Orbital Insight uses geolocation to understand trends in both public and private sectors. With international geolocation data, open source articles, and known locations of interest, we can begin to better understand the relationships between countries.

After several articles were released citing connections between North Korean "exports" to certain African countries, we decided to take a closer look at geolocation data. The "exports" are North Korean commandos, and they allegedly train Uganda's elite troops in various skills including martial arts and helicopter gunnery. They are paid as contractors in cash from a classified Ugandan military budget. The North Korean contractors are uniquely also among a declining group of people that can service Cold War era weaponry. This weaponry has found itself in many country's arsenals, and therefore the North Korean contractors are poised to do the work. This revenue is one way the DPRK uses an alternative revenue system to fund other projects. The money may never officially enter North Korea, making it harder to track or to enforce sanctions on it.

THE WALL STREET JOURNAL.

WORLD

North Korea Built an Alternative Financial System Using a Shadowy Network of Traders

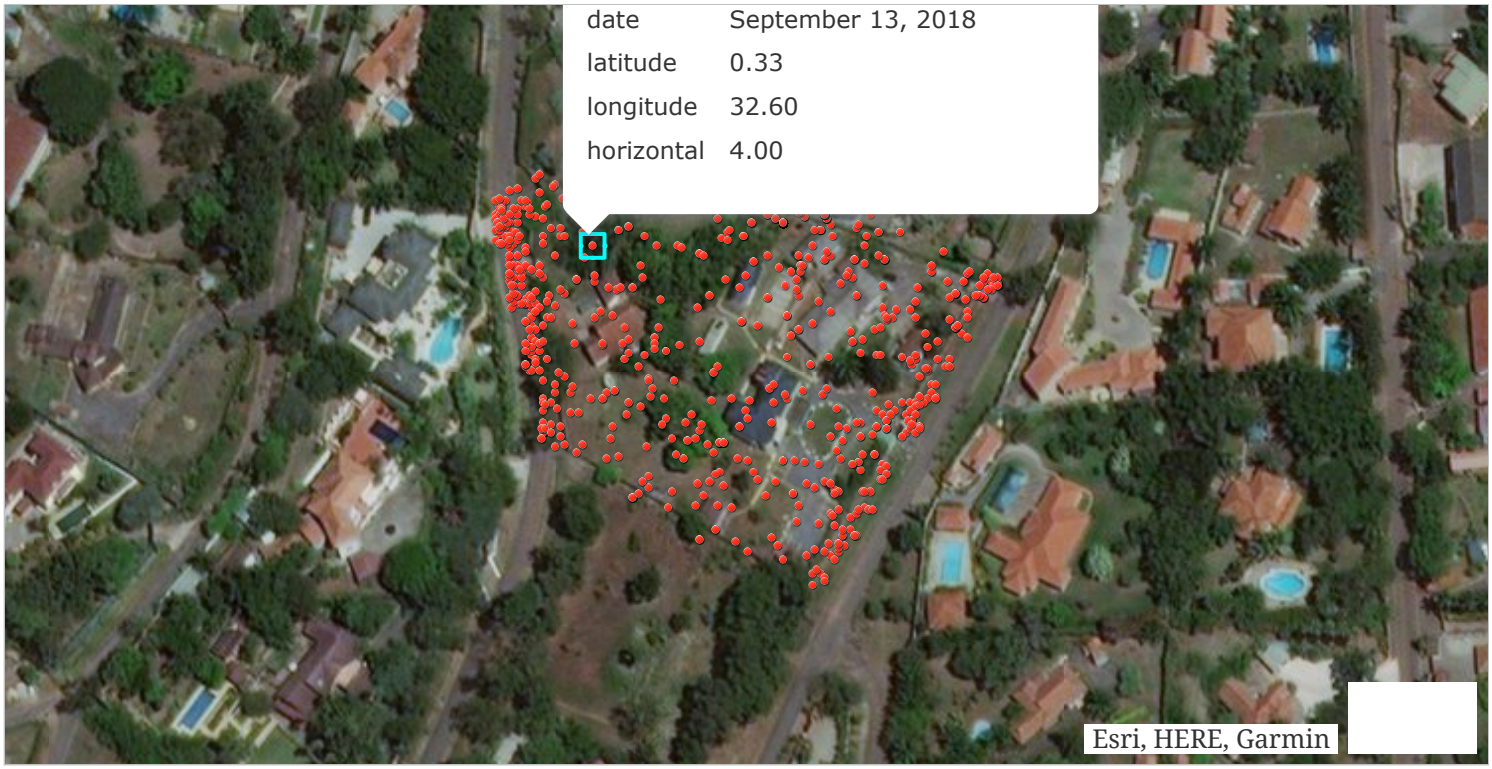
The Kim Jong Un regime moves millions of dollars around the world despite sanctions and pressure on international banks to curtail its activities. The hidden system is central to the country's effort to keep its economy afloat.

By Niharika Mandhana and Aruna Viswanatha

This example is just one type of export that North Korea uses. By offering cut-price military training, weapons, and workers, North Korea can generate money for Pyongyang. By doing so, they are violating United Nations sanctions put in place in 2016. Anonymous Ugandan military personnel stated, ***"We never ended our ties…they just moved underground."***

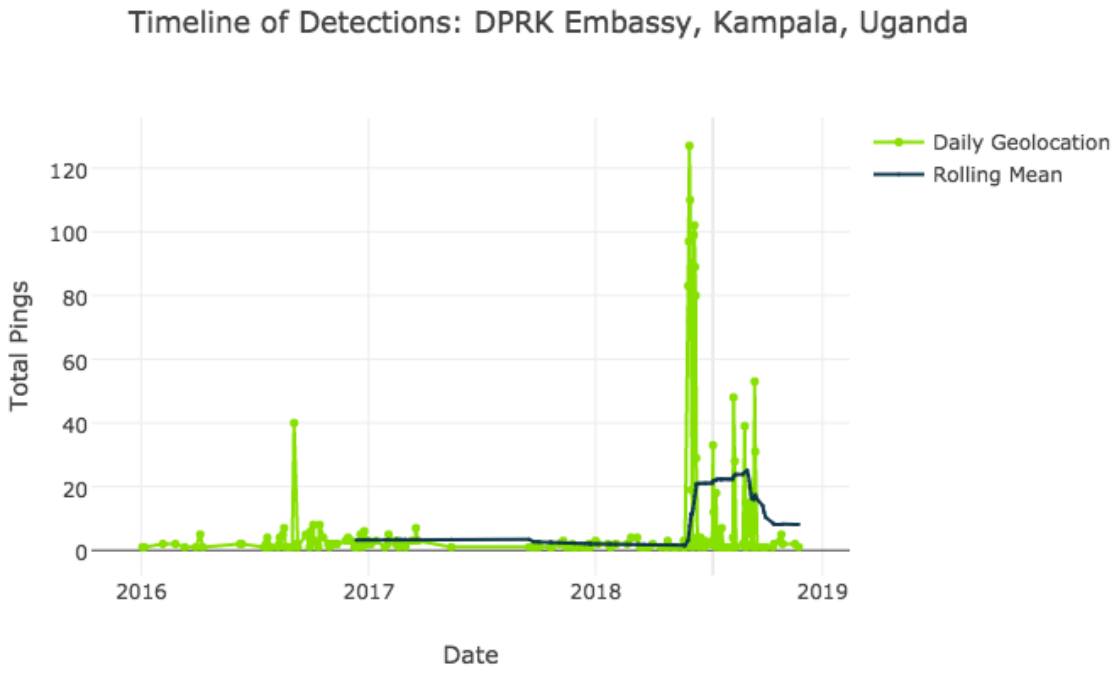
DPRK Embassy, Uganda

By querying our geolocation database on the DPRK embassy in Uganda, we can begin to first understand raw ping count as well as daily unique device counts.

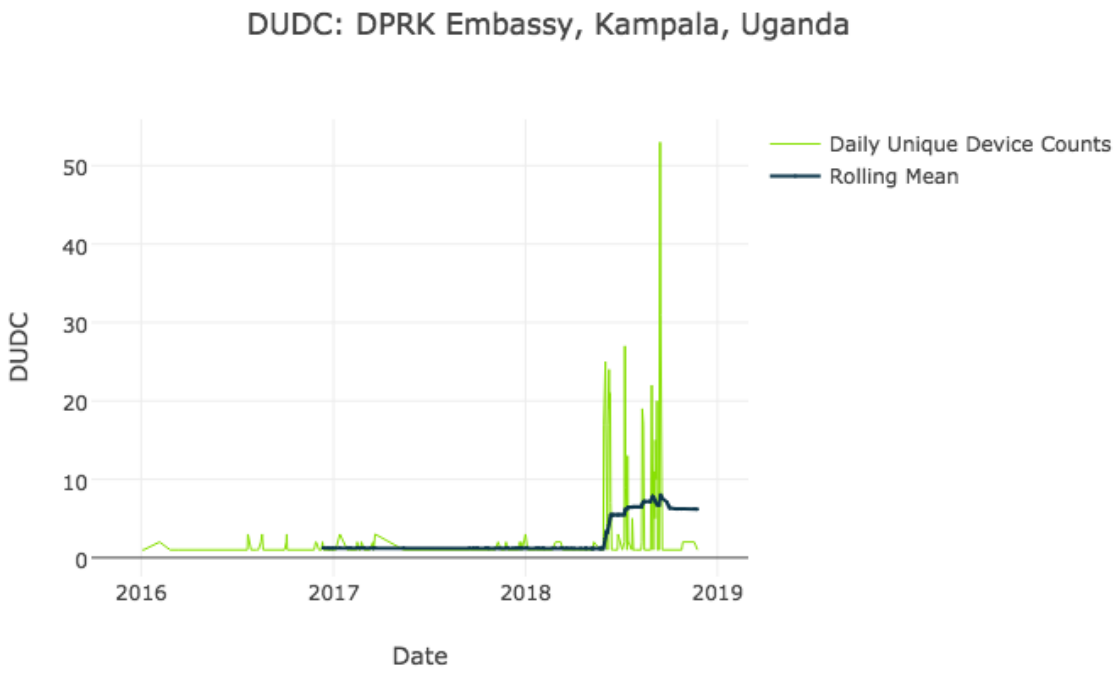


Here we see raw geolocation pings in and around the perimeter of the North Korean embassy in Kampala, Uganda.

Geolocation Data

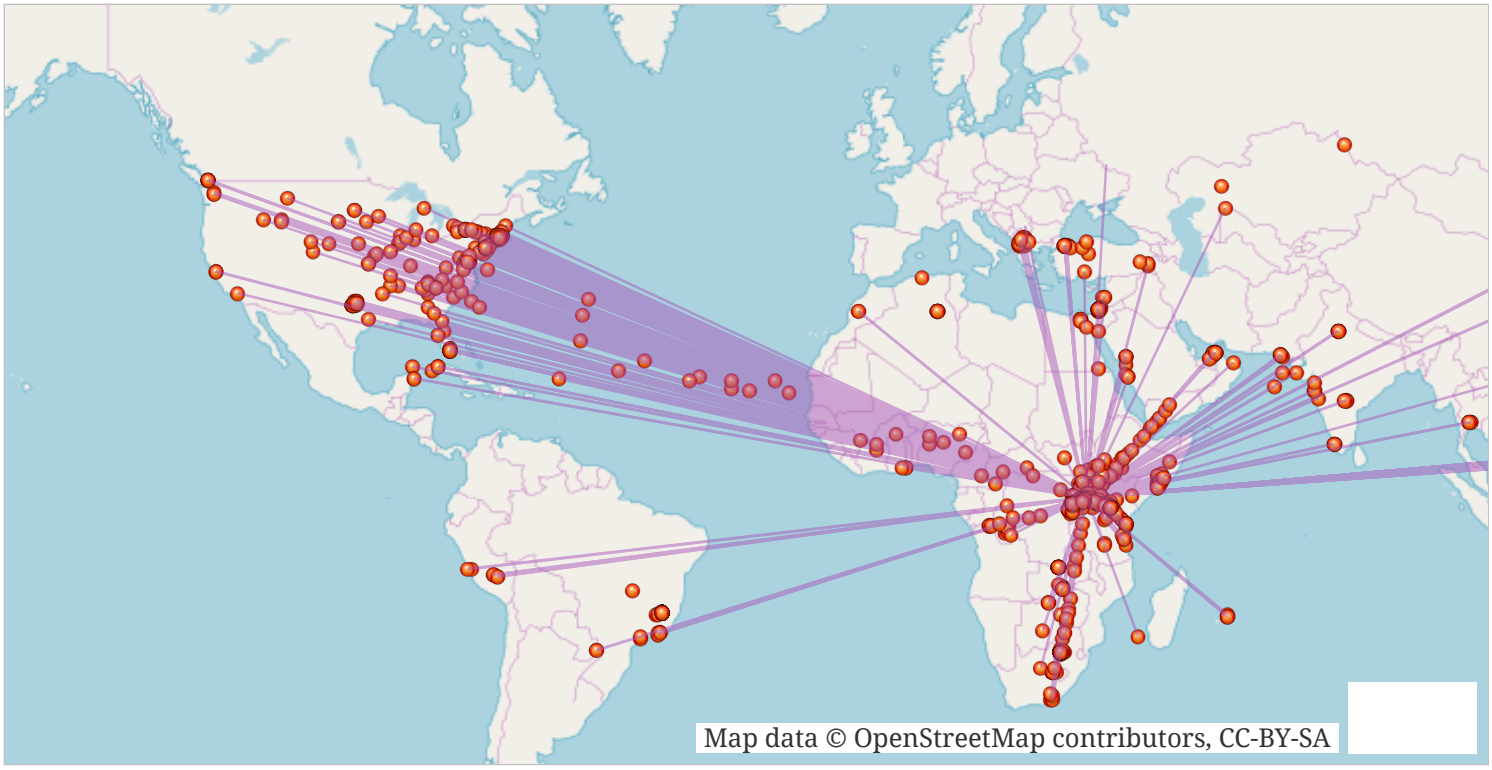


A time series is created to show overall ping activity between 2016 and the end of 2018. Sanctions were imposed in 2016 and pings appear to decline in 2017. However, reports by Ugandan diplomats stated, "The number of North Korean Embassy officials has significantly expanded in the past year." This could partially explain the spike in pings mid-2018 and on.

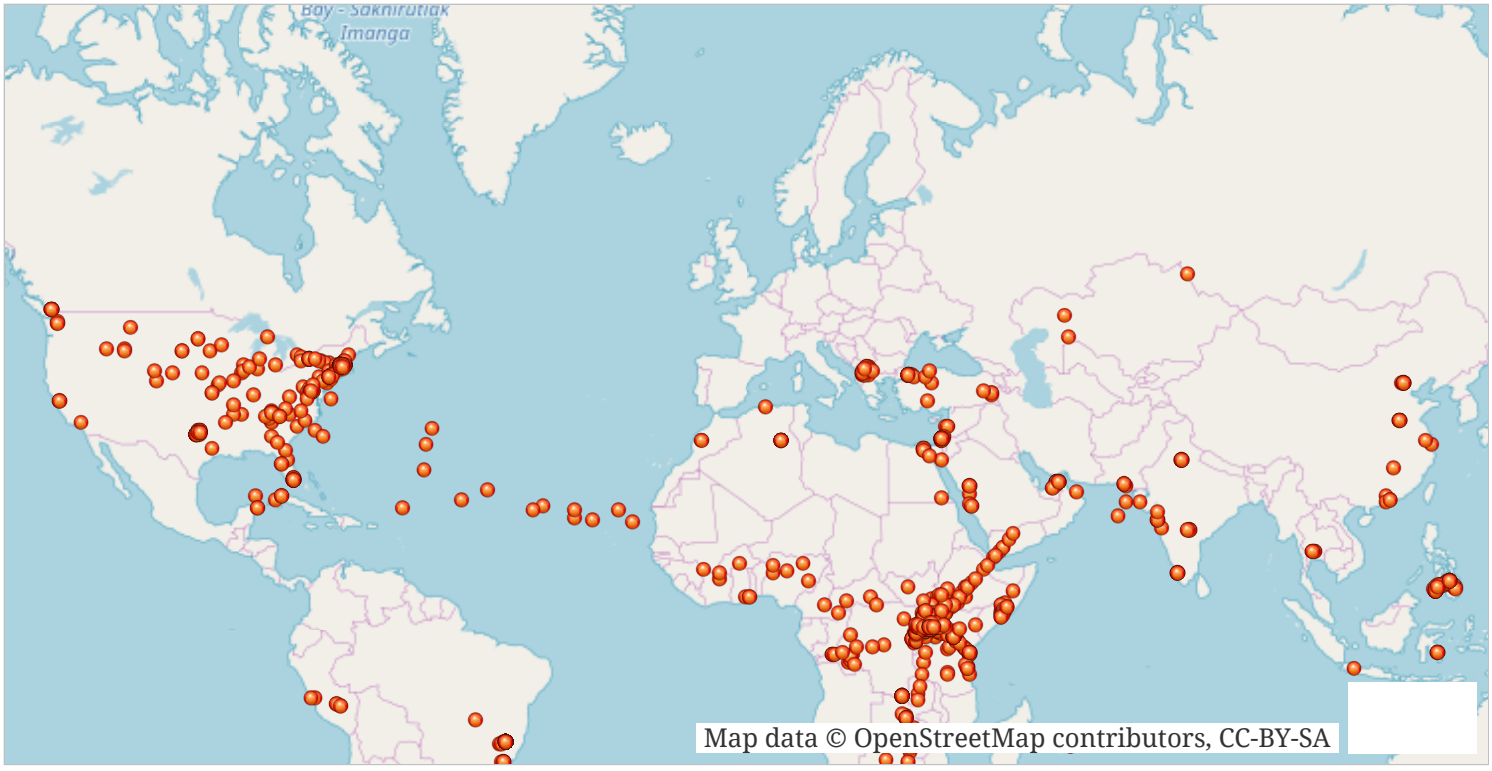


Daily unique device counts (DUDC) are also important. DUDC over time noticeably increase at about the same time the raw ping counts also increase. This data also partially verifies reports of increased North Korean embassy personnel or visitors.

Global Query



Once the device IDs in the DPRK Uganda embassy are known, they are used to query the global geolocation database. In this case, the global pings shown are average lat/lon per device per day. It should be noted that pings in open ocean are most likely an average of different ping locations within the same day due to a flight.



With the geolocation data acquired via the global query, we can understand where unique device IDs that were at one time present within the DPRK embassy in Uganda also are within the world. This is particularly useful for analysts and organizations to incorporate into a model, or use with other supplementary data sources. Such data could be military base locations, black sites, weapons caches, manufacturing facilities, etc.

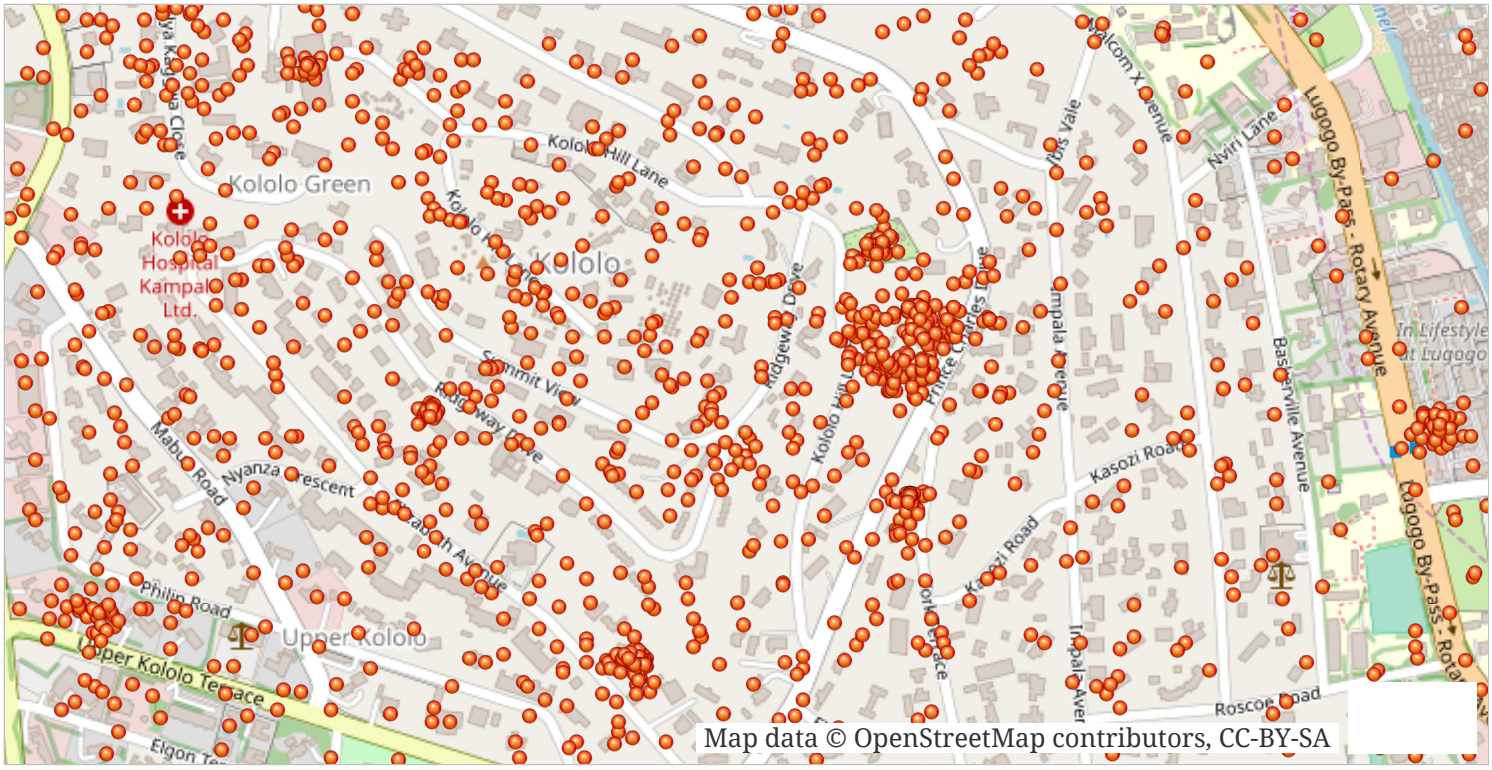
Military Connection

An example of an interesting finding revolves around the Ugandan Peoples Defense Force (UPDF) Special Forces Command HQ. Observed is a ping (red star) with a device ID that was at one time on DPRK embassy grounds in Kampala.

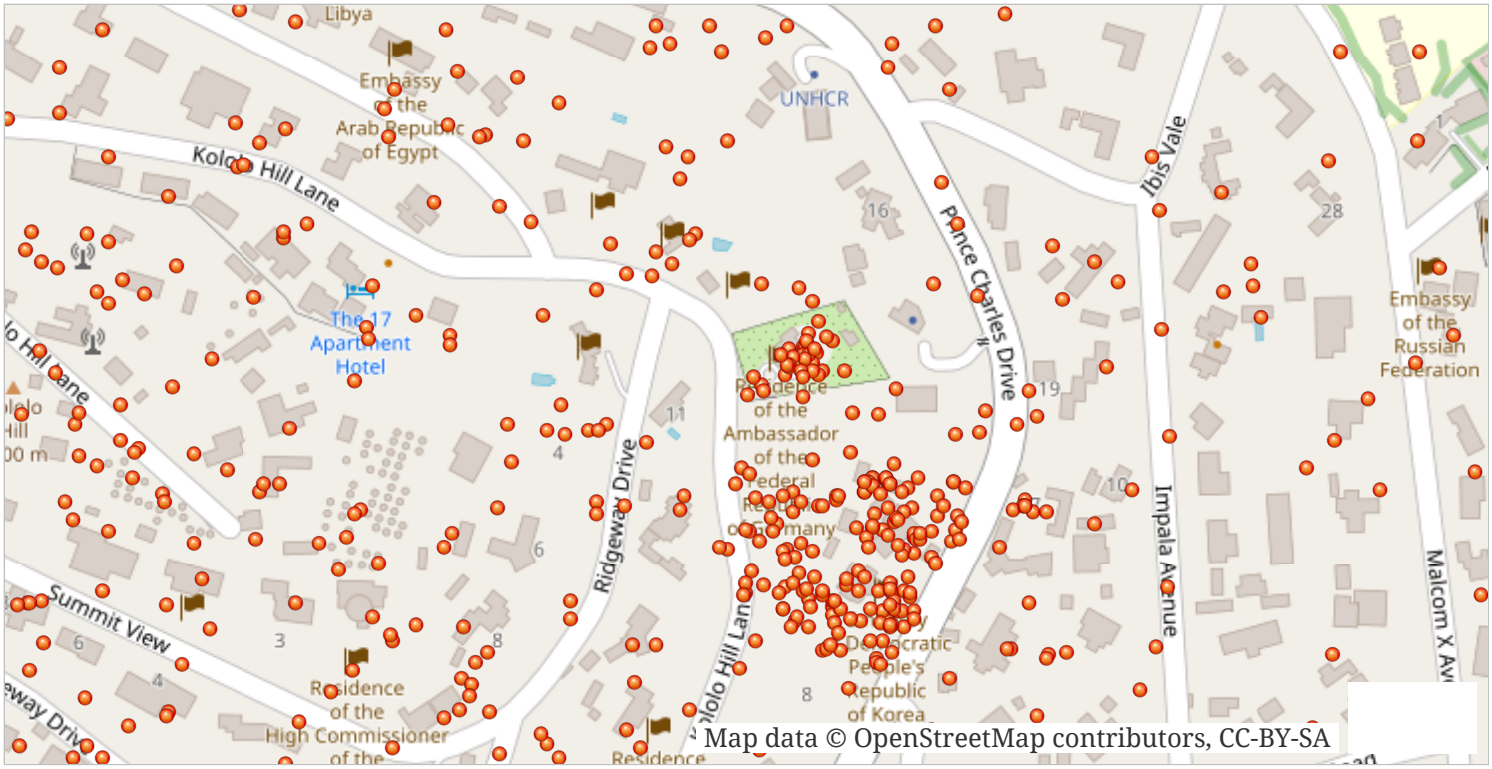
Vidas Engineering Services, with offices in this suburban-Kampala building, continues to have close ties with North Korea. EDWARD ECHWALU FOR THE WALL STREET JOURNAL

With this information, an analyst could delve into a deeper analysis. Keep in mind, for instructional purposes these lat/lon are averages, but an analyst would be able to use this open sourced/unclassified work to guide any further classified work. The unclassified nature of this type of analysis can also free up classified resources doing similar work.

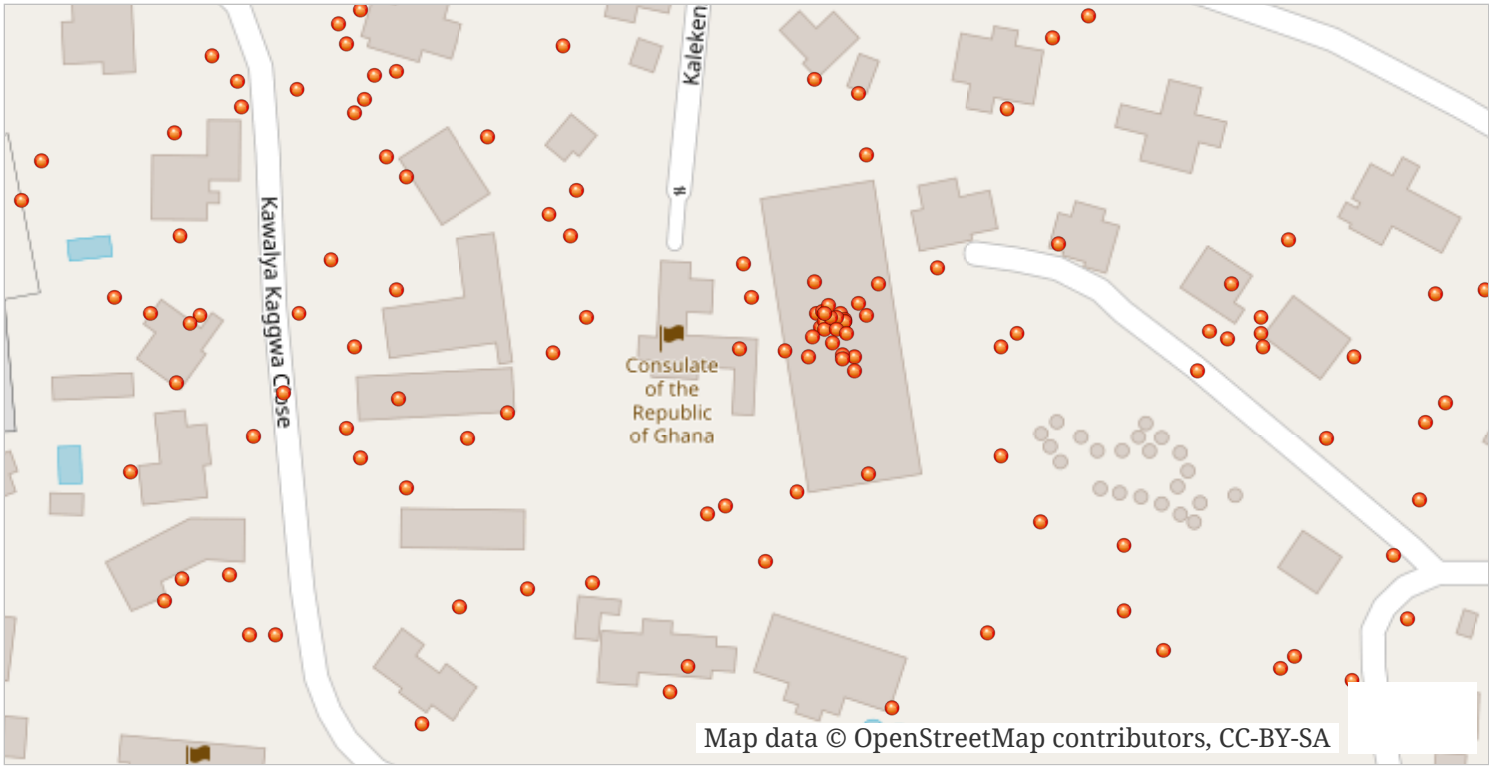
More Connections



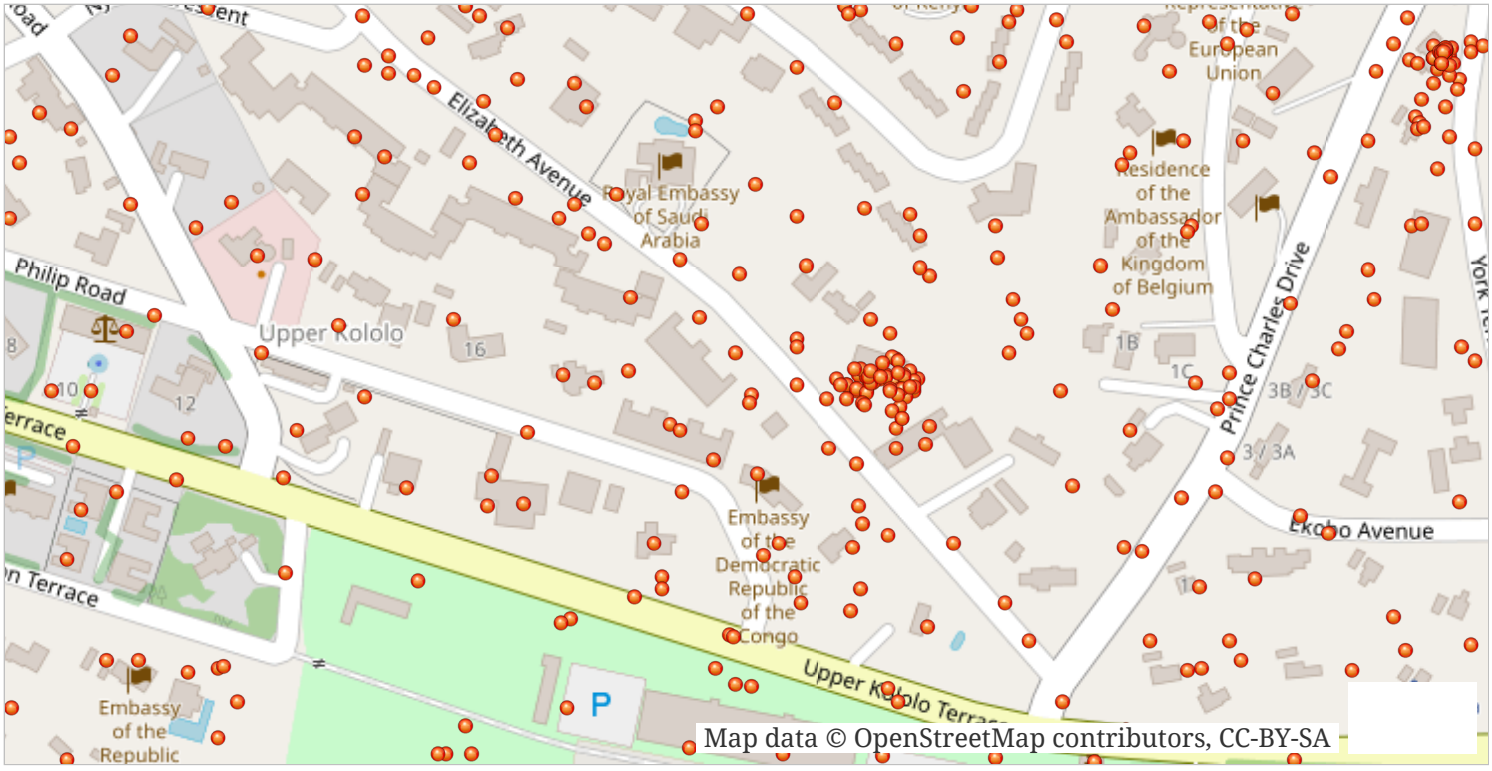
A global query of unique devices from the DPRK embassy devices will have noise. This partially has to do with the average lat/lon method used to cut down compute time. However, an analyst can still use this method to identify ping ***clusters***, which could identify points of interest.



The equally distributed, but relatively dense ping cluster in the bottom center is the DPRK embassy. Directly north of it is a cluster of pings that happens to be the residence of the German ambassador. This means that at one time at least one device ID has been to both the DPRK embassy and German ambassador's residence.



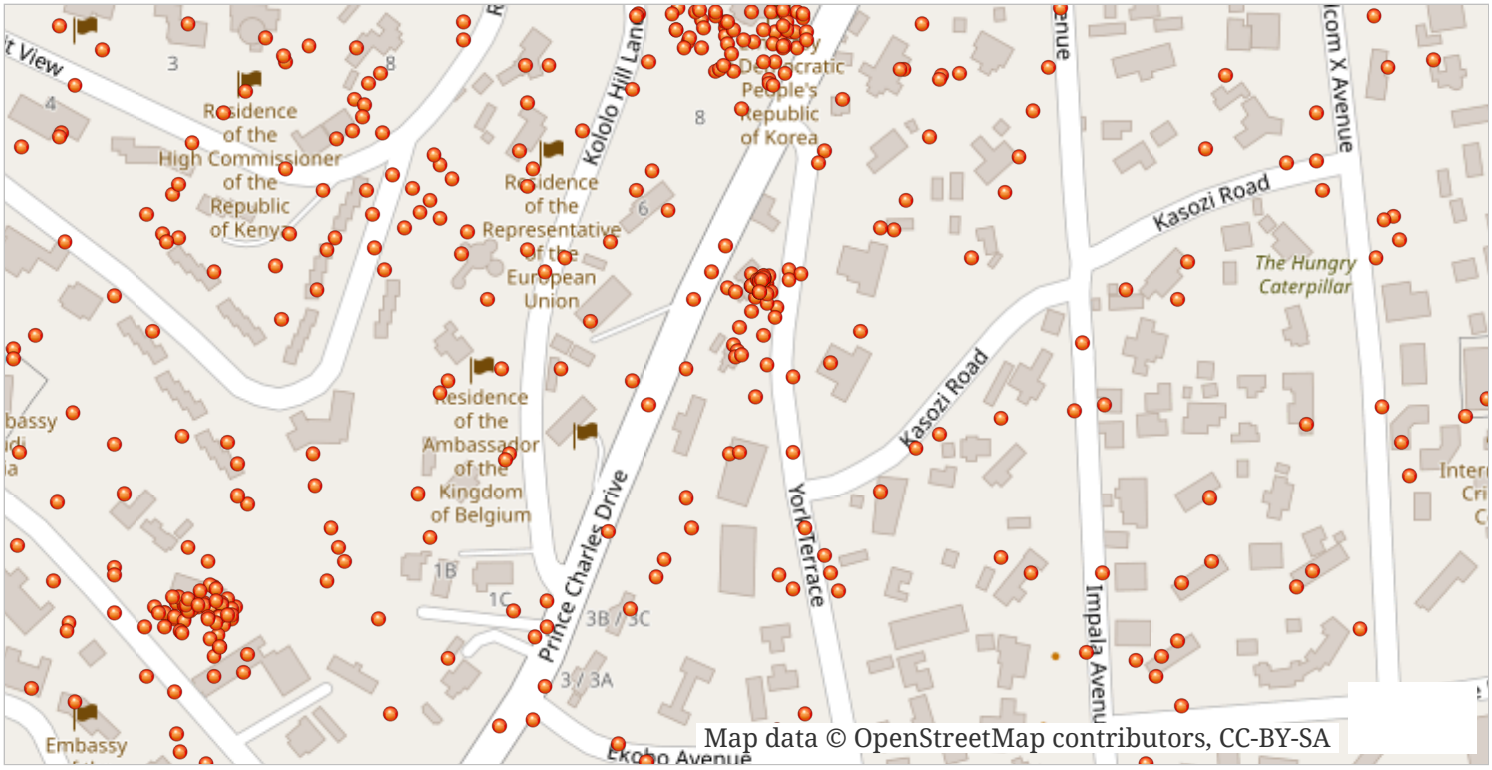
Other ping clusters can be observed to help see through noise. Here, a cluster of pings is shown in the Consulate of the Republic of Ghana area. Again, the pings for the global query were taken from the device IDs in the DPRK embassy, verifying that there is at least some contact between the DPRK embassy and Ghana consulate.



The next cluster of pings does not necessarily have a government building associated with it, but still could warrant a deeper look.

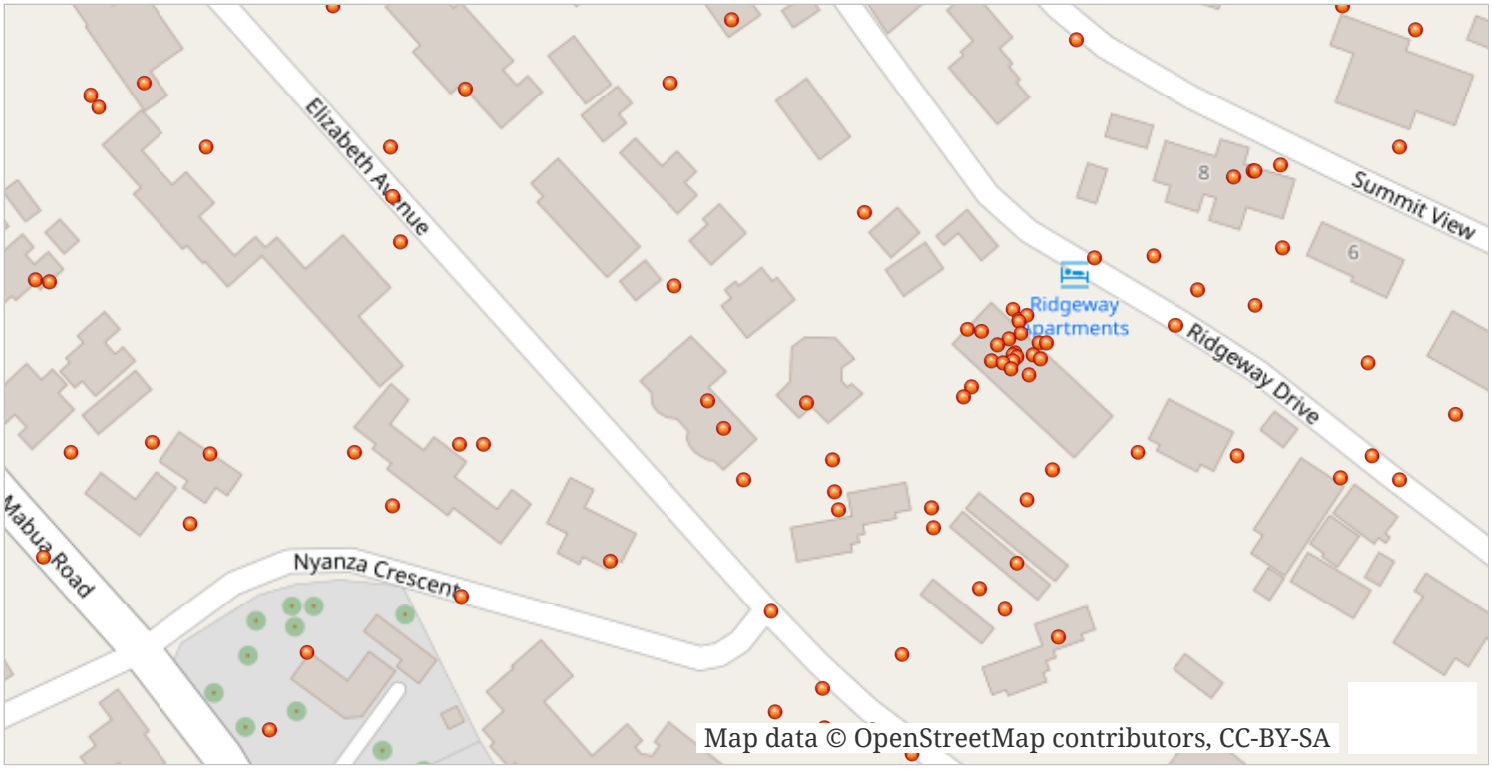
The building with the cluster of pings above corresponds to the driveway to the right in this google streetview image.

However, the driveway to the left belongs to the Nigerian High Commission. This could mean nothing, but it is worthy of at least mentioning in an analyst report on DPRK embassy device ID pings.



Another cluster with no known government association located between Prince Chares Drive and York Terrace is shown.

Again, it may be nothing, but the structure is relatively large with concertina wire, gates, and probably some type of security. This information would be something to note down in case this location becomes of interest in the future.



Lastly, there are a group of pings near Ridgeway Apartments. These device IDs are another piece of information that could be tagged and referenced in the future if needed.

General Resources	Mandhana, N., & Viswanatha, A. (2018, December 28). North Korea Built an Alternative Financial System Using a Shadowy Network of Traders. Wall Street Journal. Retrieved from https://www.wsj.com/articles/north-korea-built-an-alternative-financial-system-using-a-shadowy-network-of-traders-11546012082
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