Preface

This study titled "Ebola: A Big Data Disaster" by Sean Martin McDonald, undertaken with support from the Open Society Foundation, Ford Foundation, and Media Democracy Fund, explores the use of Big Data in the form of Call Detail Record (CDR) data in humanitarian crisis. It discusses the challenges of digital humanitarian coordination in health emergencies like the Ebola outbreak in West Africa, and the marked tension in the debate around experimentation with humanitarian technologies and the impact on privacy. McDonald's research focuses on the two primary legal and human rights frameworks, privacy and property, to question the impact of unregulated use of CDR's on human rights. It also highlights how the diffusion of data science to the realm of international development constitutes a genuine opportunity to bring powerful new tools to fight crisis and emergencies.

Analysing the risks of using CDRs to perform migration analysis and contact tracing without user consent, as well as the application of big data to disease surveillance is an important entry point into the debate around use of Big Data for development and humanitarian aid. The paper also raises crucial questions of legal significance about the access to information, the limitation of data sharing, and the concept of proportionality in privacy invasion in the public good. These issues hold great relevance in today's time where big data and its emerging role for development, involving its actual and potential uses as well as harms is under consideration across the world.

The paper highlights the absence of a dialogue around the significant legal risks posed by the collection, use, and international transfer of personally identifiable data and humanitarian information, and the grey areas around assumptions of public good. The paper calls for a critical discussion around the experimental nature of data modelling in emergency response due to mismanagement of information has been largely emphasized to protect the contours of human rights.

This study offers an important perspective for us at the Centre for Internet and Society, and our works on Privacy, Big Data, and Big Data for Development, and very productively articulates the risks of adopting solutions to issues important for development without taking into consideration legal implications and the larger impact on human rights. We look forward to continue to critically engage with issues raised by Big Data in the context of human rights and sustainable development, and bring together diverse perspectives on these issues.

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Executive Summary

Digitizing disaster response invites the problems of digital systems into the most fragile and vulnerable environments in the world. Troublingly, it is often humanitarian organizations that lead the charge, underestimating the practical and legal implications of digitizing these systems, from data security to operational coordination to the fairness of algorithms. In addition to their own digital transformations, many humanitarian organizations actively encourage governments, charitable foundations, technology companies, and mobile networks to share data in ways that are illegal without user consent or the invocation of governmental emergency powers. The governance of emergency powers over digital systems remain poorly defined and badly regulated, and lack the basic due process checks and balances that exist for nearly every other kind of government emergency authority. The humanitarian community knows that it does not have the technological, legal, or institutional checks necessary to fairly or fully realize the promise of digital systems. That knowledge, however, hasn't prevented many of the world's most important and trusted institutions from taking irresponsible, at best, and illegal, at worst, risks with some of the world's most sensitive data.

The most prominent of these risks is the growing call for mobile network operators – the companies that provide mobile phone and data services – databases, which usually contain a significant amount of personal information. According to the most frequently cited expert for justifying the release of mobile phone records, we simply don't have a sufficient understanding of how to apply these records to social services systems—even less so in fragile contexts. The humanitarian community lacks the data modeling, professional technology implementation standards, and the enforcement capacity to protect, or even define, the public's interest. Even in places where there are regulatory institutions to fill the gap, emergency contexts often cause disruption or suspension of the safeguarding processes required to protect human rights. Without these processes – or any other form of public oversight – digitizing humanitarian systems can add layers of opacity to the already complex data models, implementation approaches, or intended outcomes of the response, further crippling tenuous public trust and good governance.

Where this leaves us is a world where the stretching and violation of national, regional, and international human rights and data protection laws has become the norm, for a benefit that practically eludes definition, if it even exists. Despite that, many governments, businesses, and international organizations are routinely given access to mobile network operator data – Call Detail Records (CDRs), containing some of the most personal, re-identifiable data that people produce today. Humanitarian, academic, and journalistic calls for the release of CDRs gain the most traction in emergencies, contributing to a norm that actively disregards individual rights and consent. These practices not only put individuals at risk of harm, but as digital jurisprudence continues to come