Article

Emergency Infrastructure and Locational Extraction: Problematizing Computer Assisted Dispatch Systems as Public Good

James N. Gilmore

Clemson University, USA
jngilmo@clemson.edu

McKinley DuRant

Clemson University, USA
mckinld@g.clemson.edu

Abstract

This article analyzes the increasing articulation between third-party software and emergency infrastructures through a focus on the computer-assisted dispatch system RapidDeploy, which purports to help 9-1-1 responders more accurately and efficiently respond to emergency situations. We build from research that focuses on overlaps between surveillance and emergency response to demonstrate how large-scale data mining practices—in particular, location extraction—are repurposed as beneficial, if not life-saving, measures. In focusing on the capacity to extract and analyze location in the name of public good, we discursively analyze how RapidDeploy’s official company blog constructs the benevolence of data collection. We then demonstrate how these viewpoints are reproduced in the news reports in one city—Charleston, South Carolina—where RapidDeploy has formally partnered with emergency response services. This analysis is used to demonstrate how words like “data” and “cloud” continue to be used as vague buzzwords for companies situated at the intersections of surveillance and civic function, and to argue for greater attention to how the trend towards platformization continues to blur the relationships between surveillance and emergency response systems. This case study examines the public face of this company and, as such, analyzes the language used to gain public assent for the software and its function.

Introduction

For over thirty years, 9-1-1 emergency infrastructures have increasingly incorporated computer technologies, many of which are collectively referred to as computer-assisted (or aided) dispatch systems (CADS) (Moran and Layne 1988; Whalen 1996). The developers and promoters of such systems include not only local governments but also third-party platforms like RapidDeploy, TriTech, and Banjo that specialize in developing software for emergency responders and 9-1-1 call centers. In their promotional materials, these companies rely on keywords such as “new,” “improved,” “next-gen,” and “state of the art” to describe the value of their projects for ensuring the safety of community members.

In order to provide these services, these companies frame large-scale data extraction and analysis as a public good. Consider the following anecdote from RapidDeploy’s blog:

When the Wireless 9-1-1 call was received by the 9-1-1 Telecommunicator there was no response from the caller but frantic screams from a female in the background could be heard. The only address information available with the initial call was the cellular tower address. Law enforcement officers were dispatched and began a search in the area around the cellular tower’s address but could not locate the victim. The decision was

Gilmore, James N. and McKinley DuRant. 2021. Emergency Infrastructure and Locational Extraction: Problematizing Computer Assisted Dispatch Systems as Public Good: Subtitle. *Surveillance & Society* 19(2): 187-198.

<https://ojs.library.queensu.ca/index.php/surveillance-and-society/index> | ISSN: 1477-7487

© The author(s), 2021 | Licensed to the Surveillance Studies Network under a [Creative Commons Attribution Non-Commercial No Derivatives license](https://creativecommons.org/licenses/by-nc-nd/4.0/)

made to have the newly upgraded workstation with RapidDeploy's RadiusPlus, join the call to see if a better location could be identified with the new technology. Using the new mapping application, the 9-1-1 Telecommunicator was able to locate the female victim within six meters on the map. They quickly relayed information to the officers who were already within two blocks of the caller and were on scene within seconds. (RapidDeploy 2020e)

This story is not just a celebration of saving a life; it is also, and more importantly, a celebration of how these emergency infrastructures are also surveillance infrastructures. They operate, in part, through the capacity to extract and utilize location data from phones to coordinate responses. Location is, in many ways, the prime data point for emergency responders: it is necessary to know location in order to coordinate and deploy a response team, and it is among the first questions responders ask those who call response lines like 9-1-1.

The tradeoff of location data for emergency assistance is at the heart of many response situations, but RapidDeploy's blog rearticulates the value of location as a means to promote large amounts of data extraction, automated analysis, and predictive analytics. The company itself, as explored in this article, offers little transparency when it comes to explaining what, exactly, it does with all of this data gathered in the name of protecting the public. While citizens may gladly disclose their own location during an emergency, there is little disclosure from these platforms about why location data are stored and used beyond the scope of responding to a call. Another way to say this is that platforms like RapidDeploy participate in the datafication of emergency response. Datafication (Mayer-Schönberger and Cukier 2014) that attends to the many ways the utilization of data collection is intricately, if not inherently, an act of surveillance, in part through the development of the linkage of these two things through dataveillance (Clarke 1988, 1994).

This article focuses on a case study of one CADS (RapidDeploy) in one particular location (Charleston, South Carolina) to assess how location data mining and analysis are discursively constructed as public goods and, in turn, how they are promoted uncritically in local spaces. We analyze two sites of discourse: first, RapidDeploy's blog, which outlines a number of ways the company constructs data collection and analysis as central to the protection of citizens; and second, the local reporting and press releases surrounding Charleston County's decision to partner with RapidDeploy for its 9-1-1 call centers in January 2020, which largely reproduces the ideological framing of the company's blog and press releases. Throughout, this article stresses the public face of RapidDeploy and the public reporting in Charleston, focusing on language used to gain public assent for the software. In particular, claims for public safety and protection are promoted through vague, almost mystical metaphors of "data" and "cloud." Our analysis traces connections between platformization, surveillance, and metaphor. The positive associations of "data" and "cloud" for creating so-called actionable intelligence become the means by which practices associated with surveillance can become considered morally good for citizens. In doing this, platforms like RapidDeploy position themselves as useful for the safety of citizens with little to no evident community pushback, entrenching the connections between surveillance and emergency response that have existed for a number of decades (see Frith 2015).

Framing Surveillance as Public Good

The discursive frame of surveillance as a public good—as, indeed, crucial to the protection of citizens' well-being—is certainly nothing new. It has been a major theme of post-9/11 anti-terrorism policies, which have championed the monitoring of citizen behavior in the name of preventing terrorist attacks (Lyon 2003, 2007; Andrejevic 2007). Indeed, Sanders (2006) argues that the September 11 terrorist attacks revealed inadequacies in New York City's emergency communication infrastructure, which facilitated greater pushes to digitize and datafy 9-1-1 response. As Phillips (2005: 844) has put it: 9-1-1 is "a surveillance system. It mediates identification, observation, typification, and response" through the interrelationships between laws, purposes, and organizations. For emergency response, this is surveillance in the name of protection. These surveillance infrastructures can proliferate largely unimpeded because of the supposedly good work (here, "good" meaning both technically efficient and morally beneficial) they do for communities. This

“good work” becomes performative; Hall (2015) has examined how the airport has transformed as a site where security is performed through Transportation Security Administration (TSA) checkpoints and their attendant technologies of body scans, “random” interrogations, and baggage checks. While 9-1-1 telecommunications and response systems do not, by and large, deal with the perceived risk of terrorism in the same ways as the TSA, ICE, PRISM, and other agencies and programs particular to the United States do, Hall’s focus on the performance of surveillance and security, a concept she has extended alongside scholarship with Monahan and Reeves (Hall, Monahan, and Reeves 2016), is productive for our analysis. We see RapidDeploy’s blog and the local press releases and news reports about the platform as performative, that is to say, as modes of writing invested more with communicating particular ideologies than with communicating complex information.

As explained in greater detail in the analysis below, RapidDeploy emphasizes location and, in particular, the extraction of location data—a process key to much work in surveillance studies literature. In the case of many government surveillance platforms, like PRISM, location functions as a means for tracking and monitoring citizens (Lyon 2015). “Locative data” are often treated in imprecise terms that mask “subtle yet significant differences in geocoded data extraction and use” (Barreneche and Wilken 2015: 498). For instance, platforms like Foursquare—which relied primarily on locational “check-ins”—had particular communicative and infrastructural operations (Sakeer and Evans 2016; Frith 2013, 2014). These platforms, which encourage the sharing of location within social networks, are different from platforms that offer services like child location tracking (Hasinoff 2017; Gilmore 2020b) and operate under more of a logic of securitization.

Identification, location, and some means of tracking are deemed necessary for helping individuals facing any number of injuries, crises, or distresses in an expedient manner. Of course, this is a noble goal. The infrastructures of local governments *should* be architected towards helping people as quickly and effectively as possible, and a number of 9-1-1 practices, like text-to-9-1-1 services, have attempted to “shift the infrastructural dimensions of 9-1-1” by allowing for more inclusive modes of user practices (Ellessor 2019a: 4492). This is just one element in a larger suite of operations within which call-takers and dispatchers must work efficiently to identify caller locations. Other elements within this suite include Autonomic Number Identification (ANI) and Automatic Location Identifier (ALI) systems, which help call center workers identify the location of mobile phones. These identification systems are only one small part of the complicated work call-takers perform to assess a caller’s location, classify the situation, and coordinate with dispatchers to efficiently provide necessary resources. While this article is focused more on how the CADS platform RapidDeploy discursively constructs data extraction and surveillance as public goods, the implementation of these systems also impacts the human labor involved in coordinating emergency response.

These systems do not just purport to make work easier for call-takers; they actively purport to effect a transformation in the form and function of emergency response. RapidDeploy acts as a platform intermediary (Morris 2015) serving as both emergency infrastructure and data processor. Its implementation in local jurisdictions is an example of what van Dijck, Poell, and de Waal (2018) have called “platformization,” or the process of incorporating third-party, often privately-owned platforms to perform an array of social or civic functions. As they argue: “If societies want to create a platform structure that reflects and constructs a democratic order, they need to strive to implement public values and collective interests in the ecosystem’s design” (van Dijck, Poell, and de Waal 2018: 139). At the same time, however, public entities who enlist private platforms “often have no choice but to succumb to built-in mechanisms, triggering fundamental questions about conflicting values” (van Dijck, Poell, and de Waal 2018: 159). Platformization, in other words, involves trusting platforms to intervene meaningfully in the public sphere. As Monahan (2010: 37–38) puts it, “situational awareness” (a value RapidDeploy promotes continuously) is one of the goals of the larger “privatization of security” and the “realigning of national security interests with the profit motives of private companies.” Sanders (2006) suggests that the implementation of CADS offers measures of standardization and organization for emergency dispatch; the platforms that provide the software and other computational tools to emergency response programs

construct norms and protocols. In doing so, CADS attempt “to construct a factual account of the classification and prioritization process, which removes the presence and agency of call-takers” (Sanders 2006: 725); one of the major metrics of determining which actions to take, as Sanders explains, is caller location. With many CADS, public emergency response systems are articulated via platformization to private, third-party companies who assist with the datafication of emergency response while also obfuscating how that work is being performed. To be clear, this is not a new phenomenon: local jurisdictions have turned to private companies and third-party developers for emergency operations software for some time, as governments and public agencies lack the funds to develop, run, and iterate CADS systems.

Working around Opaque Surveillance Systems

Before proceeding with our discursive analysis of RapidDeploy and its implementation in Charleston, we want to provide some methodological notes and explain why choices were made with our approach to this article. Originally, this study planned to draw on a detailed analysis of RapidDeploy’s software, using descriptive analytics to assess how the platform architects the use of location analysis (following pathways suggested by Light, Burgess, and Duguay 2016). However, RapidDeploy’s website prevents members of the public from accessing virtually any information about how the software works: if a visitor to its website tries to “Learn More” about any of the platform’s functionalities or features, they are directed to a form to fill out in order to obtain information. The company declined a September 2019 request from these researchers to provide a demo of the software. RapidDeploy even makes proprietary the white papers that presumably demonstrate the effectiveness of its platform: we were unable, for instance, to access the report “Nimbus CAD: The CAD of the future case study,” which provides data about how the company’s system had been used in Collier County, Florida. While many companies black-box their data under the guise of propriety, as well as to protect sensitive data, RapidDeploy’s decision to make it all but impossible for members of the public to learn about its platform is a reminder of how companies dedicated to producing analytics based on extracting data from citizens in crisis are themselves often more opaque than they are transparent (see Hall 2015).

As such, we have surveyed sets of discourse that largely posit RapidDeploy as, simply, a public good. Where Lyon (2018) has suggested those in the global West increasingly live in a “culture of surveillance” that takes as normal the condition of being surveilled at any given moment, our analysis offers several ways scholars of surveillance, crisis, and communication infrastructure might continue studying these systems on the discursive level, where ideologies become reproduced across public relations statements and journalism outlets, with the potential of further entrenching (rather than challenging) the accepted interrelationships between emergency response and surveillance. In performing this analysis, we aim to assess how companies offer themselves as public services, as well as sketch some of the stakes and risks of trusting platforms such as RapidDeploy with assisting in the work of emergency response. The following sections proceed first with a descriptive overview of RapidDeploy’s services, followed by a critical analysis of how its blog posts use metaphors of “data” and “cloud,” and then an analysis of how these metaphors are uncritically incorporated into local news coverage of RapidDeploy contracts.

Imagining Location Extraction on RapidDeploy’s Blog

RapidDeploy advertises its work primarily through the value of extracting and analyzing more precise locational data. On its website, RapidDeploy markets three related services: Nimbus CAD, Eclipse Analytics, and Radius Mapping.

Nimbus CAD places most of its emphasis on using “the Cloud” to assist 9-1-1 operators. Call-takers experience the benefits of “tactical mapping with supplemental location sources,” dispatchers can use “dynamic ETA predictions based on real-time traffic data,” and responders can use “advanced telemetrics” features (or automated measurements and their transmission to servers) to improve things like situational awareness (RapidDeploy 2020a). Throughout the Nimbus CAD promotional page, RapidDeploy (2020a) emphasizes location, including “drive time polygons with real-time traffic,” “Waze and Dark Sky

integrations” for “real-time” incident feeds, and “faster and more accurate location updates.” These ideas of “real-time” and “faster and more accurate” updates are repeated, refined, and expanded across the promotional materials for the other elements of the platform, emphasizing how Nimbus CAD can supposedly use these more precise data points to improve the labor of call center operators.

Eclipse Analytics is marketed as “actionable real-time intelligence” (RapidDeploy 2020b). While the company provides even less information on what “Eclipse Analytics” are and how they work, it promotes offering “historic and real-time” insights based on data analysis and repeat the capacity for “actionable data” and “predictive analytics” (RapidDeploy 2020b). RapidDeploy’s evident investment in “real-time” indicates a desire to imagine a particular sort of temporal work for emergency response (Sharma 2014). Radius Mapping also extends the emphasis on future-oriented data analysis with its tagline: “Tactical mapping for the future. Today” (RapidDeploy 2020c). This page touts the variety of locational features available to 9-1-1 centers: “Radius automatically displays ALI/ANI location and RapidSOS location side by side, helping you determine incident location and track callers in motion” (RapidDeploy 2020c). Radius also “allows you to perform searches for addresses, points of interest and place names in addition to... latitude/longitude/altitude” while providing “additional situational awareness tools such as real-time traffic and incident data from TomTom and Waze, as well as real-time weather data from DarkSky” (RapidDeploy 2020c). Basically, Radius Mapping brings together multiple APIs and software for creating accurate depictions of location. It combines data from apps like Waze and Dark Sky, as well as uses established emergency location tools like ANI and ALI, to create multiple layers of data that are then used to analyze and suggest routes of response. Here, software generates data and guides decisions about operations based on those data. This is somewhat similar to how Manovich (2013) describes the ways software come to render a reality; they help to build representations and understandings of the world that make some actions possible.

RapidDeploy’s blog is used largely as a promotional tool for its local partnerships and some of its key features. As Gilmore (2020a) has explored in the context of Netflix, company blogs can be useful discursive sites for seeing how companies construct values associated with their products; while these blogs require a critical engagement to unpack them as components of how a company builds a sensibility, if not an ideology, surrounding its product, they provide ways for critical technology researchers to work around a lack of access. To that end, sixteen blog posts on RapidDeploy’s website were analyzed from the period between August 6, 2018, and March 18, 2020. Posts were selected based on two criteria: they had to discuss a local partnership (i.e., between RapidDeploy and Charleston County) or they had to provide some insight into the features and functionalities of the software. Other blog posts providing profiles of team members or promoting the company’s appearances at various technology conferences were not considered for this analysis.

“Location” serves as a major keyword across this blog. In a post celebrating the work of all emergency responders (Chambers 2019), RapidDeploy’s blog lists a number of “extreme challenges” call responders and dispatchers face. Number one on this list is “location accuracy,” and RapidDeploy is offered as a “better set of tools” for addressing these challenges through, among other things, “advanced location services” (Chambers 2019). While this piece is largely a celebratory salute to workers, it is nevertheless a means of promoting particular values and ideas around the work of the platform; particularly, the use of locational data extraction for emergency response. A piece promoting RapidDeploy’s partnership with Manatee County similarly emphasizes the importance of location data to Radius Mapping’s operations: “While having access to supplemental location is now common across the country, having automatic and immediate access to all location data side-by-side is a game changer for 9-1-1 call-takers,” ensuring “real-time traffic, video feeds,” and “call transfer trends that create actionable insights for future public safety initiatives” (Fuqua 2020). Here, location is temporally figured as related to both the present (changing in accordance to “real-time” conditions) as well as the future (creating “actionable insights”).

In other blog posts, it is not specifically location data that are prioritized but “data” as a broad and abstract category. Vargas (2020) argues “data is only valuable if it is actionable,” and data only realize their “full

potential” when they can be analyzed in real-time. Touting Eclipse Analytics, Vargas (2020) claims RapidDeploy takes “public safety data and convert[s] it into actionable intelligence that enable[s] agencies to become more data-driven and proactive,” in particular emphasizing “fresh data” that can be analyzed automatically through the platform, including “location accuracy.” Vargas’s (2020) post wholly embraces the logics of datafication, which routinely argue it is good to convert systems into real-time data analysis for decision-making purposes. Throughout his post, Vargas (2020) repeatedly claims that more data can lead to “proactive” changes that “can influence results today,” but there is little clarity in how this actually works. Rather, it is suggested that public safety organizations hand off these responsibilities directly to RapidDeploy: “Public safety organizations do not have to hire or train their staff to become experts in cloud computing, data science, statistical modeling, or artificial intelligence. Eclipse Analytics does this work behind the scenes and gives agencies the intelligence they need, when they need them to make better decisions” (Vargas 2020).

Figure 1: A graph of “Data Age vs. Value of Data in Decision Making” (Vargas 2020). Screenshot by the author.

Vargas’s (2020) metaphors give huge amounts of power to the processes of data collection and analytics: giving power to RapidDeploy’s software leads to “better” decisions that allow emergency response workers to be “proactive” in both “real-time” and the future through “actionable” intelligence; but while this post fully embraces the ideologies of dataism van Dijck (2014) charts, it is scant on specifics. In order to drive his point home, Vargas (2020) provides a graph (Figure 1) labeled “Data Age vs Value of Data in Decision Making.” Here, “[v]alue of data for decision making” is mapped against time. The “time” axis divides “real time,” “seconds,” “minutes,” “hours,” “days,” and “months” into equal spaces, whereas “value” on the opposing axis has no indication of how it is measured. A downward slope from “Fresh Data” to “Historical Data” argues the “value of data decreases with age.” The word “data” is doing a lot of imaginative work in this chart: the *kinds* of data are not specified, nor are their particular functions. In order to keep data “fresh,” where they are (supposedly) most valuable, new data must constantly be generated. This is the promise and the logic of dataism through platforms like RapidDeploy: in order to create “better” decisions, a stream of multiple data points (including location) must be extracted and fed through its data processing systems, which collect and retain the data, analyze it automatically, and return it to agencies. This post is, of course, a piece of advertising, but it advertises through dematerializing and decontextualizing “data,” turning the word into a floating signifier that can come to mean and to be whatever an agency might imagine.

Other blog posts promote the use of RapidDeploy Nimbus Mobile application for, again, “real-time information updates and notifications” that promise “actionable information... key to supporting situational

awareness” (Algatt 2020). The ability of this application to integrate with automated assistants like Siri through commands like “Siri, create a traffic stop” is repeated in other blog posts, which argue that the use of programs like Siri “enable public safety to respond faster to incidents with more situational awareness than ever” (Rapid Deploy 2019c), while presuming voice assistants always respond quickly and accurately. Again, such an assumption promotes a dataist viewpoint, suggesting digital processing tools are efficient and more reliable than other modes of human communication. This post goes so far as to suggest, without providing any evidence, that Siri “saves lives” for emergency responders and police officers.

While it is not necessarily surprising that RapidDeploy promotes its services with little sense of critical introspection or complication, this analysis does demonstrate how the company reproduces ideologies that presume dataveillance operations are inherently beneficial and productive. In the following section, we turn to one location where RapidDeploy has been implemented to demonstrate how these ideologies are reproduced in local news reports.

Promoting RapidDeploy for Charleston County

As researchers based in South Carolina, Charleston County was chosen as the other site of analysis because we consider it part of our local community. Other research might examine RapidDeploy’s partnerships in Sarasota, Florida, and Collier County, Florida, as well as in the state of Kansas, for additional insights into how local communities respond to and promote particular discourses surrounding the CADS. In 2018, Charleston County began to explore several ways to update its emergency response system. One pilot program emphasized data extraction from social media posts as a means to learn about and analyze emergency situations as they are discussed on social media (Radio Resource International 2018). This program’s promotional literature also involves one of the key themes across this discourse: the mystification of data. “Data, and how that data is used to respond to emergencies, is a major component of 9-1-1’s evolution,” according to Charleston’s Consolidated 9-1-1 Center director, Jim Lake (qtd. in Radio Resource International 2018). Here, “data” are not precisely identified but rather treated as sort of a general solution for assisting with emergency response. Elsewhere, Lake describes the unnamed response system preceding RapidDeploy as “very good and very reliable,” but says that “it’s a premise-based platform. And that premise-based platform limits our abilities” (qtd. in O’Brien 2019). RapidDeploy shifts the focus from analyzing existing premises as they unfold to presumably using predictions based on automated data analytics. Such predictions would allow all workers in the emergency response infrastructure to, presumably, provide faster responses and coordinate more efficiently during responses.

In researching local news coverage and press releases that specifically discuss RapidDeploy, fifteen articles were analyzed for this section. As Gilmore and Troutman (2020) have argued in their research on issues related to a Google data center in Charleston, South Carolina, it is often necessary to engage local news coverage to analyze local issues that are not covered in major national newspapers, be they in Charleston or elsewhere. Simultaneously—if not also paradoxically—even though local news sources are sites to learn about local infrastructures, infrastructural issues are also often underreported. Local news reports in Charleston highlighted RapidDeploy in terms of its ability to transform existing emergency response infrastructure, but all of these reports were only several hundred words in length and performed no discernible investigative analysis. In surveying news reports and press releases, we found a great deal of repetition and redundancy, signifying how many reporters effectively took RapidDeploy at its word and reproduced these press releases rather than examine the underlying operations of this platform in their reporting. This is often called “churnalism,” where cutbacks and the overwork of local journalists has led to the uncritical deployment of press releases (e.g., Lewis, Williams, and Franklin 2008; Almgren 2017).

As an example of how this manifested, consider a press release from Charleston County announcing the partnership with RapidDeploy from January 7, 2020. The release is very straightforward: the first paragraph announces contract, and the second paragraph explains what RapidDeploy does and offers a reason for the partnership: “access to modern features” and “a faster and more informed response” (Public Information Office 2020). RapidDeploy’s (2020d) blog simply reproduced the press release without crediting it to the

Public Information Office, aligning its company's views and the views of its partner. Two of Charleston's local news networks reproduced the press release in whole or in part without adding any additional context or reporting. In ABC4 News, Matt Dillane's (2020) brief write-up of less than three-hundred words on the RapidDeploy contract only uses quotes from the press release, including the following quote from Director Jim Lake: "Implementing RapidDeploy's platform will provide us with modern real-time capabilities for dispatchers as well as first responders... We are very excited to move forward with this CAD platform that supports emerging technologies" (qtd. in Dillane 2020). Tim Renaud (2020), writing for the local NBC affiliate, also exclusively draws on language from the press release, occasionally reproducing language without citing it as from the release, including the following sentence: "Charleston County has tested RapidDeploy extensively over the last two years to evaluate the functionality and performance of the system." Renaud's brief article of less than three-hundred words also reproduces the same quote from Lake above.

Rather than investigating how the platform works, what tests were performed to measure its effectiveness, and what the implications of the switch might be for area residents, RapidDeploy is presented as a platform for improving emergency response, providing better response times, and generally making people safer—all of which are lines directly reproduced from RapidDeploy's promotional materials. The defunding of local news in the United States has made it harder for citizens to assess complex issues facing their communities (see, for just one example, Allsop 2020). This reproduction of the press release as news could have occurred for any number of reasons: an understaffed news station or a perceived lack of interest in emergency infrastructure among them. The issue is, we suggest, a systemic one: neither the fault of the reporter nor the outlet, but the result of a perception that individuals do not care about things like emergency infrastructures, which in turn makes it harder for these issues to gain visibility, be discussed and debated, and become part of public discourse. Indeed, a number of keyword searches in the digital archives of one of Charleston's leading newspapers (*The Post and Courier*) found zero articles about RapidDeploy or CADS. Here, the decisions to not examine how surveillance and data extraction are part and parcel of how these systems function means citizens are not encouraged to consider the complexity of the technical systems undergirding—"transforming," to use RapidDeploy's word—emergency response in their area.

In place of public discussion about the complexity of these systems, the press release and subsequent reporting (quite like RapidDeploy's blog posts) deploy a number of buzzwords that are used for promoting the platform rather than doing any serious education about its function. Safety is, perhaps unsurprisingly, a major keyword in the press release and news stories, where changes to 9-1-1 response are seen as inherently designed to keep people safe. These are reflected in RapidDeploy's own promotion of its partnership with Charleston, which highlights how "the move to a cloud-native platform will give Charleston County access to modern features like real-time traffic information and incident feeds, allowing a faster and more informed emergency response" (RapidDeploy 2020d). In another partnership announcement with Sarasota County in Florida, RapidDeploy's representatives used much the same language, including a prediction that "It's a not a question of 'if,' but 'when,' all 9-1-1 centers will move to the Cloud" (RapidDeploy 2019b). The capitalization of "Cloud" here is part of the ongoing process of treating cloud computing like a sort of mystical, ethereal practice, as discussed above. In positioning cloud computing as an inevitability, RapidDeploy also obfuscates what, exactly, this is and how it works. Using simplifications of Cloud, like the simplifications of Data in other blog posts, allows the platform's representatives to trade in popular metaphors when courting potential clients. Almost all local reports depict the platform as "new and improved" (Renaud 2020; O'Brien 2019). The Charleston County government, for instance, promotes RapidDeploy as "new and improved," highlighting its "access to modern features like real-time traffic information and incident feeds, allowing a faster and more informed emergency response," constituting nothing less than the "digital transformation of public safety in Charleston" (Public Information Office 2020).

This phrase—"digital transformation"—is borrowed directly from RapidDeploy's promotional language, and is found throughout its blog (i.e., RapidDeploy 2019a). While perhaps not as clear a copy as the local reporting's reproduction of the County's news release, the reproduction of this phrase from RapidDeploy's

blog to Charleston County's press release demonstrates another instance where promotional language becomes the means by which these platforms are presented uncritically. This digital transformation is proposed to be a fundamental good, placing power and trust in digital technologies to do the work of security and safety. The construction of safety through platformization has affinities with what Ellcessor (2019b: 501), in her study of emergency blue lights on college campuses, has called an "infrastructure of feeling." Here, she suggests, "The construction of a highly visible telecommunication infrastructure" through blue lights "served less to address real problems than to offer a physical promise of 'safety' and to stave off further criticism or change regarding campus and security culture" (Ellcessor 2019b: 501). In a similar way, the eagerness with which local news reporters repeat verbatim the talking points of RapidDeploy and local governments serves to construct a value of safety that comes to be performed through platformization. Because RapidDeploy operates as a largely invisible or opaque infrastructure—and because the company keeps most of its materials private, even to researchers and citizens—there is little room to investigate, either discursively or materially, the operating conditions of this platform. If such a transformation does improve working conditions and emergency response times (which, again, we cannot evaluate in any meaningful way because of the inability for researchers to access this company's white papers and demos), it also simultaneously portends the integration of third-party surveillance-based measures that ask citizens to acquiesce to their interpellation into an apparatus of constant data capture in order to receive emergency care, with little room for parties outside these contractual arrangements to assess the work of these platforms.

Taking RapidDeploy on Its Terms

To place trust in a company like RapidDeploy is to trust it to behave like a public entity rather than a private one. In many ways, our analysis of this platform replays a familiar story: a new technology is privileged for the claims it can make about data analytics rather than interrogated for the potential costs of data extraction. RapidDeploy's claims to be "predictive" and to provide more efficient response times are, in the abstract, valuable tools for emergency responders seeking means to save more lives and help those in danger. The overly celebratory tone of the discourse examined in this article, while not surprising, is nonetheless unsettling. RapidDeploy's vague commitments to "Data" and "the Cloud" connect their public relations statements to a larger process of mystifying the infrastructural operations of these servers and machine learners (Mosco 2014).

In doing so, RapidDeploy also masks how it conceptualizes "location." Through its promotional discourses—and those which become reproduced in local news reports and local government press releases—"location" becomes a key trope to analyzing the work of these CADs. As a data processing company, one of RapidDeploy's aims is to convert location into measurable, analytical data points based on a variety of contextual or situational factors. In doing so, location becomes surveilled not only by the 9-1-1 call operator, dispatcher, and emergency response teams who use the variety of data analytics to respond to calls but also by the platforms' data processing systems that make this work possible.

Rather than engage the complexity of how 9-1-1 workers use their platform, RapidDeploy deploys vague technological metaphors that are then reproduced in publicity and reporting. "Cloud," for instance, has been criticized by media infrastructure studies scholars for the ways it overlooks the material and environmental impacts of internet storage (Pasek 2019) as well as by human geographers who suggest cloud-based metaphors obfuscate the actual traces of how data flow, as clouds are "seemingly nowhere" (Pickren 2018: 29). Metaphors of cloud computing position clouds as both ubiquitous and, crucially, divine. As Peters (2015) reminds us, clouds were historically associated with God and the heavens; that is to say, with omnipotence. Hu (2015) sees this as a return of what Foucault (2003: xvi) called sovereign power: "the sovereignty of data comes out of the way we invest the cloud's technology with cultural fantasies about security and participation." RapidDeploy's discursive use of metaphors like "cloud" are highly intentional buzzwords designed to attract clients to its platform. The invocation of cloud is also a means of obscuring how the platform actually collects, processes, and retains location data. This lack of transparency allows RapidDeploy to craft its image as a wholly beneficial platform through its ability to harness the supposed magic of the cloud.

“Data,” and its cousin “Information,” similarly succumb to metaphorical incantations of all-knowing craftiness. Srinivasan, Finn, and Ames (2017: 13) note as much in their development of “information determinism,” or “the notion that ‘information’ by itself, and in the abstract, can bring about social change—believing that access to such ‘information’ will automatically lead to predictable (usually positive) outcomes.” As van Dijck (2014: 203) claims, “Data firms want their platforms to be acknowledged as objective, standardized aggregators of metadata—better and more precise than the tools government agencies... use.” For van Dijck (2014), this indicates an ideology that puts significant trust in data itself. Companies like RapidDeploy, then, capitalize on the relative popularity of such ideologies to gain trust in communities; while it may provide important emergency response services, its promotional language also evades specific descriptions of platform operations.

Conclusion

As mentioned near the start of this article, CADS have been part of emergency response in some areas since the 1990s and have always been accompanied by configurations of surveillance as a public good. However, as the example of Charleston County demonstrates, local emergency response systems utilize third-party platforms that promise to assist with improved working conditions while simultaneously masking the ability for members of the public to learn about the mechanisms of location extraction in these systems. The ongoing platformization of emergency response demonstrates the complexity of common themes in surveillance studies literature like location tracking. In this article, we have examined how RapidDeploy claims to transform processes of locational extraction in emergency response through invoking particular imaginaries of concepts like data, location, and cloud. Thinking through these issues in relation to surveillance emphasizes their power and opacity; local governments need to provide more transparent means for contracted platforms and infrastructures to be analyzed. In doing so, we advocate for more precision surrounding what is meant by terms like “data” and “real-time” and “cloud” in local news reporting and government agency press releases, which often treat them more as buzzwords and less as meaningful and specific parts of automated computer protocols and data analysis.

It matters, in other words, that local governments and institutions continue to delegate the work of emergency response to platforms that are designed to help citizens but remain largely inaccessible themselves. As much as they work to make location transparent, they are largely opaque to a variety of publics who may never know that they are there. As platforms continue to integrate with conceptions of the public good, it is imperative to critically assess how the surveillant operations of things like location extraction enmesh with the broader ideological functions of securitization, care, and response. The reproduction of the terms these platforms set—and the definitions of concepts like “cloud” they employ—is part of the process of obfuscating how surveillance occurs and how it benefits the companies who build and maintain these platforms. Such language, as analyzed in this article, is rooted in dataist embraces of data-in-and-of-itself, and represents these platforms as contingent and complex assemblages between surveillance practices and public security.

References

- Algatt, Jamie. 2020. RapidDeploy’s New Native Mobile Applications Ring in New Era for First Responders. *RapidDeploy* (blog), January 16. <https://www.rapiddeploy.com/blog/new-rapiddeploy-native-app> [accessed June 5, 2020].
- Allsop, Jon. 2020. America’s Local Newspapers Confront an Apocalypse. *Columbia Journalism Review*, March 31. https://www.cjr.org/the_media_today/local_news_layoffs_coronavirus.php [accessed December 15, 2020].
- Almgren, Susanne M. 2017. Undoing Churnalism? Users Sharing Local News on Facebook. *Digital Journalism* 5 (8): 1060–1079.
- Andrejevic, Mark. 2007. *iSpy: Surveillance Power in the Interactive Era*. Lawrence, KS: University Press of Kansas.
- Barreneche, Carlos, and Rowan Wilken. 2015. Platform Specificity and the Politics of Location Extraction. *European Journal of Cultural Studies* 18 (4–5): 497–513.
- Chambers, Ryan. 2019. The Calue of the “One” in 9-1-1. *RapidDeploy* (blog), April 15. <https://www.rapiddeploy.com/blog/npstw> [accessed June 5, 2020].
- Clarke, Roger. 1988. Information Technology and Dataveillance. *Communications of the ACM* 31 (5): 498–512.

- . 1994. Dataveillance by Governments: The Technique of Computer Matching. *Information Technology & People* 7 (2): 46–85.
- Dillane, Matt. 2020. Charleston County Upgrades Dispatch System with New Platform. *ABC News* 4, January 7. <https://abcnews4.com/news/local/charleston-county-upgrades-dispatch-system-with-new-platform> [accessed June 5, 2020].
- Ellcessor, Elizabeth. 2019a. Call If You Can, Text If You Can't: A Dismediation of U.S. Emergency Communication Infrastructure. *International Journal of Communication* 13: 4487–4506.
- . 2019b. Blue-Light Emergency Phones on Campus: Media Infrastructures of Feeling. *International Journal of Cultural Studies* 22 (4): 499–518.
- Foucault, Michel. 2003. *"Society Must be Defended": Lectures at the Collège de France, 1975-1976*. New York: Picador.
- Frith, Jordan. 2013. Turning Life into a Game: Foursquare, Gamification, and Personal Mobility. *Mobile Media & Communication* 1 (2): 248–262.
- . 2014. Communicating through location: The Understood Meaning of the Foursquare Check-in. *Journal of Computer-Mediated Communication* 19 (4): 890–905.
- . 2015. *Smartphones as Locative Media*. Malden, MA: Polity.
- Fuqua, Jason. 2020. Manatee County Procures RapidDeploy Radius Plus Mapping for Next Generation 9-1-1 Situational Awareness. *RapidDeploy* (blog), February 14. <https://www.rapiddeploy.com/blog/manatee-county> [accessed June 5, 2020].
- Gilmore, James N. 2020a. To Affinity and Beyond: Clicking as Communicative Gesture on the Experimentation Platform. *Communication, Culture and Critique* 13 (3): 333–348.
- . 2020b. Securing the Kids: Geofencing and Child Wearables. *Convergence: The International Journal of Research into New Media Technologies* 26 (5-6): 1333–1346.
- Gilmore, James N., and Bailey Troutman. 2020. Articulating Infrastructure to Water: Agri-Culture and Google's South Carolina Data Center. *International Journal of Cultural Studies* 23 (6): 916–931.
- Hall, Rachel. 2015. *The Transparent Traveler: The Performance Culture of Airport Security*. Durham, NC: Duke University Press.
- Hall, Rachel, Torin Monahan, and Joshua Reeves. 2016. Surveillance and Performance. *Surveillance & Society* 14 (2): 154–167.
- Hasinoff, Amy Adele. 2017. Where Are You? Location Tracking and the Promise of Child Safety. *Television & New Media* 18 (6): 496–512.
- Hu, Tung-Hui. 2015. *A Prehistory of the Cloud*. Cambridge, MA: The MIT Press.
- Lewis, Justin, Andrew Williams, and Bob Franklin. 2008. A Compromised Fourth Estate. *Journalism Studies* 9 (1): 1–20.
- Light, Ben, Jean Burgess, and Stefanie Duguay. 2016. The Walkthrough Method: An Approach to the Study of Apps. *New Media & Society* 20 (3): 881–900.
- Lyon, David. 2003. *Surveillance after September 11*. Malden, MA: Polity.
- . 2007. *Identifying Citizens: ID Cards as Surveillance*. Malden, MA: Polity.
- . 2015. *Surveillance after Snowden*. Malden, MA: Polity.
- . 2018. *The Culture of Surveillance: Watching as a Way of Life*. Malden, MA: Polity.
- Manovich, Lev. 2013. *Software Takes Command*. New York: Bloomsbury.
- Mayer-Schönberger, Viktor, and Kenneth Cukier. 2014. *Big Data: A Revolution That Will Transform How We Live, Work, and Think*. London: John Murray.
- Monahan, Torin. 2010. *Surveillance in the Time of Insecurity*. New Brunswick, NJ: Rutgers University Press.
- Moran, J. and Layne, K. 1988. Enhanced 9-1-1/CAD (Computer Assisted Dispatch): Interfacing New Technology to Fight Crime. *Police Chief* 55 (8): 25–29.
- Morris, Jeremy Wade. 2015. Curation by Code: Infomediaries and the Data Mining of Taste. *European Journal of Cultural Studies* 18 (4-5): 446–463.
- Mosco, Vincent. 2014. *To the Cloud: Big Data in a Turbulent World*. New York: Routledge.
- O'Brien, Abbey. 2019. Charleston County Testing New 9-1-1 Dispatch System. *WCSN* 5, August 20. <https://www.live5news.com/2019/08/20/charleston-county-testing-new-dispatch-system/> [accessed June 5, 2020].
- Pasek, Anne. 2019. Managing Carbon and Data Flows: Fungible Forms of Mediation in the Cloud. *Culture Machine*: 1–15.
- Peters, John Durham. 2015. *The Marvelous Clouds: Towards an Elemental Philosophy of Media*. Chicago, IL: University of Chicago Press.
- Phillips, David. 2005. Texas 9-1-1: Emergency Telecommunications and the Genesis of Surveillance Infrastructure. *Telecommunications Policy* 29: 843–856.
- Pickren, Graham. 2018. "The Global Assemblage of Digital Flow": Critical Data Studies and the Infrastructures of Computing. *Progress in Human Geography* 42 (2): 225–243.
- Public Information Office. 2020. Charleston County Replaces Dispatch System with New Improved Technology. *Charleston County*, January 7. <https://www.charlestoncounty.org/news/2020/4374.pdf> [accessed December 9, 2020].
- Radio Resource International. 2018. S.C. 9-1-1 Center Explores Social Media to Improve Operations. *Radio Resource International*, November 5. <https://www.rmediagroup.com/News/NewsDetails/NewsID/17575#.XAe-miPyBo0.email> [accessed June 8, 2020].
- . 2019a. Dispatching from the Cloud: How the Digital Transformation of 9-1-1 Makes Communities Safer. *RapidDeploy* (blog), January 15. <https://www.rapiddeploy.com/blog/dispatching-from-the-cloud-how-the-digital-transformation-of-9-1-1-makes-communities-safer> [accessed June 5, 2020].
- . 2019b. Sarasota County Selects RapidDeploy for Future-Proof Cloud Aided Dispatch Solution. *RapidDeploy* (blog), August 29. <https://www.rapiddeploy.com/blog/sarasota-county-announcement> [accessed June 5, 2020].
- . 2019c. Voice Activation Feature That Saves Lives and Improves Officer Safety. *RapidDeploy* (blog), October 24. <https://www.rapiddeploy.com/blog/voice-activated> [accessed June 5, 2020].
- . 2020a. Nimbus CAD. <https://www.rapiddeploy.com/nimbus> [accessed June 7, 2020].

- . 2020b. Eclipse Analytics. <https://www.rapiddeploy.com/eclipse> [accessed June 7, 2020].
- . 2020c. Radius Mapping. <https://www.rapiddeploy.com/radius> [accessed June 7, 2020].
- . 2020d. Charleston County Replaces Dispatch System with New Improved Technology. *RapidDeploy* (blog), January 7. <https://www.rapiddeploy.com/blog/charlestoncounty> [accessed June 5, 2020].
- . 2020e. Success Story: First Responders Credit RadiusPlus for Increasing Location Accuracy and Reduced Response Times. *RapidDeploy* (blog), March 18. <https://www.rapiddeploy.com/blog/customer-story-radius-plus-mapping-saves-an-individual-from-possible-death> [accessed June 5, 2020].
- Renaud, Tim. 2020. Charleston County Rolls Out New, Improved Tech for 911 Dispatch Center. *Count on News* 2, January 8. <https://www.counton2.com/news/local-news/charleston-county-news/charleston-county-rolls-our-new-improved-tech-for-911-dispatch-center/> [accessed June 5, 2020].
- Saker, Michael, and Leighton Evans. 2016. Everyday Life and Locative Play: An Exploration of Foursquare and Playful Engagements with Space and Place. *Media, Culture and Society* 38 (8): 1169–1183.
- Sanders, Carrie. 2006. Have You Been Identified? Hidden Boundary Work in Emergency Services Classification. *Information, Communication, and Society* 9 (6): 714–736.
- Sharma, Sarah. 2014. *In the Meantime: Temporality and Cultural Politics*. Durham, NC: Duke University Press.
- Srinivasan, Janaki, Megan Finn, and Morgan Ames. 2017. Information Determinism: The Consequences of Faith in Information. *The Information Society* 33 (1): 13–22.
- Van Dijck, José. 2014. Datafication, Dataism and Dataveillance: Big Data between Scientific Paradigm and Ideology. *Surveillance & Society* 12 (2): 197–208.
- Van Dijck, José, Thomas Poell, and Martijn de Waal. 2018. *The Platform Society: Public Values in a Connective World*. New York: Oxford University Press.
- Vargas, Alberto. 2020. It's Time for Public Safety to Get More Value from Its Data. *RapidDeploy* (blog), January 21. <https://www.rapiddeploy.com/blog/value-from-data> [accessed June 5, 2020].
- Whalen, Jack. 1996. A Technology of Order Production: Computer-Aided Dispatch in Public Safety Communications. In *Situated Order: Studies in the Social Organization of Talk and Embodied Action*, edited by Paul ten Have and George Psathas, 187–230. Washington, DC: University Press of America.