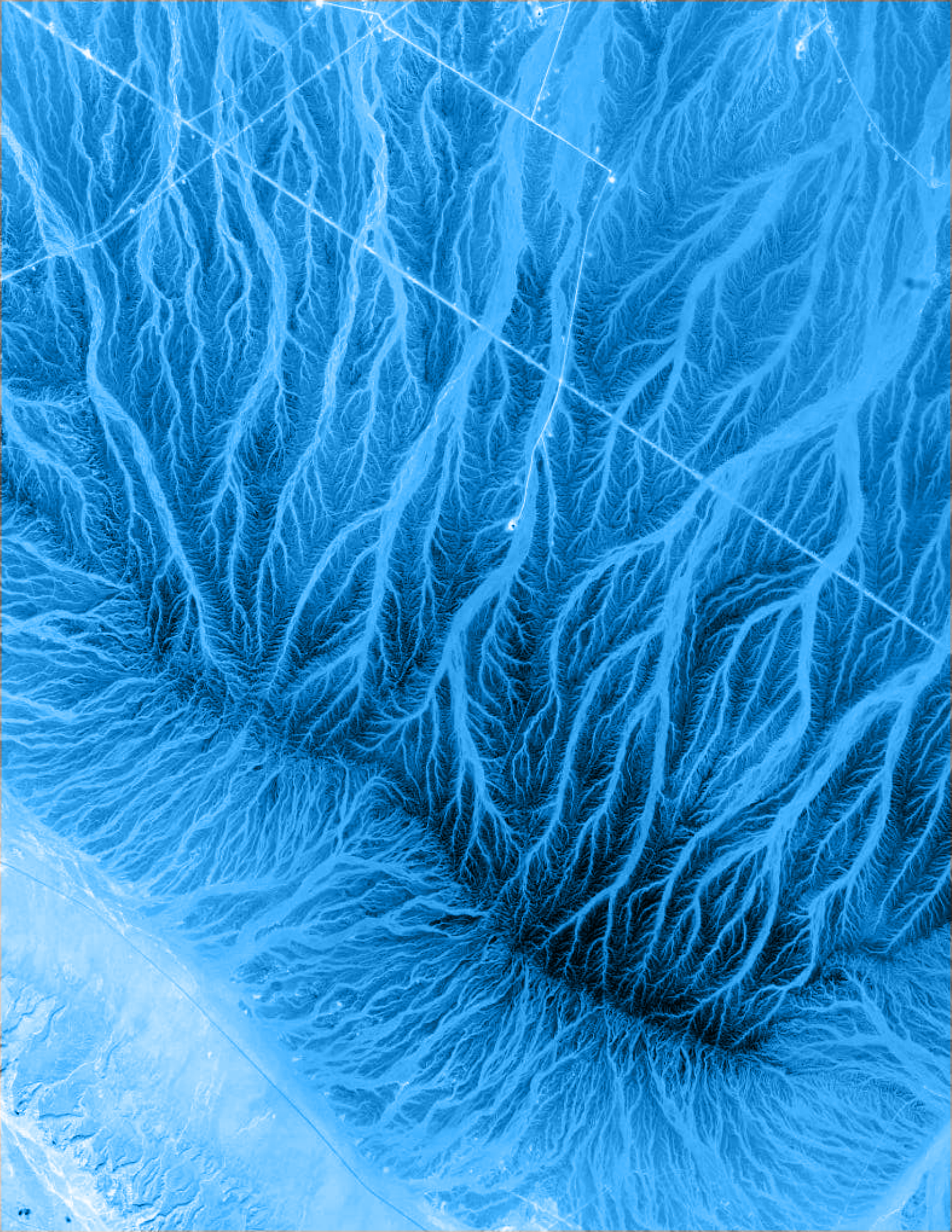
Mango

Imagery Provider Roundup



IMAGERY PROVIDER ROUNDUP

Chris Brown
CEO & Co-founder of Mango

Image basemaps are a great way to give your maps context by showing natural features and recent on the ground changes that may not be reflected in your data.

There are a plethora of basemap providers out there and choosing the right one can be daunting so we've put together this handy guide to help you choose the right one for your purpose and budget.

The first thing to note is that imagery comes from either an aerial platform such as aircraft, helicopters, drones/UAV, or satellite imagery, from satellites orbiting high above the earth.

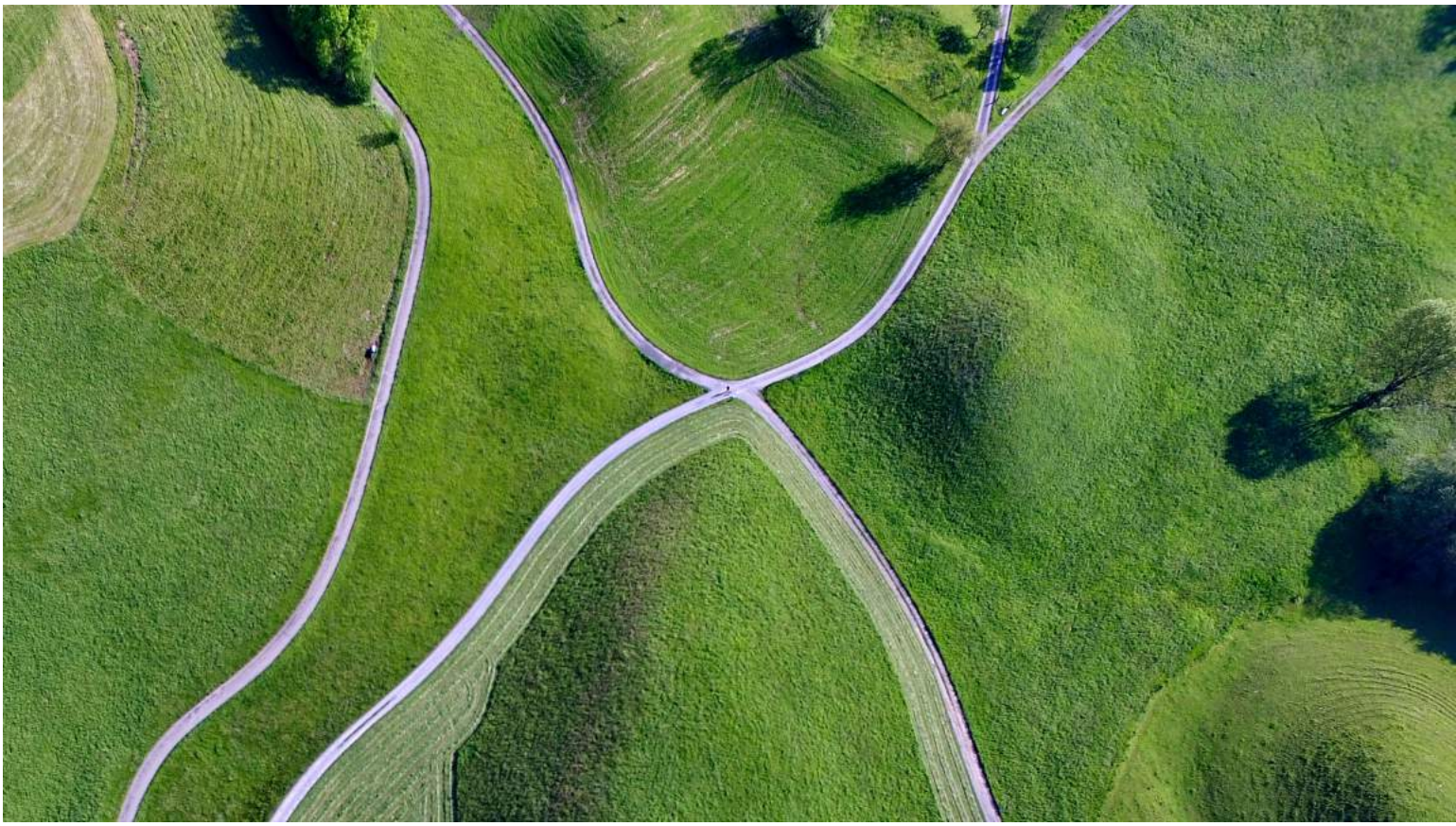
Aerial imagery tends to be acquired by companies working in specific countries or regions while satellite imagery is typically global in coverage.

Aerial imagery tends to be higher resolution than satellite imagery, though that is not always the case as the newer satellite platforms are capable of capturing imagery at 30cm resolution.

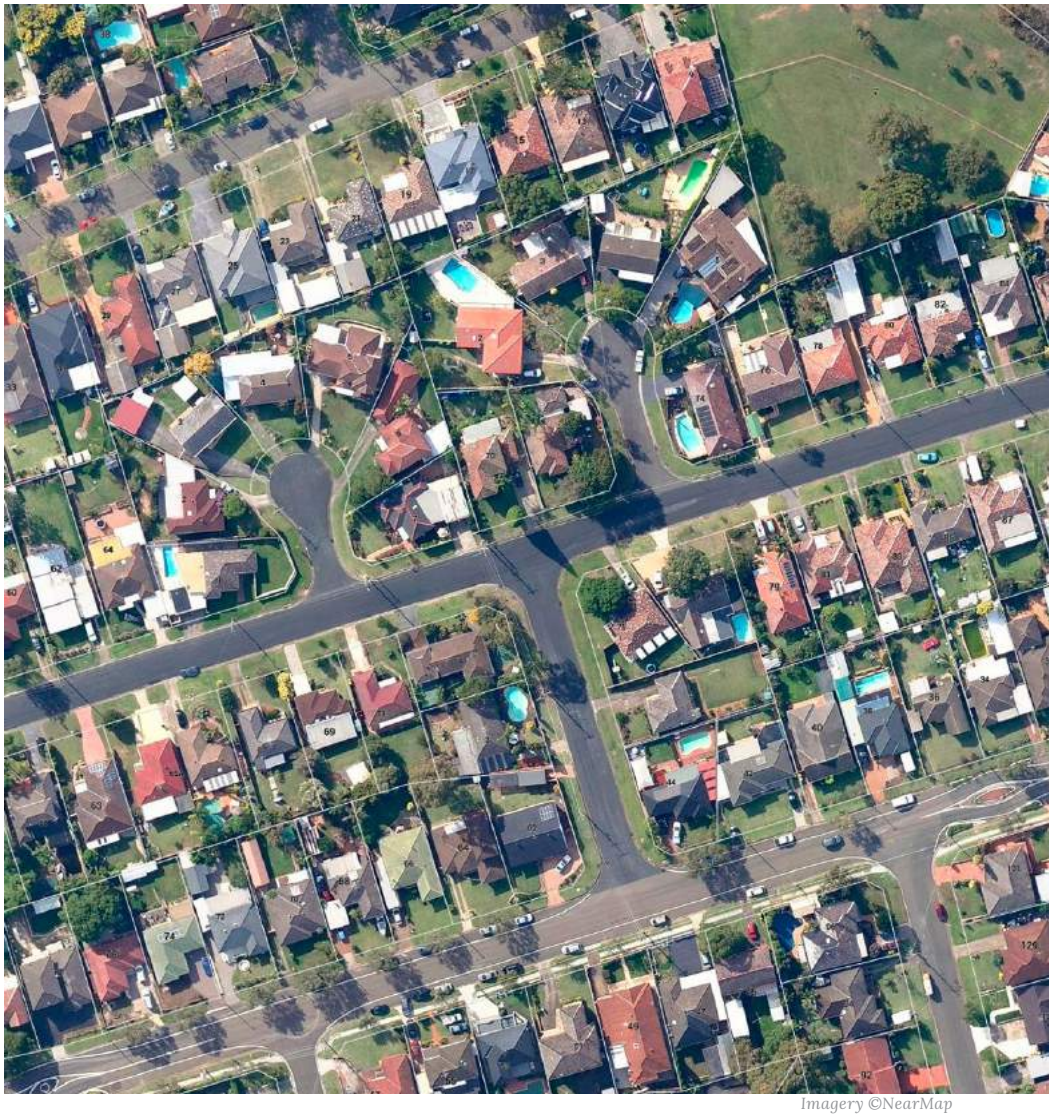
A key parameter to look out with all imagery is ***how recent the imagery is***. The cost to capture, process and serve imagery of every square inch of the world comes with a not-insignificant cost, which has to be balanced with user demand.

In any case, the outputs of these two platforms tend to be very similar in the form a seamless mosaic of images covering large areas, that offer a pleasing basemap (to the eye) that can be added as a background to your map.

Let's take a look some aerial imagery options first.



Aerial Basemaps



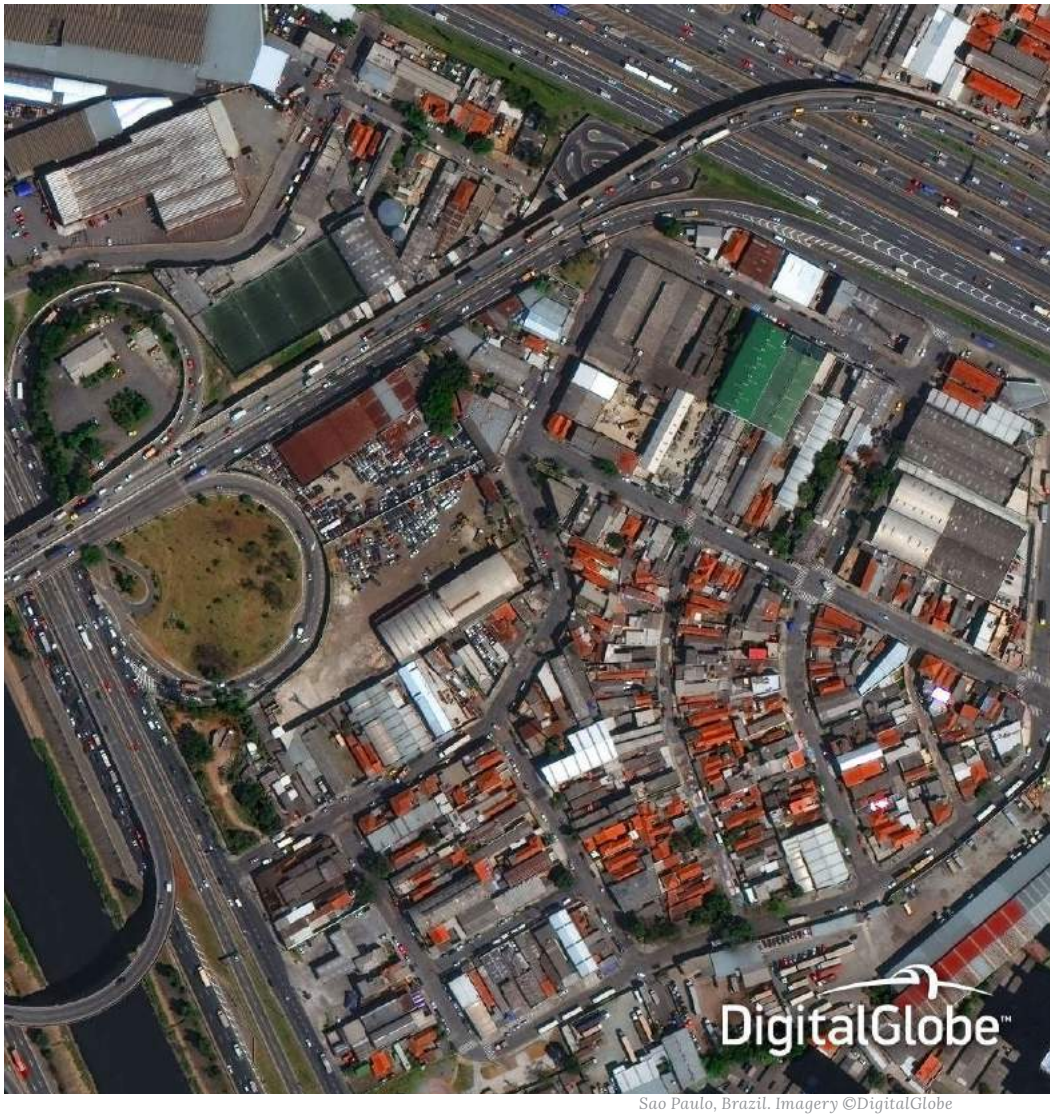
Imagery ©NearMap

NearMap offer eye-popping aerial photography of major US cities including 70% of the population, updated “several times a year”.

Their imagery is delivered with a resolution of 2.8in (7cm). They also cover major populated areas in Australia.

nearmap.com

DigitalGlobe



Sao Paulo, Brazil. Imagery ©DigitalGlobe

DigitalGlobe produce "wall to wall" 30cm aerial imagery product called *Precision Aerial* for the contiguous United States and Western Europe.

No information about currency is made public—suggesting it might be "*every few years*" or so.

Pricing is also not made transparent neither the possibility and costs around web display.

digitalglobe.com

spookfish
geospatial imagery redefined

Elizabeth Quay, Western Australia. Imagery ©Spookfish

SpookFish is another newcomer with the promise of low cost, high cadence imagery.

Currently focused on Australia, but with plans to expand in Europe. Their main focus is on major cities, but expanding to more populated rural areas is imminent, according to their website.

Interestingly, they offer unlimited data access, though governed by their fair usage policy (no "*taking the piss*", as they would say Down Under).

Pricing for their WMTS enabled Enterprise plans are tailored to each , but their web-access only plans start from AUD$66 per month.

spookfish.com

NAIP

Imagery © USDA Farm Service Agency

NAIP Imagery [FREE]. National Agriculture Imagery Program (NAIP) acquires aerial imagery during the agricultural growing seasons in the continental U.S.

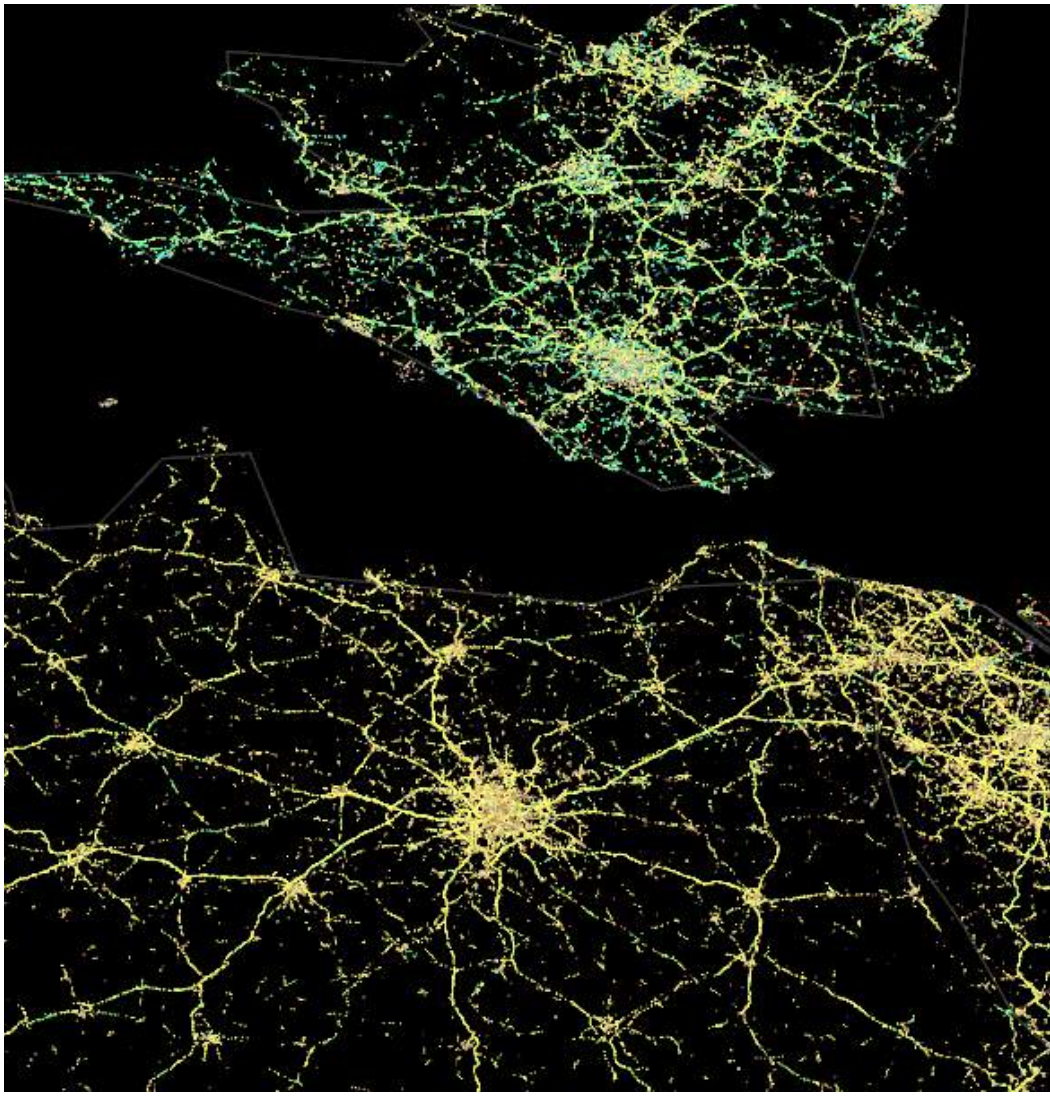
The imagery tends to be a little bit older and a little bit lower resolution (1m), but it's totally free (as in beer).

They offer state by state image mosaics as a map service but unfortunately have committed the cardinal sin of *not adding support for the Web Mercator projection*—the de facto standard for web mapping.

This means it can only really useful with a desktop GIS and can't be integrated with other web map services.

bit.ly/NAIPImagery

Satellite Basemaps



Imagery ©HERE

here [FORMERLY NAVTEQ] have really upped their game in recent years and are one of the leading providers of satellite derived image basemaps, rubbing shoulders with the likes of Google and Mapbox in terms of currency and coverage.

For public applications, plans start at $0 for 15,000 views, or "transactions" per month (1 transaction = 15 server requests).

Business plans start at $199 per month which includes fifty thousand transactions each month.

They also offer "hybrid" tiles which include roads and place names over a satellite image basemap.

here.com

Imagery ©Mapbox

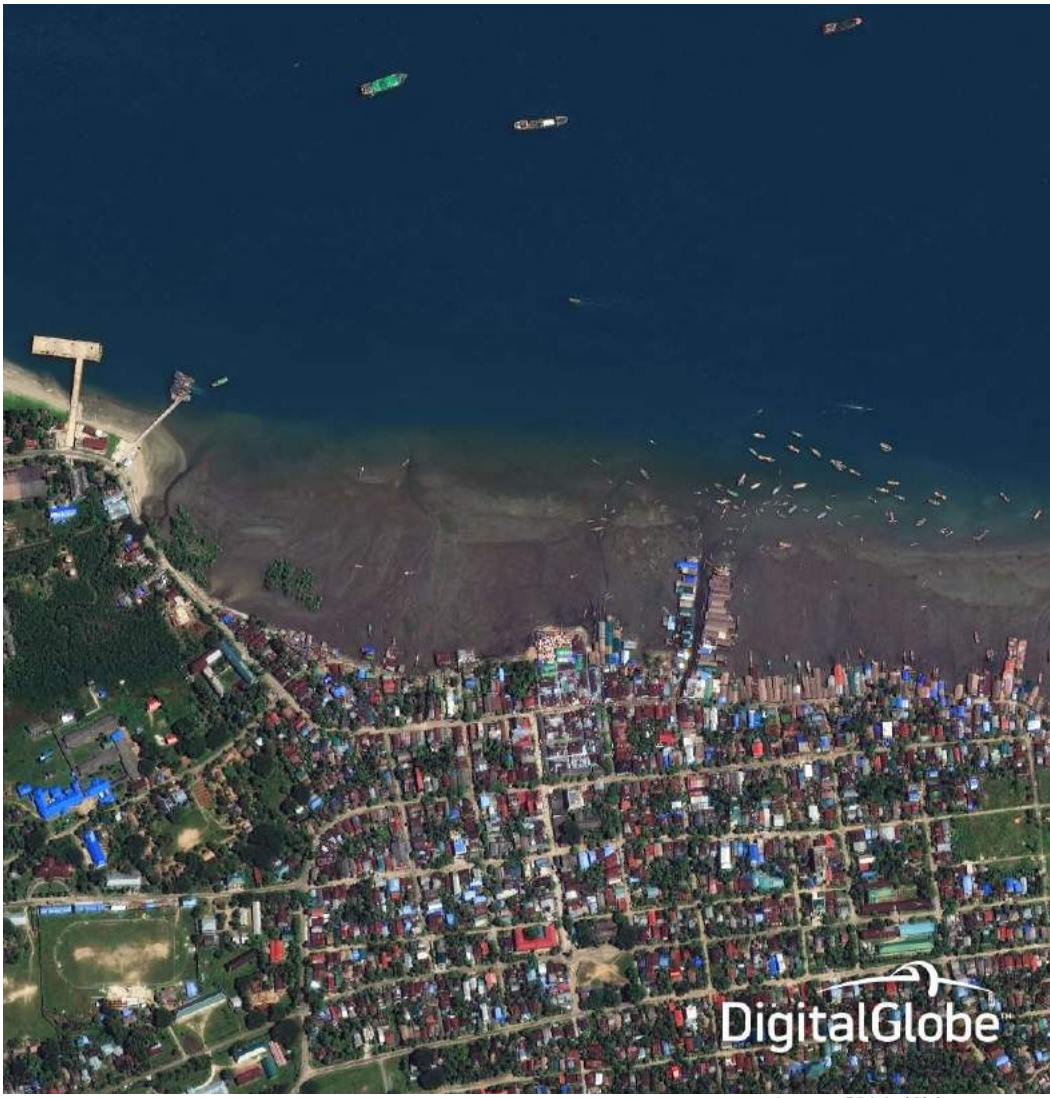
MapBox, the poster child for "geo" startups, is pretty much a household name these days, and often considered to be the best alternative to Google Maps.

They offer much more than map tiles, including geocoding and directions, but we'll just focus on their basemap offering in this book.

They offer a free plan with up 50,000 map views a month for public maps/applications and their Premium Plans start $499/month for 1,000,000 views on public or private maps.

This includes their other services such as geocoding and MapBox Studio, hence the slightly higher pricing.

mapbox.com



Imagery ©DigitalGlobe

DigitalGlobe are the operators of a constellation of VHR (very high resolution) satellites, including the highest resolutions civilian satellites (WorldView-3) which can image at 30 cm resolution. DigitalGlobe, along with Airbus are the main suppliers of imagery to the other basemap providers listed here.

Additionally, they offer their own basemap service as a subscription, which costs $79/month for free applications and up to 100,000 map views a month or $599/month for commercial apps with up to 250,000 map views a month, making it less attractive than some of the others.

It should be noted that although their own and operate the satellites, it does not mean that they turn all of the captured imagery into a basemap. In our experience, some of the other providers such as HERE and Mapbox may have more up to date imagery that DigitalGlobe.

digitalglobe.com

AIRBUS

Imagery ©Airbus

Airbus, from across the pond are DigitalGlobe's main competitor in the operator/ provider space. They operate both very high resolution and high resolution satellites, producing imagery with a 50cm and 1.5m pixels size respectively.

Their *One Atlas - One View* product promises currency of < 2 years old while *One Live* promises imagery that is less than one year old.

www.intelligence-airbusds.com

Imagery ©Planet

Planet are another startup on the scene who, like DigitalGlobe own and operate their own satellite constellation.

They are currently on track to reach their goal of imaging the entire earth every single day. It should be noted that their imagery is slightly lower resolution than the other providers at 3m, but for many a worthwhile tradeoff against coverage.

Their pricing is not public and they have a plethora of products, but our understanding is that a web service allowing 500,000 map view a month will cost $750 per month for up to 100 users.

One of the main benefits of this basemap service is that will be up to date everywhere, not just cities and populated places as may be the case with the other providers. So for some applications, particularly in rural or remote areas, this will an ideal choice.

planet.com

Google

Imagery ©Google

But what about Google?

Unlike the other providers mentioned here, Google are after the big end of town with sites that attract a lot of visitor traffic (think tens of millions of pageviews per month), and of course, pricing to match.

They do have a very current image basemap, *but* there are limitations on the way you can access and use the imagery.

Importantly, you can only access their basemap via their API, which means it can't be integrated into other web or desktop products that can display web map services.

earthengine.google.com

Ready to start creating stunning web maps incorporating your imagery and GIS data?

Here are five reasons why you should choose Mango:

1. *Direct upload via our web interface - no need to pay for desktop software to handle the upload*
2. *Game changing pricing for raster data storage, starting at just $50 for 50 GB*
3. *Support for really big file uploads*
4. *Share your maps privately or publicly - the choice is yours*
5. *Create beautiful vector overlays on top of your raster data*

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