numbers of viewers or track online engagement,

In this way, the hard-hitting and moving documentary was paired with real-life interaction and information sharing.

Mine action decision makers constitute an audience of representatives from donor countries, policymakers involved in mine action and disarmament issues, and other high-level representatives working on human security issues. Indeed, it quickly became clear that telling Ahmaied's story was not only an opportunity to take people to Fallujah (as far as we know, the NowHere Team was the first international media crew to capture the city on film since ISIS lost control in December 2016), but also to show the interlinkages between mine action, displacement, reconstruction efforts, and victim assistance. One intention of *Home After War* was to initiate a conversation within this targeted audience. The goal was to start a discussion about IEDs from a place of empathy. To support this growing discussion and bring the experience to the greatest number of mine action professionals in one

measuring whether content has impacted behavior is difficult. Indeed, change in behavior is rarely related to a single event but is far more often the product of ongoing interactions and encounters that are woven together into a tapestry of experiences that ultimately shapes who we are and what we believe. In an attempt to partially unweave this tapestry, the GICHD has been measuring the impact of *Home After War* through a three-pronged approach: tracking reach, engagement, and action.

Reach is the simplest of the three categories. Keeping track of reach means recording where the experience has gone and how many people have seen it. These are of course important numbers to have but do not show the extent to which the experience has impacted the individual. The engagement category digs deeper into unearthing meaningful impact. The four metrics in this category that GICHD is tracking—award nominations, awards received, media mentions,



and panel invitations—indicate different ways viewers are inspired to bring the message of the experience to their circle. Finally, *action* indicates the deepest form of impact. In these cases, individuals hear about the experience from a third party and reach out to NowHere Media and GICHD to use the experience for their own outreach and education efforts. The numbers in Table 1 reflect that current impact assessment as of October 2019. To that end, it has only been since about February 2019 that the action category could be measured; understandably, the experience had to be released and seen before results in this category could be examined.

Numbers to Date

Even the combination of these indicators only tells part of the story’s impact around the globe. In part this is because tracking the meaningful impact of VR is a nascent field. Just as was the case for social media managers nearly a decade ago, we need time to develop a clearer understanding of how people consume VR content and are affected by it before developing standard measures on impact and reach. That said, being “on the ground” at mine action events and film festivals and watching people’s individual reactions to the piece has been inspiring. We have had Middle East desk officers based in their capitals thank us for taking them to see—for the first time—where their beneficiaries actually live. And we have spoken to Iraqis who have not been home for many years weep for the homes they once knew. Sharing these intimate moments has been an immense privilege, giving us confidence that VR can have a strong role in shaping people’s emotions as well as their decisions to make change in the world.

REACH	
Total viewers	> 500
Number of film festivals	27
Number of mine action meetings and conferences	9
Number of public events and museums	5
Continents reached	4
Countries reached	14
Cities reached	40
ENGAGEMENT	
Award nominations	12
Festival awards received	7
Media mentions	30
Invitations to deliver high-level presentations (i.e., film festivals, international conferences)	13
ACTION	
Number of invitations by mine action partners to show experience at their events	7
Requests from museums to use experience for an exhibition	2

Table 1. Impact numbers for *Home After War*.

What’s Next?

After collaborating with VR experts on the *Home After War* project, it is exciting to think through other ways that VR could be useful to the mine action sector. In mine action especially, the ability to create



a world that contains only virtual hazards has enormous potential for expanding training opportunities. Over the past few years, the GICHD has experimented with creating two-dimensional virtual worlds for such purposes, and *Home After War* has given the GICHD the insight with which to transform these virtual worlds into immersive ones as well.

The Explosive Weapons Effects Simulator, for instance, was launched in 2018 by the GICHD in partnership with Fraunhofer EMI. The user is given the option of selecting from five different weapon systems (122 mm BM-21 multi-barrel rocket launcher; 152 mm and 155 mm artillery guns; 81 mm, 82 mm, and 120 mm medium and heavy mortars; 115 mm, 120 mm, and 125 mm tank guns; and MK82 aerial bombs), and then from five different populated areas (ranging in size from hamlet to large city). After selecting a target in the fictitious populated area, the potential primary and secondary effects of the chosen weapon would have on that area are visualized. This tool is by no means meant to be a game but rather a visual device that demonstrates the impact of using non-precision weapons in populated areas through the safe, anonymous space offered by this virtual world. *Home After War* has demonstrated one option for how to move from the virtual, flat environments of the Explosive Weapons Effectives Simulator into a fully immersive virtual space. By including VR as a training or educational tool as well as benefiting from its storytelling potential, there are multiple options for how to integrate this technology into the operational activities of the GICHD and other organizations.

The GICHD is not the only organization in the sector to push innovation with this new technology. As is demonstrated in this edition of *The Journal*, Golden West is working in augmented reality (AR) and

VR to push training efforts forward and create virtual spaces where people can learn safely and effectively. Training development is a wide-open space in which VR can be effectively used—new environments, new forms of contamination, and even complicated scenarios can be quickly rendered and visited through this technology.

Home After War is just the beginning. In just a few years the technologies that created Ahmaied's home will already seem antiquated. However, the telling of Ahmaied's story and others like it will always be critical for shedding light on pressing humanitarian challenges: testing the limits of innovation through this form of storytelling has the potential to contribute to a safer tomorrow. ©

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Sandra Bialystok, Ph.D., has been working in communications in mine action since 2014, when she joined the GICHD, where she is now the Digital Media Coordinator. She runs the GICHD's multiple websites and social media, and advises on new channels and tools, including virtual and augmented reality and mobile applications. Bialystok holds a doctorate, and a master's degree in comparative literature from the University of Toronto and a master's from Oxford University.