



Overture Maps Linux Foundation Project: The Potential for Revolution in Navigation Technology



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Summary

The Linux Foundation, a global nonprofit organization [announced the formation of the Overture Maps Foundation](#) in mid-December 2022. Supported by Microsoft, Amazon Web Services (AWS), Meta, and TomTom, the Project aims to bring together various organizations, governments, individuals, and businesses to create a global map solution that would be available to developers via open-source code. With the founding members' creation of the [Overture Maps Foundation](#), the initiative will collectively gather resources to build map data that is complete, accurate, and updated, and will reportedly be available to all developers under an open data license.



OVERTURE MAPS
FOUNDATION

What Is the Overture Maps Foundation Project

In mid-December 2022, the Linux Foundation announced a new collaborative effort to develop interoperable open map data as a shared asset that can strengthen mapping services worldwide. [The Overture Maps Foundation](#) was created to address the need for

not only better mapping data, but to share open-source code with developers, globally. Citing that "sourcing and curating high-quality, current, and comprehensive data from disparate sources are difficult and expensive," along with the fact that current map data is vulnerable to errors and inconsistencies, the Foundation's goal is to deliver quality geospatial data with open-source code for developers.

The Founding members of the Overture Maps Foundation include tech giants Microsoft, AWS, Meta, and TomTom. Many have speculated that the formation of the group is an effort to weaken the clear dominance that Google holds with Google Maps. From a competitive standpoint, there are very few alternatives to Google Maps. While Apple maps has made significant strides since their disastrous debut in 2012, Google Maps remains firmly in place as the number one source of map data.

Founding Members



Just a few weeks ago on February 6, 2023, [Esri](#), a global market leader in GIS, also [joined the Overture Maps Foundation](#). "Ready access to geospatial information has fueled the innovation of many technologies and products, benefitting organizations and communities around the world," said Deane Kensok, Esri ArcGIS Content CTO. "Esri is committed to expanding access to ready-to-use map data and helping the global geospatial community who are building the next generation of location-based apps and solutions for tomorrow's challenges."

Google has also been notoriously reluctant to share information with others, given the amount of revenue generated by the sale of ads in conjunction with Google maps. Because Google (Alphabet) lumps their revenues from Google Maps into its "Google

Services" category, it impossible to determine the exact amount of revenue generated or the types of data collected, but the estimates have been eye opening. Many in the industry want to level the playing field.

The chink in the armor of Google Maps, however, has been greatly enlarged by last week's decision by the [U.S. Department of Justice to sue Google for Monopolizing Digital Advertising Technologies](#) in a civil antitrust suit. The complaint alleges that Google "monopolizes key digital advertising technologies," collectively referred to as the "ad tech stack," that website publishers depend on to sell ads and that advertisers rely on to buy ads and reach potential customers. Website publishers use ad tech tools to generate advertising revenue that supports the creation and maintenance of a vibrant open web, providing the public with unprecedented access to ideas, artistic expression, information, goods, and services. Through this monopolization lawsuit, the Justice Department and state Attorneys General seek to restore competition in these important markets and obtain equitable and monetary relief on behalf of the American public." Google's domination in mapping could play a key part in the DOJ's suit.



The screenshot shows the official website of the U.S. Department of Justice, specifically the Office of Public Affairs news section. The header features the Department of Justice seal and name. A navigation bar includes links for ABOUT, OUR AGENCY, OUR WORK, NEWS, RESOURCES, and CAREERS. The breadcrumb trail reads: Home » Office of Public Affairs » News. A black banner with white text reads "JUSTICE NEWS". Below this, the text "Department of Justice" and "Office of Public Affairs" is displayed. The main content area begins with "FOR IMMEDIATE RELEASE" on the left and "Tuesday, January 24, 2023" on the right. The headline is "Justice Department Sues Google for Monopolizing Digital Advertising Technologies". The sub-headline is "Through Serial Acquisitions and Anticompetitive Auction Manipulation, Google Subverted Competition in Internet Advertising Technologies". The body text states: "Today, the Justice Department, along with the Attorneys General of California, Colorado, Connecticut, New Jersey, New York, Rhode Island, Tennessee, and Virginia, filed a civil antitrust suit against Google for monopolizing multiple digital advertising technology products in violation of Sections 1 and 2 of the Sherman Act."

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JUSTICE NEWS

Department of Justice
Office of Public Affairs

FOR IMMEDIATE RELEASE Tuesday, January 24, 2023

Justice Department Sues Google for Monopolizing Digital Advertising Technologies

Through Serial Acquisitions and Anticompetitive Auction Manipulation, Google Subverted Competition in Internet Advertising Technologies

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Google Maps has also had its struggles in Europe. German data protection and privacy rules have forbidden the use of Google Street Maps in Germany, as well as several other countries.

As almost anyone can see, the clear motivation for the Overture Maps Foundation Project is to equalize the disparity of power in GIS (Geographic Information System) mapping data, but also to create open-source data for the benefit of developers worldwide. The availability of open map data empowers developers and map creators to build new compelling applications. The project will seek to integrate with existing open map data from projects such as OpenStreetMap and city planning departments, along with new map data contributed by members and built using computer vision and AI/ML techniques to create a living digital record of the physical world.

One question that may be on your mind is, "what about [Open Street Maps \(OSM\)](#)? Wasn't OSM designed to do the same thing?" Overture Maps is a data-centric map project, not a community of individual map editors. Therefore, Overture is intended to be complementary to OSM. OSM will combine with other sources to produce new open map data sets. Overture data will be available for use by the OpenStreetMap community under compatible open data licenses.

The press release suggests that the code will be open-source and available on Git. The [Frequently Asked Questions \(FAQ\) section of the Overture Maps Foundation website](#) states that "Overture's open source code will be subject to the MIT license." Dataset input, according to the FAQ, "will be contributed under both the ODbL and CDLA permissive v2. Contributions to CDLA permissive v2 datasets will be contributed under the CDLA permissive v2."

The stated goals of the Overture Maps Project are:

- [Collaborative Map Building](#) - To incorporate map data from multiple sources, including Overture Members, civic organizations, and open data sources.
- [Global Entity Reference System](#) - To simplify interoperability, providing a system that links entities from different datasets to the same real-world entities.
- [Quality Assurance Processes](#) - To validate maps to check for errors, breakage, and vandalism to help ensure that map data can be used in production systems.
- [Structured Data Schema](#) - To define and drive adoption of a common, well-structured, and documented data schema to create an easy-to-use ecosystem of




map data.

Membership

The Overture Maps Foundation offers tiered levels of membership. Membership benefits are listed as, "accelerating progress and influence prioritization and decision-making around data investments, technical innovation, and timing."

	Steering	General	Contributor	Qualified Nonprofits/ Government
Annual Membership Fee	\$3,000,000	\$300,000	\$3,000	\$0
Engineering Headcount Contribution	20 FTE			
Data or Technology Contribution	✓	✓	✓	✓
Seat on Steering Committee	✓			
Determine Technical Priorities for Overture Maps	✓			
Chair Working Groups and Projects	✓	✓		
Voting rights on Working Groups and Projects	✓	✓		
Membership on Working Groups and Projects	✓	✓	✓	✓
Use Overture Maps Trademark	✓	✓	✓	✓
Listed on Overture Maps Website	✓	✓	✓	✓

Entities joining the consortium will have the benefit of being able to influence "prioritization and decisions around investments, technical innovation and timing." Overture expects to release its first datasets in the first half of 2023, including basic layers such as buildings, road and administrative information. Those datasets will then be steadily improved over time to enhance coverage, resolution and accuracy, as well as introduce new layers such as places, routing and 3D building data.

	<p>According to the Linux Foundation Press release, AWS has a vested interest in the Overture Maps Project. According to Michael Kopenec, General Manager for AWS Geospatial, <i>"Map data plays an increasingly important role both internally and for our customers across AWS. However, maintaining accurate and comprehensive map data is cost prohibitive and complex, which can put it out of reach for many customers and stifle innovation. Through Overture, we are facilitating greater cooperation across the industry to make comprehensive, high-quality map data available to more end users. This will allow everyone to take advantage of the same underlying data to power a wide range of established and emerging mapping use cases across industries."</i></p>
	<p>Microsoft also has an interest in the Overture Maps Project. <i>"Microsoft is committed to closing the data divide and helping organizations of all sizes to realize the benefits of data as well as the new technologies it powers, including geospatial data,"</i> said Russell Dicker, Corporate VP of Product, Maps and Local at Microsoft in statement. <i>"Current and next-generation map products require open map data, built using AI, that's reliable, easy-to-use, and interoperable."</i></p>
	<p>With Meta's new foray into the world of virtual reality, the Overture Maps Project would greatly benefit new AI initiatives. According to Jan Erik Solem, Engineering Director, Maps at Meta, <i>"Immersive experiences, which understand and blend into your physical environment, are critical to the embodied internet of the future. By delivering interoperable open map data, Overture provides the foundation for an open metaverse built by creators, developers, and businesses alike."</i></p>



Aside from the initial press release on December 15, 2022, there has been no further communication from the Overture Maps Foundation.




Potential Impact

Map and location data play an important part in multiple business sectors all over the world, particularly Vertex, Inc.

- Tax GIS – This map could end Vertex’s reliance on zip+4 for jurisdiction boundaries by possibly providing latitude/longitude information. There is currently no information on how the Overture Maps Foundation would handle addresses, or if they plan to use longitude/latitude for address purposes.
- Address cleansing –Vertex, Inc. would greatly benefit from an alternative to our current SAP tool for address cleansing. The tool is old, not a container, and it is not a SaaS solution. Our costs could potentially be lowered by address cleansing being maintained elsewhere with containerization, better options for scaling, and better integration options. If Overture Maps offers such capabilities, Vertex, Inc. could potentially benefit from lower cost and better performance. There is currently no information regarding whether the Overture Maps would provide address cleansing, however there are Quality Assurance (QA) processes in place, according to the Press Release. The release does not say, however, which QA practices are in place.

Google Maps competitors

	<p>Despite its admitted flop in 2012, Apple Maps data has vastly improved, particularly with the latest iOS 16. Unfortunately, it still lags behind Google Maps. Because Apple maps are offered with a focus on user privacy, Apple cannot access its own user data to make improvements.</p>
	<p>Azure Maps is a GIS API service platform that allows enterprises, organizations, and developers to incorporate and enable advanced geospatial and mapping functionalities in the applications and solutions they are creating, deploying, and managing using Microsoft Azure cloud services. Azure maps (Microsoft) is said to be lower in cost, but most developers do not feel it meets the muster when compared to Google Maps.</p>
	<p>Bing Maps is a web mapping service provided as a part of Microsoft's Bing suite of search engines and powered by the</p>

	<p>Bing Maps Platform framework. Since 2020, the map data is provided by TomTom. Overall, developers feel that Google Maps has better quality satellite and aerial images that incorporate more locations because of its use of satellites. Google also has more features such as traffic information, more detailed location information, maps of indoor locations, and embedded maps.</p>
	<p>Mapbox is an American provider of custom online maps for websites and applications such as Foursquare, the Financial Times, The Weather Channel, Instacart Inc. and Snapchat. Snapchat is attempting a foray into the mapping services arena with its new Snap Map product. The Snap Map is based on both Bing Maps and Open Street Maps. Developers feel that this product is a decent alternative, however, data cannot be added directly to Mapbox, so data must be added to Open Street Maps to be added. It's like a patchwork quilt that still doesn't come near the quality of Google Maps.</p>
	<p>ArcGIS is a family of client, server and online geographic information system software development services. Most developers found that Google Maps was easier to use, set up, and administer, as well as more accurate.</p>

Conclusion

Although this could be a game-changer for Vertex, Inc., there is no additional information available on this Project other than the initial press release, which does not include specifics on how the map functions, or any of the geospatial mapping technology involved. While, in theory, this could be groundbreaking, we should take a "wait and see" approach. This topic should be tracked on a regular basis. Once more information becomes available on the specific details of the Project, we should revisit this topic.

Sources

- [Original Linux Foundation press release](#)
- [Overture Maps Foundation website](#)
- [Google \(Alphabet\) Metrics and Infographics](#)
- [U.S. Dept. of Justice press release](#)
- [Open Street Maps](#)
- <https://www.apple.com/maps/>
- <https://map.snapchat.com/>
- <https://www.arcgis.com/index.html>
- [Esri press release](#)

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