# THE ODbL AND OPENSTREETMAP: ANALYSIS AND USE CASES

**Prepared by the Centre for Spatial Law and Policy**

## Introduction

This paper analyzes the impact of the Open Database License (ODbL) on the use of OpenStreetMap (OSM) data. It was prepared by the Centre for Spatial Law and Policy (the "Centre"). The study was conducted after the State of the Map (US) 2014 meeting in Washington DC. A number of formal and informal discussions around the ODbL took place at the meeting, with several members of the OSM community asking for use cases on how the ODbL impacted the use of OSM data. In conducting this study, the Centre analyzed the ODbL from a legal standpoint. It then conducted a series of interviews of users and potential users of OSM data. Those interviewed included representatives from government, the private sector, non-governmental organizations (NGOs) and the research community. A series of use cases were created based upon the results of these interviews and are included in this paper.

There are benefits and challenges associated with any license or data sharing agreement. This study is not intended to compare the ODbL with other potential licenses. Nor does it propose specific changes to the ODbL. Rather, it is intended to highlight the impact that the ODbL and the associated OSM governance structure are having on potential users of OSM data, so that an informed discussion can take place within the OSM community.

## Executive Summary

Any license can be a complex legal document. A data license is uniquely complex because of the differences in the way data is treated under various legal regimes around the world. In addition, the laws related to many important issues related to data, such as copyright, data scraping and privacy are in a state of flux. This results in uncertainty on the part of potential licensees as to how they can use the data under both the license and applicable law.

The use cases below gives examples as to why potential users were unable to use the OSM data. The primary reason that potential users provided was that they were unable to comply with the "share alike" provisions. "Share-alike" was made even more difficult because of a lack of clarity of important terms and provisions of the ODbL. This lack of clarity is further exacerbated by the broad scope of the ODbL in terms of jurisdiction and applicable law. Typically, a potential licensee will often seek to address such concerns with an authoritative representative of the licensor. However, given the

composition of OSM and its governance structure, it is often difficult or impossible for potential licensees of OSM data to receive an answer they (or their lawyers) can rely upon. As a result, potential users will turn to other sources of data. (Anecdotal evidence suggests that others are using OSM data without fully understanding the license terms.)

## Background of Adoption of ODbL

In 2012, the OpenStreetMap Foundation (the "Foundation") adopted the ODbL for the use in licensing of OSM data. The ODbL replaced the Creative Commons Attribution Share-Alike 2.0 license (CC-BY-SA) which was less suited for a work that is a database. The ODbL is one of three licenses created by the Open Knowledge Project for the licensing of "open data". The other two licenses are the Open Data Commons Attribution License and the Open Data Commons Public Domain Dedication and License.

## The ODbL

Almost all members of the OSM community interviewed agreed that the ODbL is better than CC-by-SA for the licensing of OSM data. However, there were a number of concerns expressed about several of its terms. As described below, the "share-alike" provisions of the ODbL were often cited as a concern. However, those interviewed cited several other concerns as well that in their experience have a significant impact on the use of OSM data. The following describes some of these concerns. For the convenience of the reader, they are set forth generally in the order they arise in the ODbL.

### 1. License Does Not Cover Contents.

The ODbL was drafted as a license for all types of databases, not solely for geospatial databases. Moreover, the Open Knowledge Foundation's intent was for the ODbL to be used universally: not tailored to any specific jurisdiction or legal framework. For example, the license is intended to apply both to jurisdictions that protect databases and those that do not have such legal protections. It is also intended to serve as both a contract and a license.

As a result, some important legal issues of concern to potential users of OSM data are not specifically addressed. Most prominently, the Preamble provides that the ODbL only licenses the database itself, and not the contents. It states in pertinent part that:

> "Databases can contain a wide variety of types of content . . . . and so the ODbL only governs the rights over the Database, and not the contents of the

> Database individually. Licensors should use the ODbL together with another license for the contents if the contents have single set of rights that uniformly covers all of the contents."

It further provides that "[s]ometimes the contents of a database, or the database itself can be covered by other rights not addressed here . . . . and so you are advised that you may have to consult other documents or clear other rights before doing activities not covered by this license." This point is referenced again in Section 2.4, which provides in pertinent part that:

> "[t]he individual items of the Contents contained in this Database may be covered by other rights, including copyright, patent, data protection, privacy, or personality rights and this License does not cover any right (other than Database Rights or in contract) in individual Contents contained in the Database."

This requirement to "consult other documents" creates a level of uncertainty for potential users as to what rights they are receiving in the data. This uncertainty increases with respect to OSM data because of the many different contributors of the data and the variety of potential legal jurisdictions that must be considered given the database's scope. Some users are unwilling or unable to work with such uncertainty.

2. Rights of Contributors in Data is Uncertain.

It is unclear to what extent contributors to OSM have the right to enforce the ODbL, exacerbating the uncertainty around content licensing. As described above, the Preamble states that the contents of the licensed database may be subject to other rights. The instrument by which contributors convey data to the OpenStreetMap database is one source of such rights. (Before contributing data to OSM, contributors must agree to the terms of a Contributor Agreement.) Section 2 of the Contributor Terms (English language version) provides that:

> "Subject to Section 3 and 4 below, You hereby grant to OSMF a worldwide, royalty-free, non-exclusive, perpetual, irrevocable licence to do any act that is restricted by copyright, database right or any related right over anything within the Contents, whether in the original medium or any other. These rights explicitly include commercial use, and do not exclude any field of endeavour. These rights include, without limitation, the right to sub-license the work through multiple tiers of sub-licensees and to sue for any copyright

> violation directly connected with OSMF's rights under these terms. To the extent allowable under applicable local laws and copyright conventions, You also waive and/or agree not to assert against OSMF or its licensees any moral rights that You may have in the Contents."

The Contributor retains all other rights, pursuant to Section 5 of the Contributor Terms.

This language does not state that a Contributor has specifically waived its rights to enforce the terms of the ODbL, or any other rights the Contributor might have in the data. In fact, the language of the Contributor Terms cited above suggests that each Contributor retains such rights. As a result, a potential user of OSM data must consider the likelihood that Contributors may bring a claim regarding how the licensee is using its data - even if it received assurance from the OSM Foundation that such use is permitted. The risks associated with such uncertainty becomes even greater with OSM data given the global nature of both the OSM community and the products and services that are created based upon OSM data.

3. Uncertain if and to what extent "share-alike" applies

Concerns over the share-alike provisions were cited in each of the use cases described below. Several organizations expressed concerns about being required to share data about individuals that would violate privacy/data protection laws. Others were concerned about releasing proprietary data or data that could provide business intelligence to competitors. In addition, several government agencies in the U.S. are unable to release data with "share-alike" provisions because they are required by law to publish data in the public domain (i.e. with no restrictions).

One of the challenges for potential users of OSM data is trying to determine when such provisions are applicable to the products and services that they wish to create. Unfortunately, the ODbL is often not clear on this issue, particularly with respect to functions and applications that are fundamental to the geospatial community.

In the ODbL, the "share-alike" provisions, apply to the licensed Database and a "Derivative Database". As a result, understanding what operations on OSM data result in a Derivative Database is key to determine whether the resulting product or service is to be "shared-alike" (i.e. licensed under the ODbL).

Section 4.4 of the ODbL provides that:

> "[a]ny Derivative Database that You Publicly Use must be only under the terms of (i) This License; (ii) A later version of this License similar in spirit

> to this License; or (iii) A compatible license. If You license the Derivative Database under one of the licenses mentioned in (iii), You must comply with the terms of that license."
>
> A Derivative Database is defined as:
>
> "a database based upon the Database, and includes any translation, adaption, arrangement, modification or any other alteration of the Database or a Substantial part of the Contents. This includes but is not limited to, Extraction or Re-utilizing the whole or a Substantial part of the Contents in a new Database."

The phrase "the Database, and includes any translation, adaption, arrangement, modification or any other alteration of the Database or a Substantial part of the Contents" in the ODbL is very general and provides a potential licensee little guidance. Substantial is simply defined in the ODbL as "substantial in terms of quantity or quality or a combination of both." Moreover, "[t]he repeated and systematic Extraction or Re-utilization of insubstantial parts of the Contents *may* . . . amount to the Extraction or Re-utilization of a Substantial part of the Contents, modification or any other alter." Therefore, what constitutes "Substantial" is subjective, particularly given the numerous ways in which geospatial data can be extracted, aggregated and visualized.

The OSM Community Guidelines (the "Community Guidelines") state that the definition of "Substantial" is taken directly from Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases (the "Database Directive"). Over time, there will be a body of case law and other interpretations under European law that can be used to clarify the term.

However, licenses outside of Europe will not be able to put much reliance upon such clarifications, as it will have little standing in other parts of the world. Moreover, the use of the term "may" rather than "will" in Section 6.2 of the ODbL with respect to "repeated and systematic [extractions]" of "insubstantial parts of the Contents" implies that the such systematic extractions *may not* be Substantial and therefore the resulting database may not be a Derivative Database subject to the share-alike provisions of the ODbL.

Moreover, efforts to define "Substantial" in the Community Guidelines may be at odds with emerging European case law. For example, the Guidelines define "Substantial" as 100 features. (see http://www.osmfoundation.org/wiki/License/Community_Guidelines/Substantial_-

_Guideline). This is an extremely low threshold considering OSM contains more than 2.5 billion records. (see e.g. https://lists.openstreetmap.org/pipermail/legal-talk/2014-April/007809.html

As noted below, this lack of clarity surrounding the "share-alike" provisions raises a number of questions. For example, does simply adding metadata to the OSM data create a Derivative Database? Alternatively, would extracting all of the restaurants identified in a small town be considered "substantial" while extracting the same number of restaurants from a large city is permitted? Moreover, who decides the answers to these questions?

In the ODbL, the concept of "Produced Work" provides the conceptual counterpart to "Derivative Database". Section 4.5(b) of the ODbL states in pertinent part that a work based on OSM data can be either a Produced Work or a Derivative Database:

> "4.5 (b). Using this Database, a Derivative Database, or this Database as part of a Collective Database to create a Produced Work does not create a Derivative Database for purposes of Section 4.4."

In the same vein, the Community Guidelines provide that "[t]he published result of your project is either a Produced Worked or a Derivative Database within the meaning of the ODbL". Both are works based upon OSM data, but a Derivative Database is to be licensed under the ODbL, pursuant to the "share-alike" principles, while a Produced Work can be licensed under any licensing regime.

A Produced Work is defined in the ODbL as "a work (such as an image, audiovisual material, text, or sounds) resulting from using the whole or a Substantial part of the Contents (via a search or other query) from this Database, a Derivative Database, or this Database as part of a Collective Database." According to the Community Guidelines, a Produced Work can be published "under any license that you like". Similarly, Section 4.3 of the ODbL provides that:

> "Creating and Using a Produced Work does not require the notice in Section 4.2 [referencing the "share-alike" provisions of Section 4.4]. However, if you Publicly Use a Produced Work, You must include a notice associated with the Produced Work reasonably calculated to make any Person that uses, views, accesses, interacts with, or is otherwise exposed to the Produced Work aware that Content was obtained from the Database, Derivative Database, or the Database as part of a Collective Database, and that it is available under this License."

Unfortunately, it can be difficult for a potential licensee to determine under the ODbL whether an action results in a Derived Database or a Produced Work. The challenge is particularly complicated given the nature of geospatial data and the associated products and applications. For example, geocoding and reverse geocoding results are obtained from a "query" of a database. Does aggregating those results with other data create a Produced Work?

The OSM community has tried to clarify the distinction. It recently added a clarification of "Produced Work" in the Community Guidelines, which provides in pertinent part that it is:

> "a term used by ODbL to broadly separate something created from a database but not a database itself. For OpenStreetMap, this often means a map, but could be something else (a mug, a data visualization . . .)"

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This clarification states that a Produced Work cannot be a database. However this assertion seems to conflict with the definition of Produced Work in the ODbL, which simply defines a Produced Work as any:

> "work (such as an image, audiovisual material, text, or sounds) resulting from using the whole or a Substantial part of the Contents (via a search or other query) from this Database, a Derivative Database, or this Database as part of a Collective Database".

Moreover, a database can be considered a work. (See e.g. http://www.out-law.com/page-5698, "*Databases are treated as a class of literary works . . . under the terms of the [UK]Copyright, Designs and Patents Act 1988*.") In addition, a series of works can be organized into a database. (Id. "*A database is defined in the legislation as a collection of independent works, data or other materials which are arranged in a systematic or methodical way and are individually accessible by electronic or other means*.')

4. Uncertainty as to Which Jurisdiction's Law Applies

Section 10.4 of the ODbL provides that:

> "[t]his License takes effect in and *will be governed by the laws of the relevant jurisdiction in which the License terms are sought to be enforced.* If the standard suite of rights granted under applicable copyright law and Database Rights in the relevant jurisdiction includes additional rights not

granted under this License, these additional rights are granted in this License in order to meet the terms of this License." [emphasis added]

As stated above, given the global nature of both OSM data and many geospatial data products and services, determining potential "relevant" jurisdictions can be difficult. As a result, a potential user of OSM data must consider (i) that an action to enforce the terms of the ODbL could be brought under the laws of any jurisdiction where a potential plaintiff has standing and (ii) that all "additional rights" granted in that jurisdiction may apply. Given the disparity of legal protections for data around the globe, this raises a great deal of uncertainty for potential licensees.

5. Lack of a "cure" period for a breach.

Section 9.1 of the ODbL provides that "any breach by You of the terms and conditions of this License *automatically* terminates this License with immediate effect and without notice to you." [emphasis added] There is no materiality threshold with respect to any such breach, nor is there any cure period. As a result, even a minor breach of the ODbL can result in automatic termination.

6. Governance Issues

It is not unusual for potential licensees to have questions as to how to interpret a particular provision of a license or as to whether a certain use is permitted. In such instances, the potential licensee (or its lawyer) will frequently direct a question to his/her counterpart. A number of those interviewed stated that the lack of such an individual with respect to the ODbL and OSM data hindered its use. Some stated that they did not receive a response to a question that they had asked of the OSM community. Others did not feel that the response was sufficient for them or their organization to rely upon. As a result, they chose not to use OSM data.

## Use Cases

In order to determine the extent that these and other issues have on the ability of third parties to use OSM data, the Centre for Spatial Law and Policy conducted a series of interviews of representatives from industry, government, academia, and the research and NGO communities. A list of those interviewed can be found on Exhibit A. Many of those interviewed are very supportive of OSM and its mission. However, most explained that they were unable to use the OSM database in ways they wished due to concerns over

certain provisions of the ODbL. Based upon these conversations, the Centre developed a series of use cases that highlight the challenges they faced with the ODbL.

**Research/NGO Use Cases**

1. Yale University Mr. Stacey Maples, M.Sc, B.Sc, Yale University

Mr. Maples has been using the OSM database in his research for several years. He also refers researchers to OSM, particularly if they are doing research regarding remote areas of the world. However, he feels he needs to warn them about the "share-alike" provisions of the ODbL, because many scientific journals impose a data embargo prior to publication on researchers. Some publisher may find the "share-alike" provisions to be in conflict with such an embargo.

Mr. Maples cited several examples in which a researcher wanted to use OSM data but did not because of concerns over creating a Derivative Database subject to the "share-alike" provisions. One such use case was a researcher who was tracking communication disruptions in portions of Syria. He was hoping to use the OSM database to perform network analysis on communication disruptions and government sweeps. However, he decided against using OSM data, primarily because it was not clear whether he would have to share the non-OSM data he used to complete segments of networks that were incomplete or missing. The researcher was using confidential informants for this additional information and although he did not intermingle his informant data with OSM data, he didn't want there to be any "cloud" over his research.

Another use case Mr. Maples cited was that he had wanted to use the OSM database to create a virtual machine with a capability to do geocoding on medical data. His plan was to isolate the geocoder on local machines, away from the university's network, to run his analysis while keeping the data anonymous and then wipe the machines of all sensitive data. However, the project is on hold because of concerns that even this approach would create a Derivative Database, subject to the "share-alike" provisions of the ODBL. The medical data to be used is subject to the privacy protections of the Health Insurance Portability and Accountability Act (HIPPA). HIPPA requires strict control over sharing of medical data. Mr. Maples did not approach the university's internal review board about the project because he knew they would not give approval since the "share-alike" requirements could conflict with the requirements of HIPPA. Mr. Maples said that even if the Community Guidelines were to grant permission for such a project, the university's internal review board would not give approval to the project. In Mr. Maples' experience, the nature of the research community is to avoid any potential risk of conflict with HIPPA.

2. Wikimedia Foundation

Wikimedia is an organization that publishes user-generated content with a bottoms-up approach. It "strives to bring a world in which every single human being can freely share in the sum of all knowledge". Its platforms include Wikipedia, Wiktionary, Wikidata and Wikispecies.

Wikimedia is looking for ways to integrate maps into its existing content. They would like to use OSM data in order to makes their maps more dynamic and interactive, but have several concerns with the ODbL. For example, all content on the Wikimedia sites is licensed by the individual authors, under Creative Commons licenses with fixed, non-negotiable terms. As a result, should there be any conflicts between the obligations of the Creative Commons licenses and the "share-alike" provisions of the ODBL, the Wikimedia Foundation would be in a difficult situation, having to satisfy terms of two different non-negotiable licenses from two different sets of authors. Wikimedia would also like to incorporate references to OSM data, such as coordinates of popular tourist sites (i.e. the Eiffel Tower) into their encyclopedia or database. However, they might prefer to use a stable identifier and OSM currently considers it best practice to use dynamic identifiers. It is unclear under the ODbL whether adding a stable identifier would create a Derivative Database subject to the "share-alike" provisions. Similarly, where Wikipedia has differences from OSM - such as with different variations of names of points of interests - it is unclear what materials would have to be shared under the ODBL. For example, would all of the variations have to be shared?

Also, Wikimedia believes that factual data should be in the public domain. As a result, it licenses its data under CC0.

3. Humanitarian OpenStreetMap Team (Mikel Maron, President).

The Humanitarian OpenStreetMap Team (HOT) acts as a bridge between traditional humanitarian responders and the OpenStreetMap community. HOT works both remotely and physically around the world to assist the collection and use of geographic data and training in OpenStreetMap. As an active member in the OSM community, Mr. Maron's main concern is community cohesion.

HOT works directly with community and governments agencies around the world involved in disaster response. He said that the ODbL has not been an issue for HOT, perhaps because during an emergency licensing issues are not of primary concern. The rescue and recovery communities lack the resources to do the massive data creation,

conflation and curation possible by the OSM community. As a result, they are willing to engage OSM, and agree to share back, mostly for cartographic products such as pdf maps.

HOT is also receiving positive responses for its efforts to assist communities in disaster preparedness. HOT is working on training and mapping projects in countries such as Indonesia, Nepal and Bangladesh, where they are directly engaged with the government agencies. Concerns over the ODbL have not come up in this scenario as well, possibly because these government agencies do not yet have the internal legal capacity to fully understand the requirements of ODbL.

However, Mr. Maron did describe a use case in which concerns over the ODbL have had an impact on the use of OSM data. The Global Boundary Dataset is an effort among a number of organizations to manage and share data on global boundaries. The participating organizations want to use OSM data. However some of the boundary data sets are in the public domain and therefore cannot be used to create a Derivative Database that would trigger the "share-like" provisions. Other data sets are limited to non-commercial use, and therefore cannot be distributed under the ODbL. The organizations were considering creating a parallel technology infrastructure in order to avoid these licensing issues.

**Private Industry Use Cases**

1. Foursquare (David Blackman is Head of Geo, Foursquare)

Foursquare is a location-based social networking company with web and mobile applications for consumers and businesses. Mr. Blackman is active in the OSM community. Foursquare and Mr. Blackman actively contribute to OpenStreetMap and public domain open data projects like quattroshapes or zetashapes. He is very concerned about "poking a hole" in the ODbL in way that would be bad for the OSM community and open up the OSM database to misuse by major companies.

Mr. Blackman said that Foursquare is not currently using data from OSM, but it does use maps from Mapbox that are based on OSM. He believes that it would use OSM database for reverse geocoding, but the company has concerns about creating a Derivative Database that would subject Foursquare's data to the "share-alike" provisions of the ODBL.

Mr. Blackman explained that when a person signs up a venue to Foursquare, he or she does not always input all the information required. For example, a person may add a

venue in Boston, but not include the address. Mr. Blackman has heard two different legal interpretations of what would happen if Foursquare were to use the OSM database in a geocoder to find the missing address. One interpretation is that a Derivative Database would be created and all of Foursquare's database would be subject to the ODbL's "share-alike" provisions. Since Foursquare's database includes venues licensed from third parties they need to protect these as business assets and therefore cannot share.

A second interpretation is that the entire database is not subject to the share-alike provisions, but that the column of lat/longs used in the query would be considered part of a Derivate Database. Theoretically Foursquare might be willing to share lat/longs, but there are other business and legal obstacles that must be considered. For example, this information might give competitors valuable insight on Foursquare's business model and also potentially its areas of growth. In addition, given current levels of concerns over location privacy around the world, Foursquare is always sensitive about transferring lat/longs of individuals (or places) to third parties.

Mr. Blackman discussed a second use case in which a business wanted to use OSM database but did not because of the ODbL. This use case involves a company that is creating a database of individuals' photographs. The company would like to reverse geocode these images so as to improve the user experience. However, the company is concerned about using OSM data because of the risk of creating a Derivative Database under the ODbL. From a business standpoint, the company does not want to share all of the images in its database. From a privacy standpoint, the company is concerned about sharing lat/longs because in some jurisdictions this information might be considered personally identifiable information that is protected by privacy laws. For example, if a user regularly adds photos, someone could determine where the user lives or is likely to be.

Mr. Blackman stated that Foursquare's primary lawyer on this matter does not have a deep background in geospatial technology and is skeptical about the ODbL. Mr. Blackman believes that the ODbL may make sense for information products such as books, but that it is not written for the way geospatial data is currently being used. He added that things might be clearer if OSM had a lawyer that could speak on its behalf and work through the issues with the other party's lawyer.

2. CartoDB (Javier de la Torre, Founder and CEO)

CartoDB is based in New York and Madrid and uses open source software to visualize geospatial information for its clients. It works with a number of non-profit organizations and businesses around the world. Mr. de la Torre is active in the OSM

community. He wants to use OSM data in a geocoder for his clients. However he is worried that his clients will might become liable if they don't share their data under the ODbL  As a result, CartoDB is looking at other geocoders.

Mr. de la Torre did not think he needed to talk to a lawyer about the license, because he always assumed it was an issue. He did not want to be the first to use OSM data with a geocoder, so he sent an email to the OSM list-serv asking whether geocoding created a Derivative Database. However, he did not receive any responses to his questions. He believes that one of the problems with the ODbL is that there is no one with authority who can speak on behalf of OSM on licensing matters.

Mr. de la Torre was also worried about who could sue for breach of the terms of the ODbL. He said it was not clear whether any contributor could sue. It also was not clear what laws would apply in the event there was a legal action. .

**Government Use Cases**

As expected, it was difficult to obtain use cases directly from government agencies. However, a number of those interviewed provided examples of government agencies that were unable to use OSM data due to concerns over the ODbL.

National Park Service (Jim McAndrew, Contractor, National Park Service)

Mr. McAndrew is project leader for an initiative to develop a uniform, crowdsourced map of all of the U.S. National Parks. Mr. McAndrew would like to partner with OSM so that the National Park Service (NPS) can manage its data in OSM. However, Mr. McAndrew is concerned that any improvements made to the NPS database with OSM data would create a Derivative Database that would subject the NPS to the "share-alike" provisions of the ODbL. NPS is unable to do this because it is required by law to release its data in the public domain. Mr. McAndrew is still trying to update OSM's database with edits from the U.S. National Parks database. However, he is required to do this through manual conflation.

Other governmental use cases.

A number of others interviewed provided anecdotal evidence of how the ODbL was having an impact on the use of OSM data by government agencies.  The biggest issue is that a number of government agencies are required by law to release its data with no restrictions.  For example, one explained how a representative from one large US federal agency said the agency could never utilize OSM because of the legal

requirements that government data be in the public domain. Another former government employee said the "share alike" provisions would be an issue if, for example, a U.S. state wished to enhance its own transportation data with OSM's road network data. Some states require their data to be released with no restrictions. Similarly, another former state employee confirmed that the "share-alike" provisions precluded using OSM data in a state-wide initiative when the data was licensed under the CC-BY-SA. He said the same concerns would have applied under the ODbL. Another interviewee was aware of several Canadian municipalities that did not use OSM data because of similar concerns.

## Conclusion

The interviews indicate that a variety of organizations, including large and small corporations, government agencies, research organizations and non-governmental organizations (NGOs) that wish to utilize OSM data struggle with the ODbL. Many struggle with understanding when and to what extent the "share-alike" provisions of the license apply. These organizations have a number of reasons for being unable or unwilling to share certain data. The reasons given vary from complying with third party license agreements or applicable law, to protecting data for privacy and proprietary reasons.

These concerns are exacerbated because organizations are creating increasingly complex products and services that use data from third parties from around the globe. This increases the uncertainty as to who might bring a legal action, which law applies and in which jurisdictions such an action could be brought. Since there is not a person (or persons) within the OSM community who can provide a sufficiently authoritative answer in a timely fashion to a third party's question or proposed use case, organizations choose not to use OSM data.

EXHIBIT A

David Blackmon, Foursquare
Joshua Campbell, Boundless
Ed Freyfoggle, Lokku
Learon Dalby, Sanborn
Stephen Johnson, Deloitte
Jim McAndrew, Contractor, National Park Service
Stacey Maples, Yale University
Mikel Maron, Humanitarian OpenStreetMap Team
Chris Nicholas, Apple
Colin Reilly, City of New York
Dr. Teresa Scassa, University of Ottawa
Javier de la Torre, CartoDB
Valerie Yakich, Apple