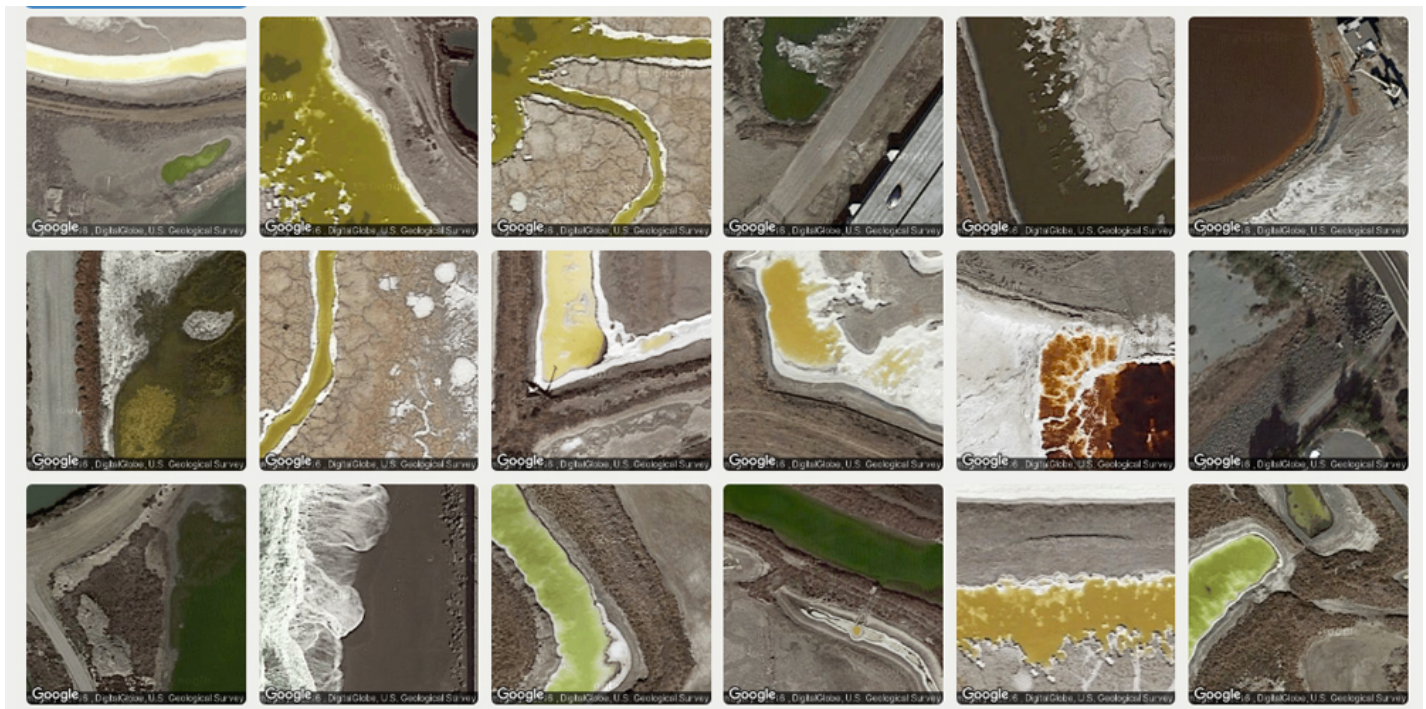


La web que encuentra lugares parecidos entre sí desde el cielo



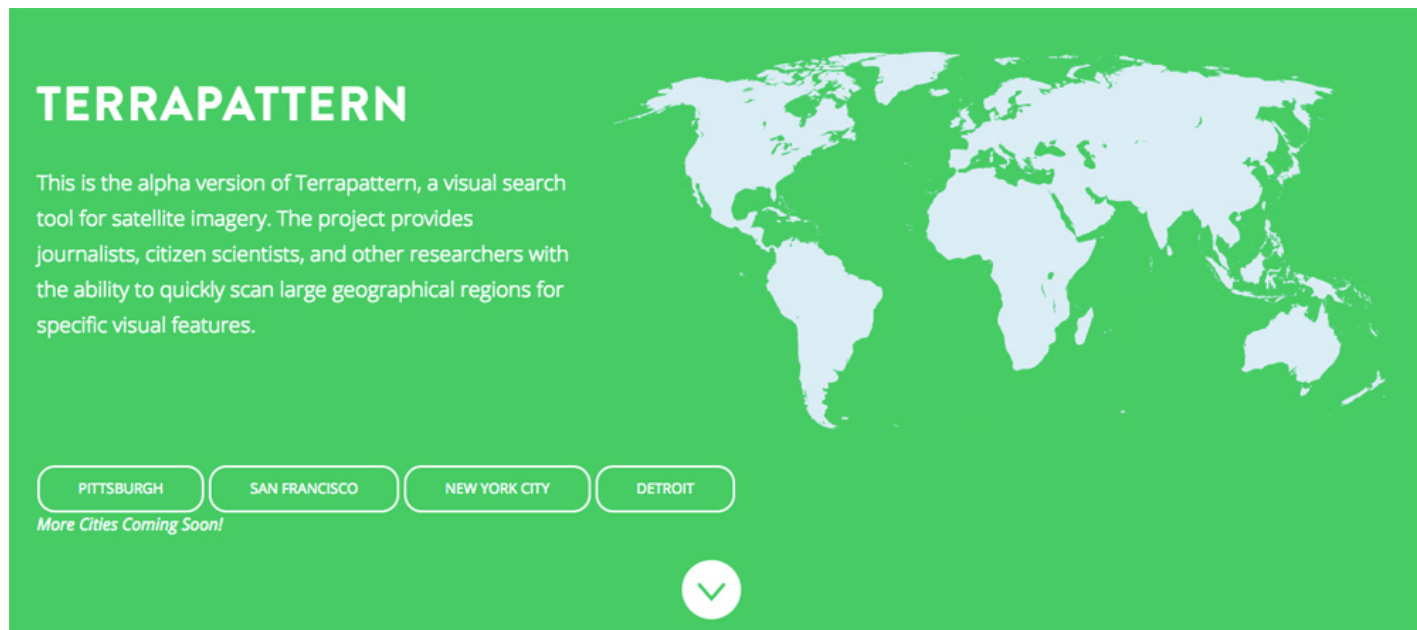
E

n the 60s, while the population was amazed to see the first images of the Earth taken from a satellite, the US army, Soviet and their allies were already bored of seeing the planet from the sky and spy anywhere that they pleased.

Powers of Ten™ (1977)

To get an idea of the level of development of this technology, there is more to remember the Eames documentary study conducted for the IBM company in 1977 with the title *Powers of ten* .

In it, the viewer could take a virtual trip from Chicago to park space. Every 10 seconds, the camera a distance 10 times higher than it was in the previous point away. Subsequently, the camera back to your starting point and entered the body of a man with the same procedure until you reach your DNA.

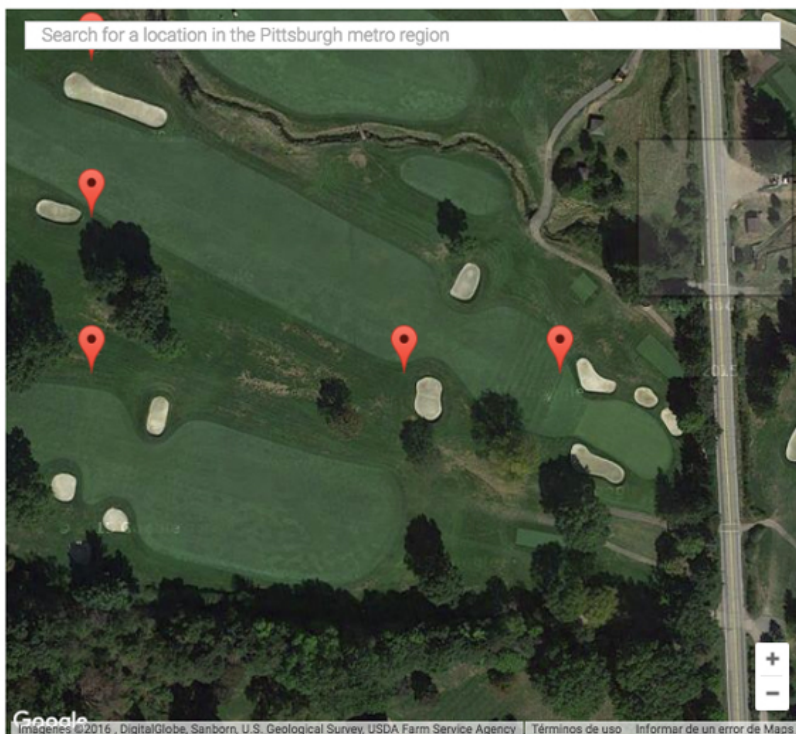


Almost 40 years later, military technology allowed the development of Google Earth, tool that can be enjoyed from house similar to that shown in the documentary marriage Eames experience.

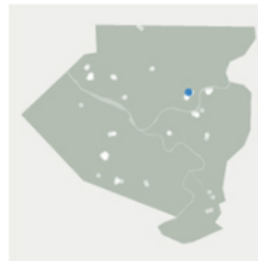
A group of programmers, teachers and artists have recently taken a step beyond the possibilities of Google Earth and created [Terrapattern](#) , a tool through which we can locate on the map places that resemble other previously given.



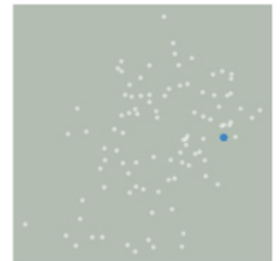
Developed by [Frank-Ratchye Studio](#) , under the guidance of a team of six people led by [Golan Levin](#) , associate professor *Computation Arts* at Carnegie Mellon University, Terrapattern can basically **select a fragment of a satellite image** , **get a set of places apparently similar** they are around and **download a list of those places** format [GeoJSON](#), designed to encode geographic data.



Geographical Plot



Similarity Plot

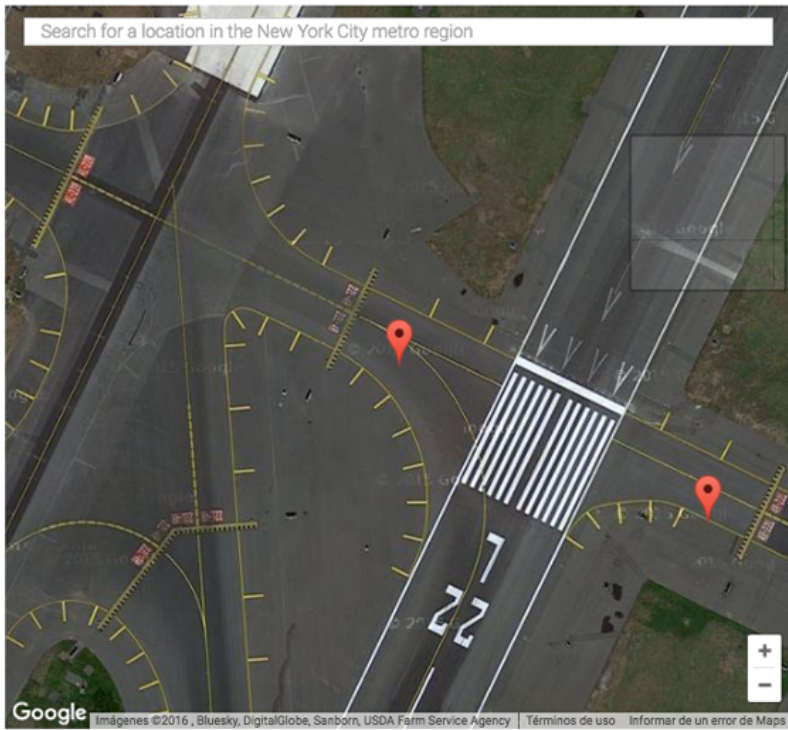


Search Results



Although the source from which it obtains the images is Google Earth, Terrapattern brings to this tool

recognition system that links hundreds of thousands of images and through a logarithm 'learns' to determine which elements are relevant and which are dispensable when establishing the similarities are sought.



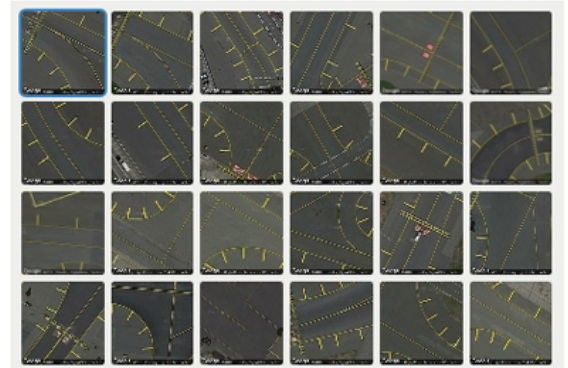
Geographical Plot



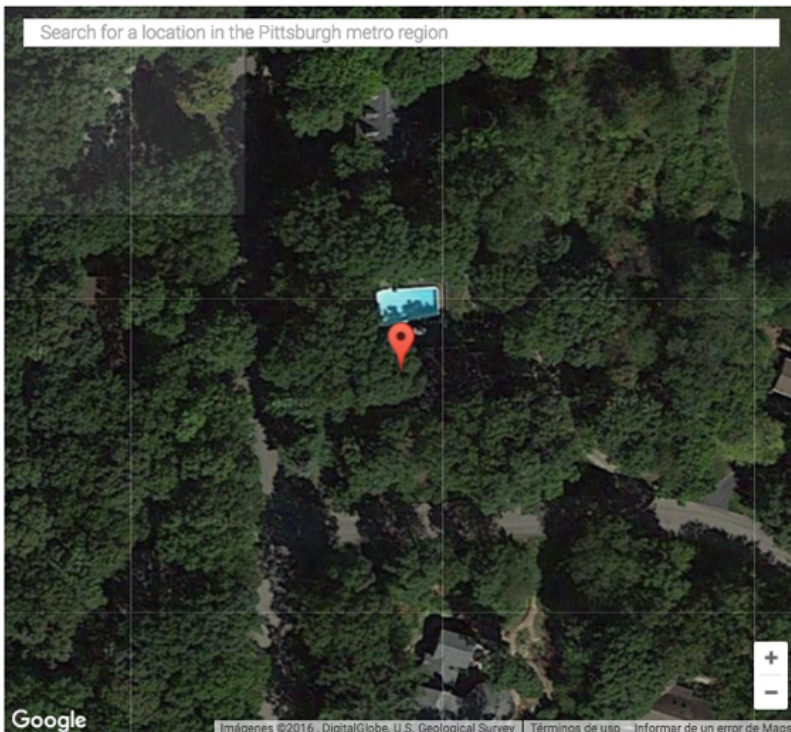
Similarity Plot



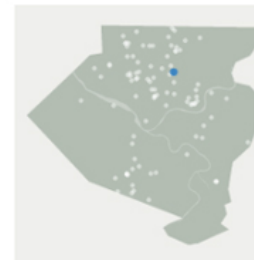
Search Results



The system is still under development and is now operating only for use on the surface four US cities: New York, Detroit, San Francisco and Pittsburgh. The reason is purely technical. Mapping one square meter requires 10 GB of RAM. Cover the entire earth's surface is going to take a little time.



Geographical Plot



Similarity Plot

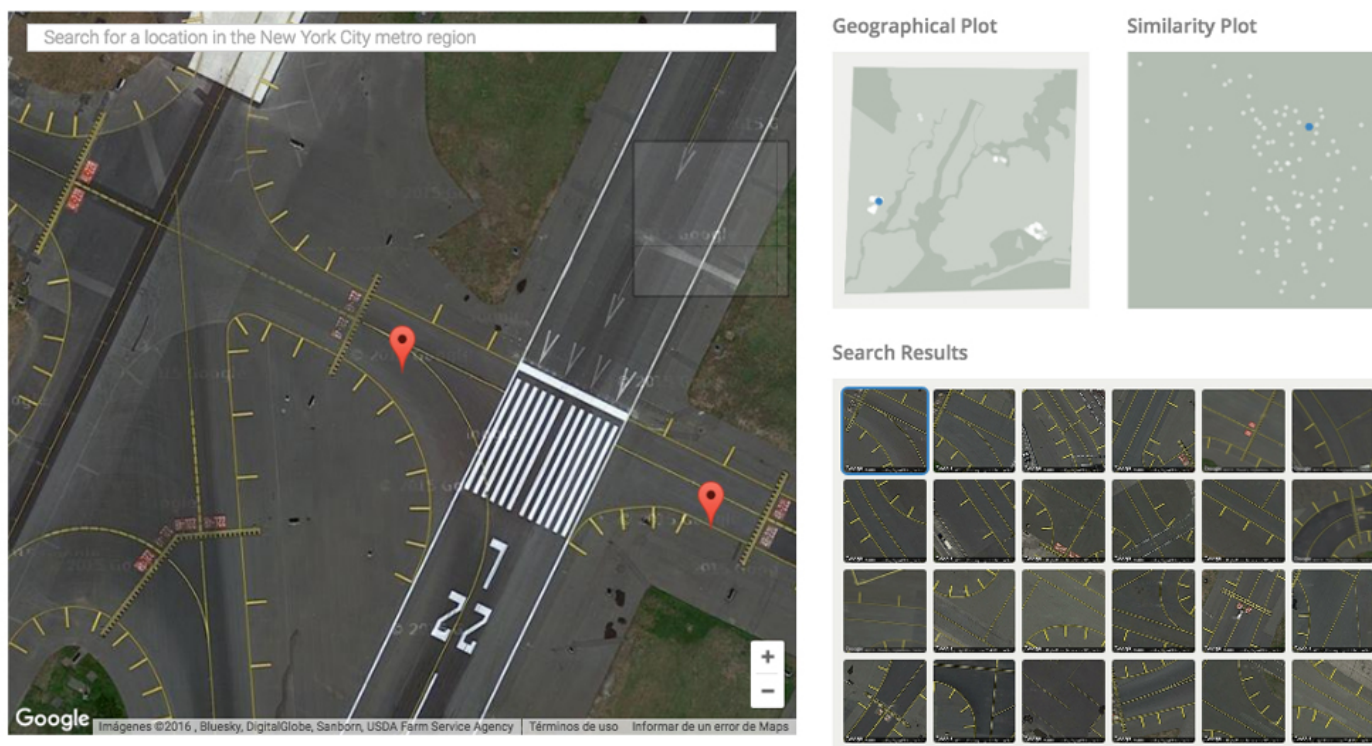


Search Results



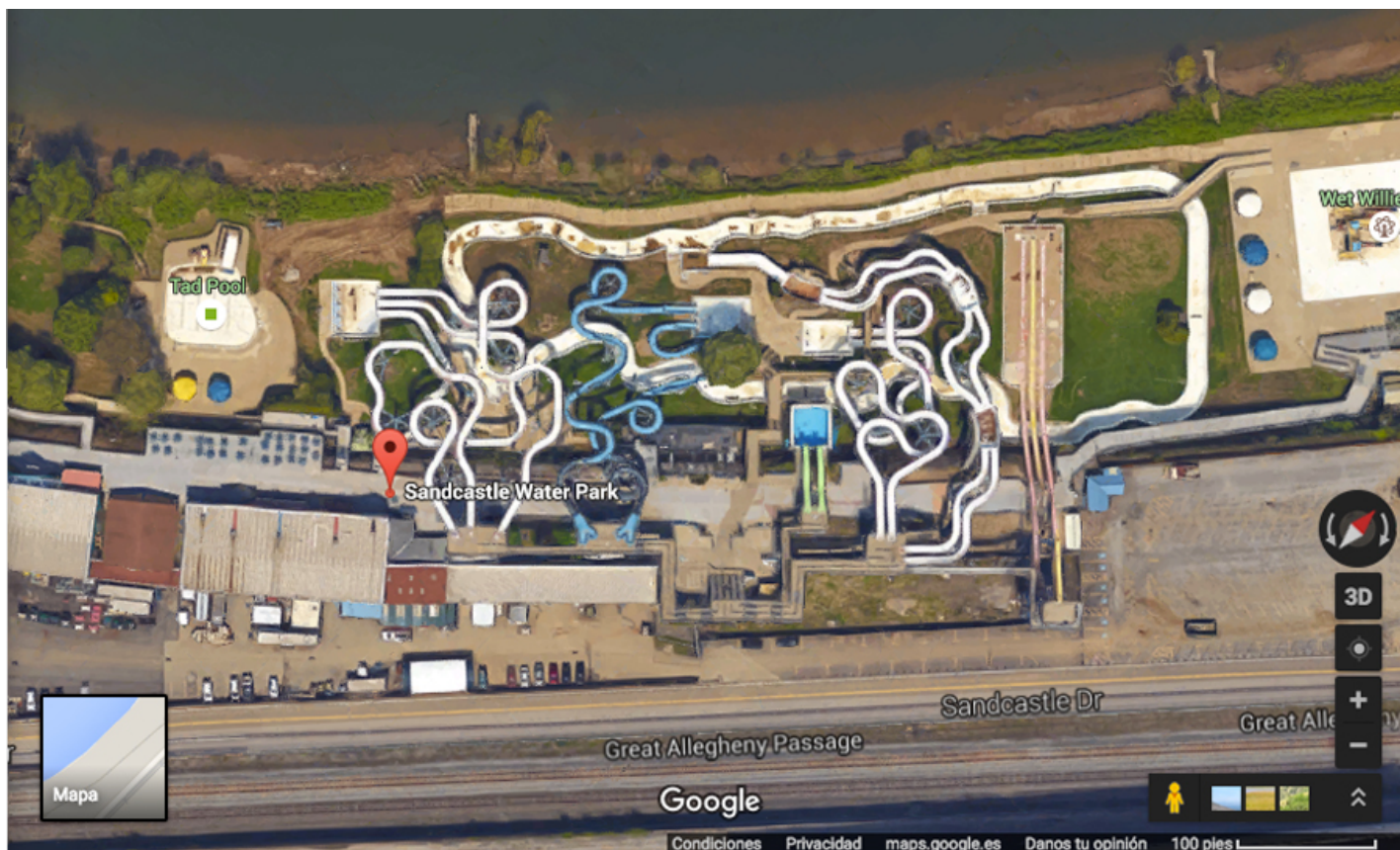
However, even in the available territories still you need to adjust certain things that do not work quite right

and that Terrapattern are fully aware, to the extent warn its users.



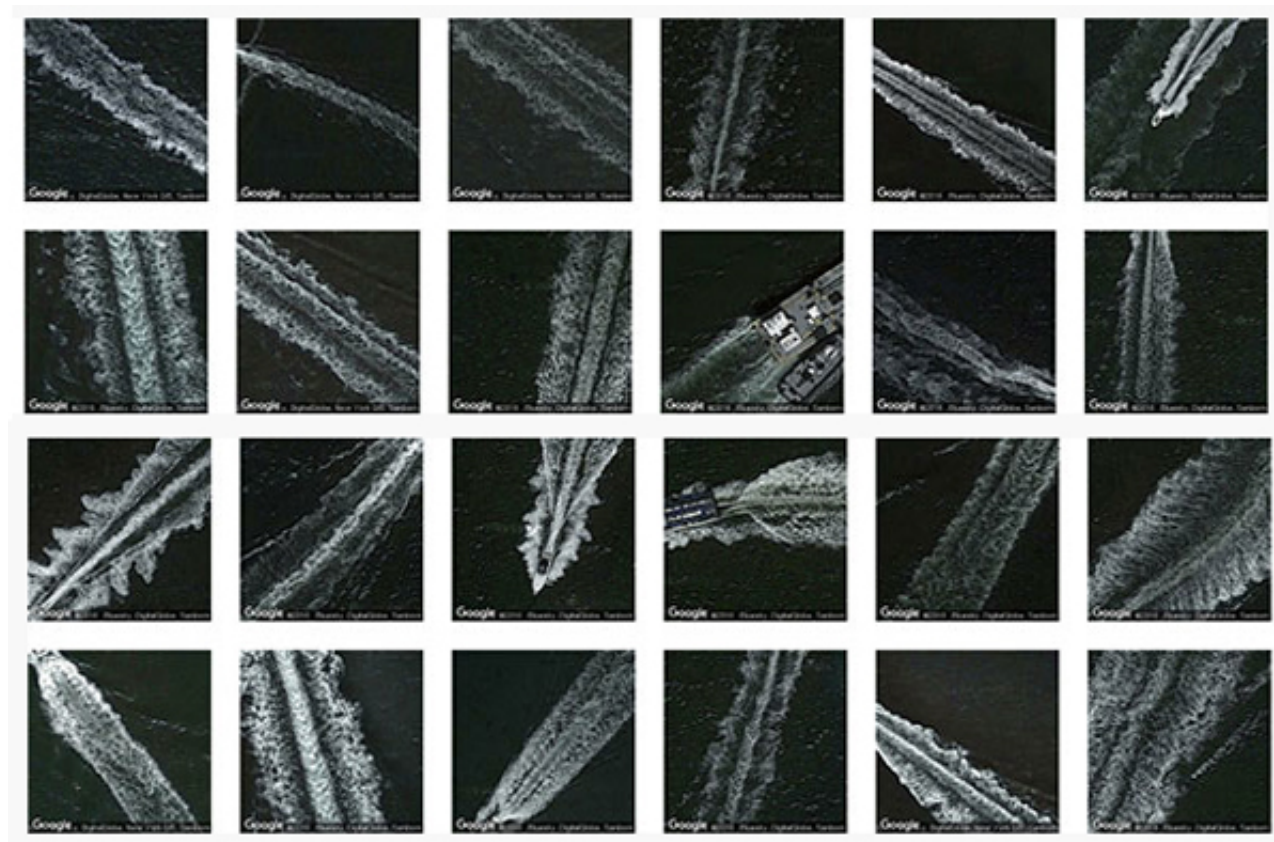
Among these failures are errors generated by the limitations of Google Earth, which does not allow proper operation *zooms* over x19. It may also happen that maps *online* have changed from those team Terrapattern used when determining recognition parameters and the results are not as expected.

You can make searches not entirely accurate because they are made by groups of pixels or tiles and not by individual pixels. Finally, it can happen simply that what is being sought is so peculiar that no other similar shows, as with the **Sandcastle Water Park** , water park located in Pittsburgh.



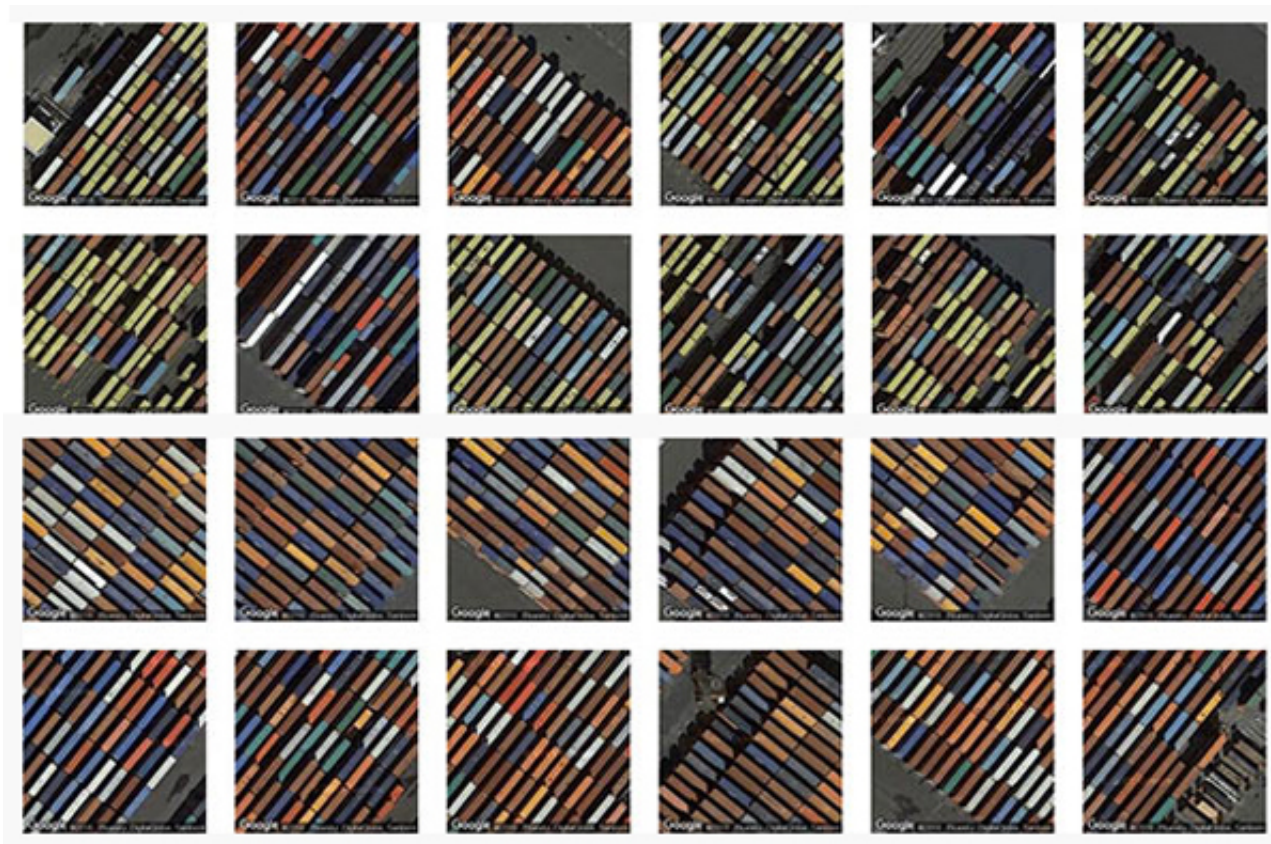
Although at first may seem Terrapattern mere entertainment or a purely playful tool - groups of *skaters* use it to locate abandoned private properties with pools in which to sneak patinar-, profits can be of great importance for society.

Archaeologists, for example, can initiate searches intended to locate ruins based on satellite images from other already known. It will also be possible to analyze in more detail human settlements, its evolution and its influence on the territory. Urban planners have more data to better determine the needs of a city. Environmental groups can locate oil fields, mines or illegal tire dumps like Seseña. Meanwhile, the human rights movements will be easier to locate mass graves based on a test pattern showing that there has been unusual movements of earth in a particular place.



The team's goal Terrapattern is that within three years, the service provides updated daily and better than the current of the entire surface of the Earth resolution maps.

"Our interest 'say its creators," it is to provide a *software* geostrategic to make life easier for people who do not have much experience in the use of machines, but is interested in it and wants to locate places with common details for further analysis "is this whatever.



According to that philosophy, **those responsible for Terrapattern have created the project under a Creative Commons license and all open source software is available under MIT license** . Anyone can lend a hand to accelerate development and improve outcome. Ultimately, there is always the possibility of sharing curiosities obtained using the tool through its *hashtag* Twitter [#terrapattern](https://twitter.com/terrapattern) .



By Eduardo Bravo