

Case Study

Learning from Multisource Telecom Data to Enrich the Customer Experience

The Challenge

Telecommunications data includes millions of data points pulled from mobile devices' GPS – including data ID, timestamps, exact location, and more. This data can help provide organizations with important insights into people flow at specific locations or events. This information helps them predict people's trajectories, time spent in a certain location, usage peak times, and much more. The ability to access and learn from this data would enable telecommunications service providers to provide optimized and improved services.

For businesses, insights derived from geolocation data is valuable to:

- Perform location-based marketing campaigns
- Optimize public transportation schedules and routes
- Improve control and response processes
- Personalize services

Unfortunately, analyzing GPS data comes with several challenges:

- GPS data contains personally identifiable information (PII) and hence is protected by privacy regulations in many jurisdictions.
- When combining geolocation data from multiple data owners, ensuring privacy compliance is even more challenging.

The Solution

Duality empowers organizations to analyze and derive insights from data while it remains encrypted, protecting its privacy and security, along every step of the analytics lifecycle. Using the platform's AI and analytics application, NTT DATA securely performed a union and examined how they can analyze GPS data pulled from multiple different mobile operators to gain insights in near real-time while remaining privacy compliant.

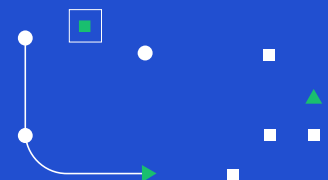
Sample Application: Optimizing Bus Routes

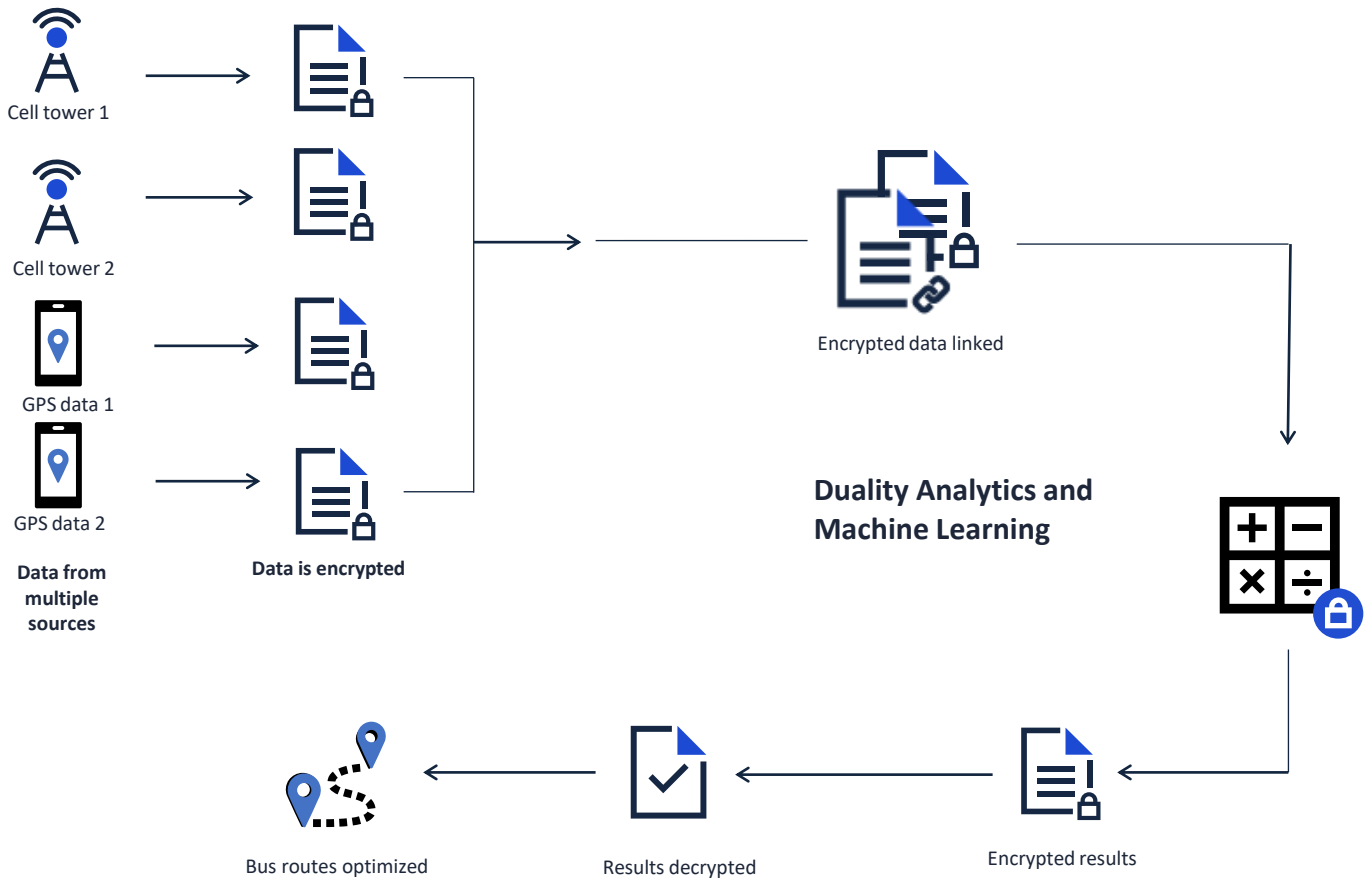
The multi source analysis of GPS data performed by NTT DATA allows, for example, public transport operators to determine how many people passed through the target area, bus arrival times, and the flow of people on and off public transportation within a set time frame. These insights allow operators to optimize the bus schedules to match the frequency of travelers in specific neighborhoods and at specific stops – increasing transportation efficiency and improving service, thus reducing cost.

Testimonial

“Duality has enabled us to fully leverage the data in our extended client and partner networks. We are now able to open new lines of business in a variety of industries - all for the greater good of our customers, and all without infringing on their privacy or their rights.”

Hiroyuki Yamanaka, Manager of the Data Secure Team, NTT DATA





Data Protection & Privacy Compliance

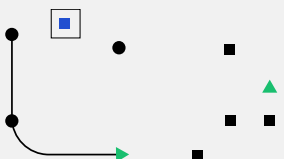
While the analysis is based on sensitive personal data (individuals' whereabouts), all data remains encrypted during analysis and NTT DATA is never exposed to the raw data points, ensuring individual privacy is fully protected.

Partners & Recognition



About Duality

Duality is the leader in secure data collaboration, empowering organizations worldwide to maximize the value of their data without compromising on privacy or regulatory compliance. Founded and led by world-renowned cryptographers and data scientists, Duality operationalizes privacy enhancing technologies (PETs) to accelerate data insights by enabling analysis and AI on encrypted data, while preserving data privacy, compliance and protecting valuable IP. A Gartner Cool Vendor, Duality was recently named a Tech Pioneer 2021 by the World Economic Forum (WEF) and listed on Fast Company's 2020 Most Innovative Companies.



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