Ethics and Technology in Humanitarian Settings: an iTRACK case study
Examining how the social-cultural intersect with the ethical in humanitarian technology design and use

For example:

• What cultural considerations need to be taken into account to really understand how privacy is a public good?
• How do cultural considerations change what is ethically acceptable or desirable?
The **iTRACK** system

Keep track of humanitarian workers in the field
Support planners/workers’ situational awareness & decisions
Approach

- Literature review
- iTRACK’s various components were tested in a simulation exercise
- Interviews with key stakeholders
- Synthetisation of findings
Movement in space

Classification and sorting

Qualifying risk
The iTRACK system
StaffSense

Mobile application for encrypted asynchronous communication in field

Users can:
- Communicate with headquarters, users
- Receive notifications and alerts
- Send location-based threat messages
- Turn on tracking
- Use a panic button

Enhanced situational awareness proactive warning and alerting
Mobile DSE Application

• Dashboard for convoy navigation and routing
• Sends real-time convoy location to the centralized system

Improved navigation and mission re-routing (in case of threats)
Improved mission planning and organisation
Real-time detection of threats and critical events

- Records 3D 360° HDR panoramic images and video
- Uses machine learning to detect landmarks and objects
- Uses landmarks to estimate vehicle location and trajectory
- Sends real-time alerts to users

Automatically detects potential threats around the vehicle
Notifies users and headquarters
Movement in Space

Ethical responsibility towards personal privacy

Social responsibility towards worker safety

Cultural responsibility towards local context

When a worker is off duty, they are not monitored

“Off-duty” is not a clear category when deployed in a crisis zone

Movement patterns can help understanding of communities being served
"(1) Pre-existing social values found in the ‘social institutions, practices and attitudes’ from which the technology emerges, (2) technical constraints and (3) emergent aspects of a context of use” (Friedman & Nissenbaum, 1996)

“The values of the author [of an algorithm], wittingly or not, are frozen into the code, effectively institutionalising those values” (Macnish, 2012)
Qualifying Risk

“When the location where the humanitarian workers reside when being off-duty does not pose any safety risks, the devices can be turned off” iTRACK designer

“When complex algorithms and big data sets are used to make decisions, it can be difficult to work out exactly what factors influenced that decision, and to what extent” (Murray & Fussey, 2018)

Safety Risk depends on a range of factors: Context, Experience, Familiarity, Timing, Frame of Reference
Because blame can potentially be assigned to several moral agents simultaneously (Mittelstadt et al, 2016) and to avoid creating an “accountability gap” (Cardona, 2008), iTrack has to be transparent about how it approaches security, threats, and ethical principles.

It has be clear about:
- How to define responsibility?
- How to define justice and fair treatment?
- What is privacy, as a right, intended to offer?
- What elements of a situation need to be considered when determining if acts are ethical?
- What is a user required to know about a system?
Contact us

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