

# State of the #icecream

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LOVE



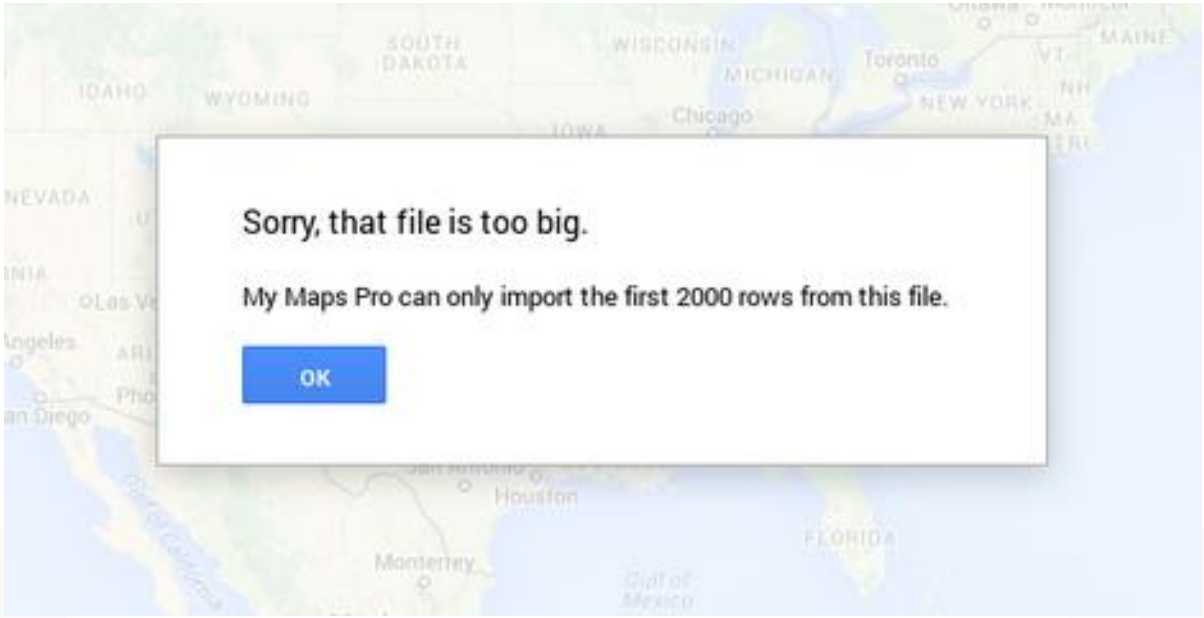

#icecream

# #icecream

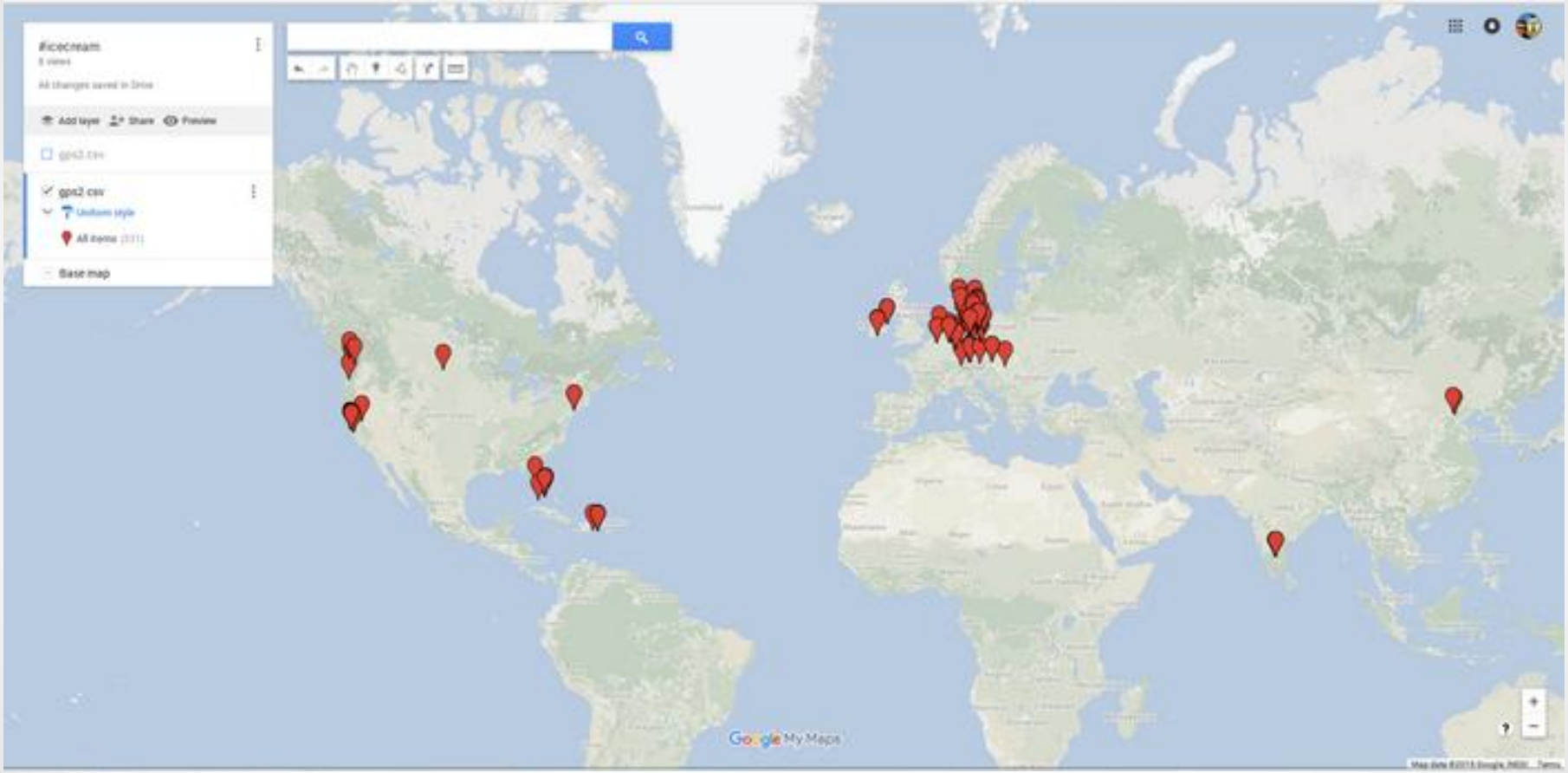
- 562 pictures with ice cream
  - 1.3 GB
  - 332 pictures with **GPS coordinates** (Exif data)
  - Unfortunately the phone does not always store GPS data ☹
- 4999 Foursquare Check-ins
  - 1823 different locations, with **GPS geocoordinates**
  - Unknown number of „ice cream“ shops (so far!)
- All (meta)data goes into a PostgreSQL database
- … there are some interesting stats

# Map everything

- Tried to plot all locations on a Google Map …



# #icecream MAP



# 4sq MAP


Foursquare
4sq_checkins_split_01.csv
4sq_checkins_split_02.csv
4sq_checkins_split_03.csv
Base map
#blamemagnus

# Conclusion

- Need more data samples!
- Data roaming was really expensive until very recently.
- Hard to get a GPS fix when in buildings.
- Google is not good for #BigData.

# Combine Image + 4Sq

```
WITH foursquare AS (
SELECT l.name,
       c.published AS time,
       c.point_lat AS lat,
       c.point_lon AS lon,
       ST_GeomFromText('Point(' || c.point_lon || ' ' || c.point_lat || ')', 4326)::geometry AS point
  FROM fsq_locations l,
       fsq_checkins c
 WHERE l.id = c.fsq_location
),
images AS (
SELECT i.id AS image_id,
       i.filename AS filename,
       i.gps_time AS time,
       ST_GeomFromText('Point(' || ROUND(DMS2DD(i.lon),9) || ' ' || ROUND(DMS2DD(i.lat),9) || ')', 4326)::geometry AS point
  FROM images i
),
matches AS (
SELECT i.filename,
       i.image_id AS image_id,
       i.time,
       f.time,
       f.name,
       ST_Distance_Sphere(f.point, i.point) / 1000 AS distance
  FROM foursquare f,
       images i
 WHERE ABS(EXTRACT(EPOCH FROM (i.time - f.time))) < 60*60*3
   AND ST_Distance_Sphere(f.point, i.point) < 1000
 ORDER BY ST_Distance_Sphere(f.point, i.point)
)
SELECT *
  FROM matches
 WHERE image_id = 65
 ORDER BY distance ASC;
```



**Foursquare Check-in**



**Image Data**



**Join Image + 4Sq, calculate distance**



**Limit by time/distance**

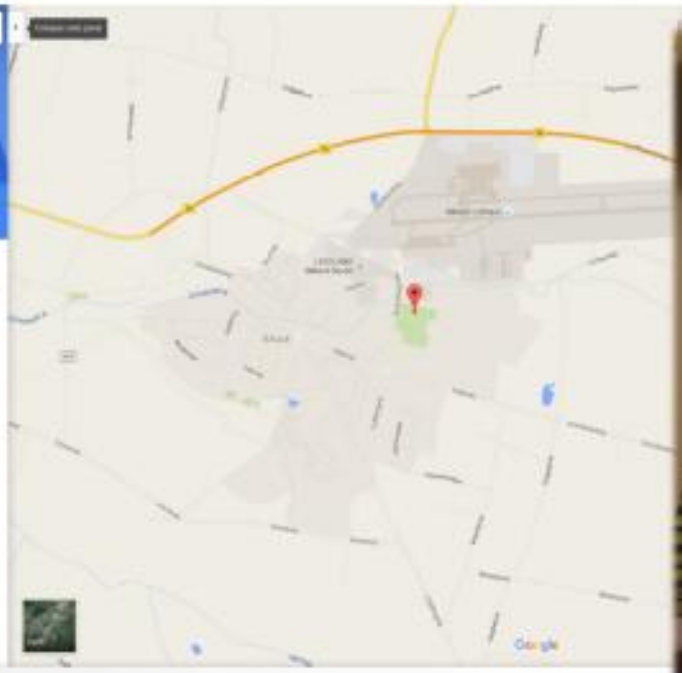


**Limit by picture**

# Most northern point

```
icecream=# SELECT * FROM images ORDER BY lat DESC LIMIT 5;
 id  |          filename          |       lat          |       lon          |        gps_time         |     create_time
-----+----------------------------+--------------------+--------------------+-------------------------+---------------------
 213 | IMG_20151010_183210.jpg    | 55° 43' 51.71" N   | 9° 8' 10.98" E     | 2015-10-10 18:31:55+02  | 2015-10-10 18:32:10
 211 | IMG_20151009_200920.jpg    | 55° 43' 51.36" N   | 9° 8' 11.64" E     | 2015-10-09 20:09:05+02  | 2015-10-09 20:09:20
 212 | IMG_20151010_074542.jpg    | 55° 43' 51.18" N   | 9° 8' 10.90" E     | 2015-10-10 07:45:40+02  | 2015-10-10 07:45:43
 138 | IMG_20150311_195631.jpg    | 55° 40' 53.62" N   | 12° 34' 29.60" E   | 2015-03-11 19:56:31+01  | 2015-03-11 19:56:31
 322 | IMG_20160910_185014.jpg    | 54° 5' 19.69" N    | 12° 8' 5.82" E     | 2016-09-10 18:50:13+02  | 2016-09-10 18:50:14
(5 rows)
```

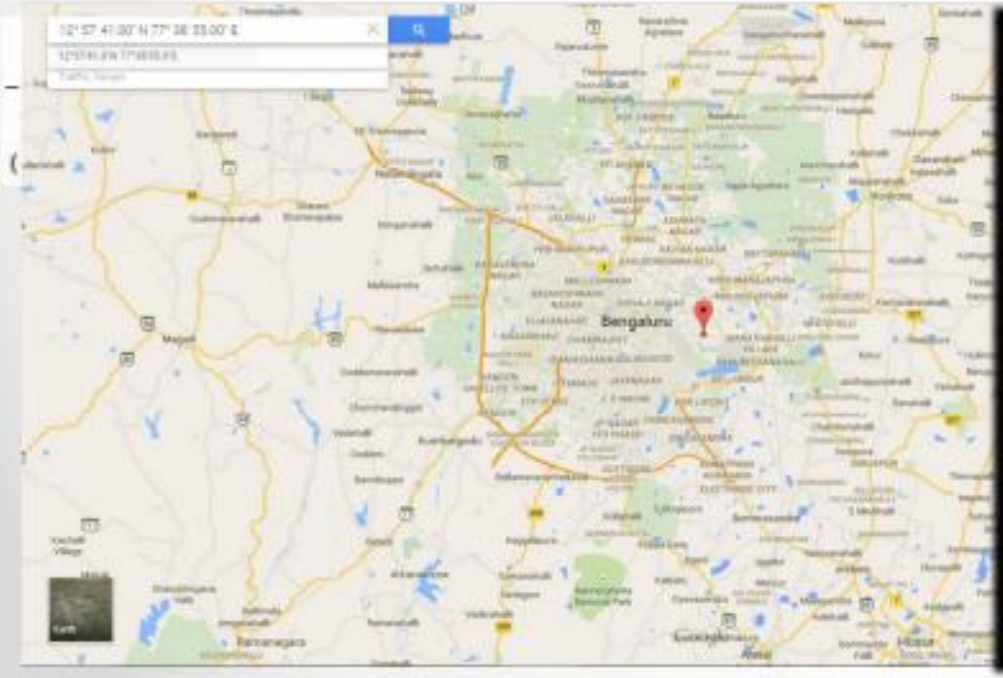






# Most southern point

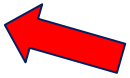
```
icecream=# SELECT * FROM images ORDER BY lat ASC LIMIT 5;
 id  |        filename         |       lat        |       lon        |        gps_time         |     create_time
-----+-------------------------+------------------+------------------+-------------------------+---------------------
  65 | IMG_20130925_203406.jpg | 12° 57' 41.00" N | 77° 38' 55.00" E | 2013-09-25 17:04:00+02 | 2013-09-25 20:34:07
 116 | IMG_20140504_220303.jpg | 12° 57' 42.00" N | 77° 38' 54.00" E | 2014-05-04 18:32:46+02 | 2014-05-04 22:03:04
  90 | IMG_20131206_203216.jpg | 12° 57' 42.00" N | 77° 38' 54.00" E | 2013-12-06 16:02:10+01 | 2013-12-06 20:32:17
  64 | IMG_20130924_221759.jpg | 12° 58' 30.00" N | 77° 36' 20.00" E | 2013-09-24 18:47:09+02 | 2013-09-24 22:18:00
  63 | IMG_20130923_125934.jpg | 12° 58' 40.00" N | 77° 41' 44.00" E | 2013-09-23 09:28:46+02 | 2013-09-23 12:59:35
(5 rows)
```



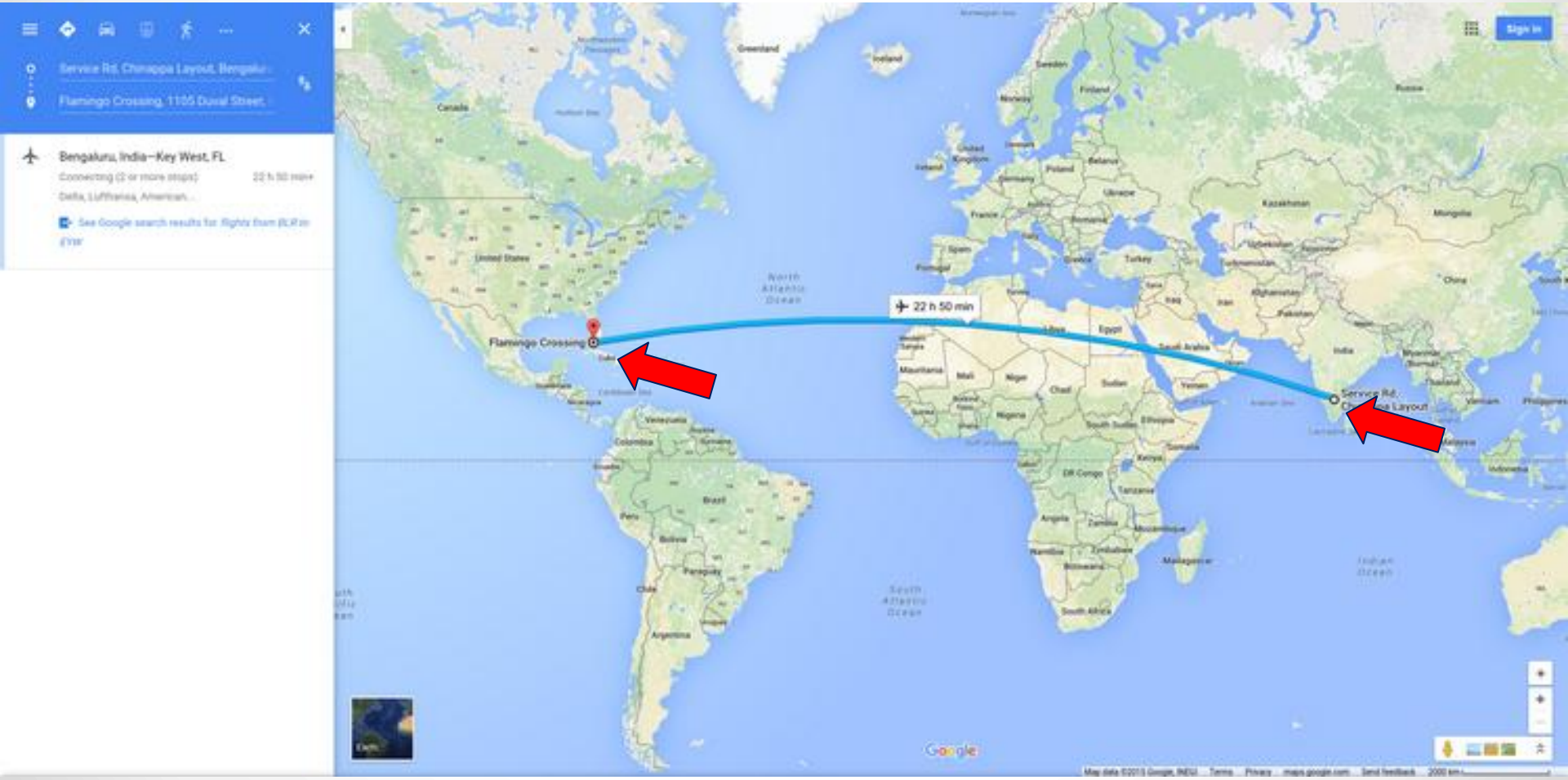



# Greatest distance

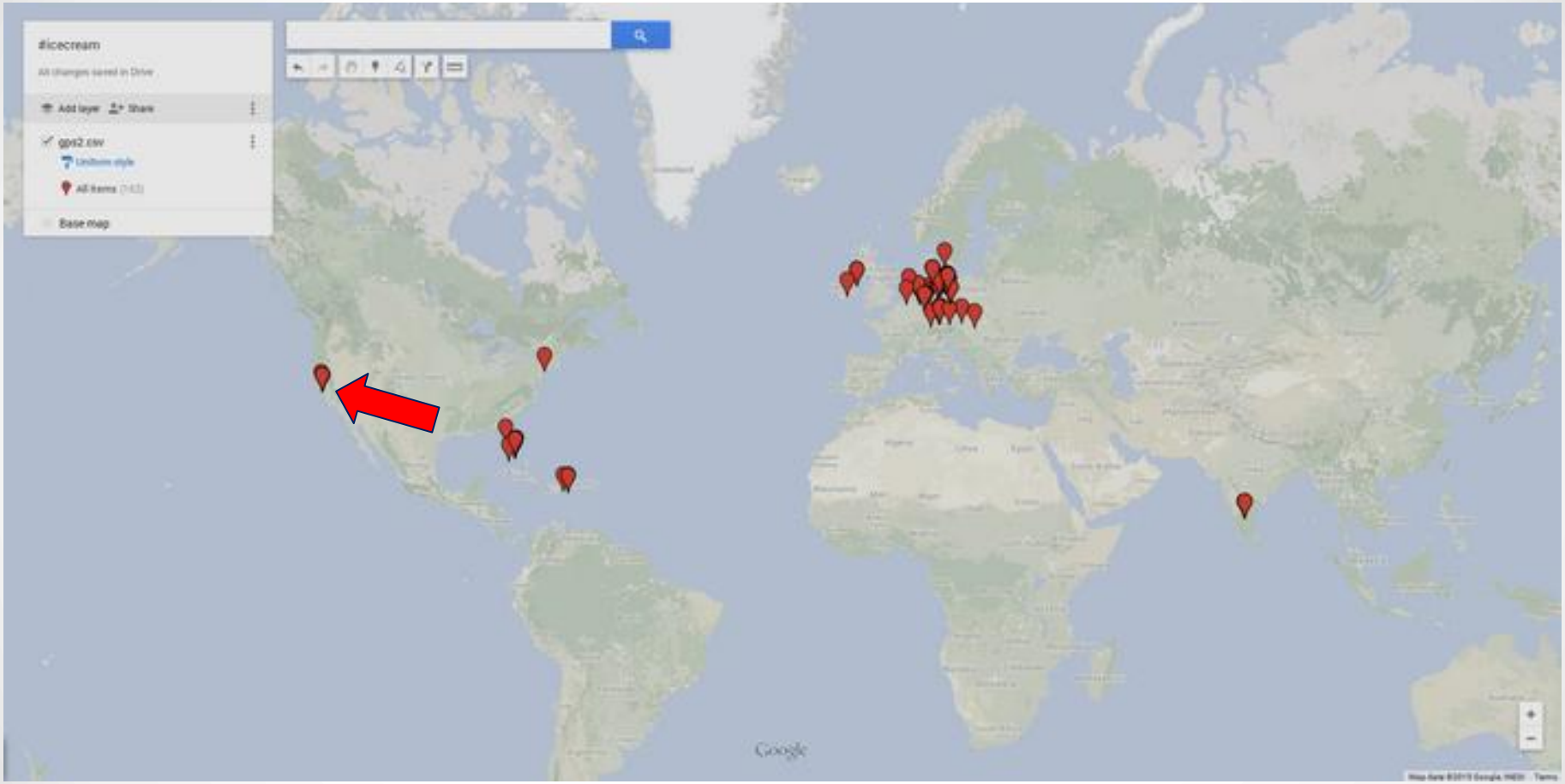
```
icecream=# WITH distance AS (SELECT i.id AS id1, i2.id AS id2,
icecream(#                          ST_Distance_Sphere( ST_GeomFromText('Point(' || ROUND(DMS2DD(i.lon),9) || ' ' || ROUND(DMS2DD(i.lat),9) || ')', 4326)::geometry,
icecream(#                                              ST_GeomFromText('Point(' || ROUND(DMS2DD(i2.lon),9) || ' ' || ROUND(DMS2DD(i2.lat),9) || ')', 4326)::geometry ) AS distance
icecream(#                    FROM images i,
icecream(#                         images i2
icecream(#                   WHERE i.id != i2.id
icecream(#                ORDER BY 3)
icecream-#    SELECT d.id1, d.id2, ROUND(d.distance) / 1000 AS distance
icecream-#      FROM distance d
icecream-#  ORDER BY distance DESC
icecream-#     LIMIT 5;
 id1 | id2 | distance
-----+-----+----------
  63 | 157 | 15285.709
 157 |  63 | 15285.709
 157 |  65 | 15284.916
  65 | 157 | 15284.916
 157 | 116 | 15284.874
(5 rows)
```



# Greatest distance



# #icecream MAP



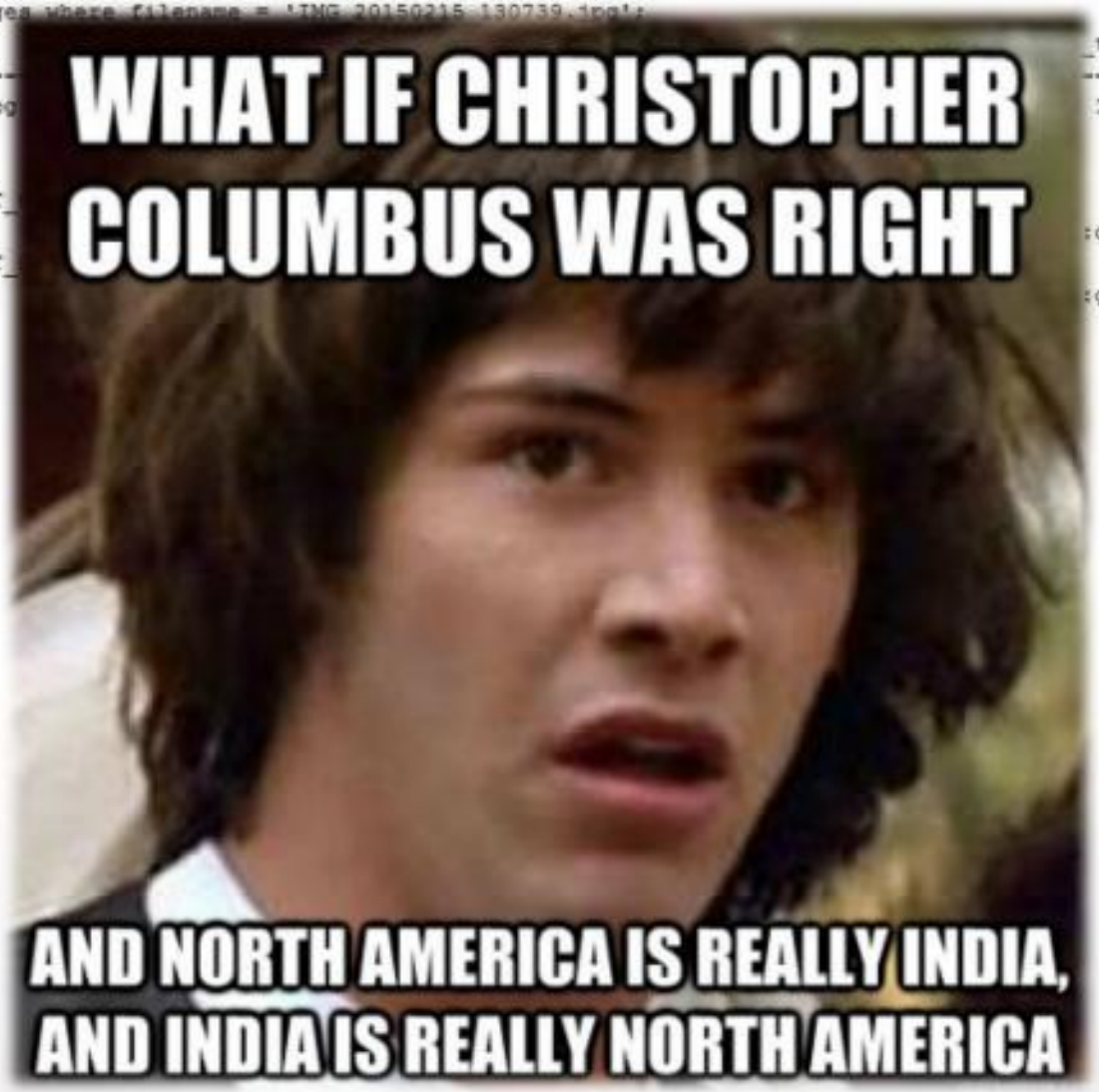
# Greatest distance

```
icecream=# select * from images where filename = 'IMG_20150215_130739.jpg';
 id  |        filename          |                                                  time
-----+--------------------------+-------------------------------------------------------
 137 | IMG_20150215_130739.jpg  | 2015-02-15 13:07:39-08:00
(1 row)

SELECT ST_Distance_Sphere( ST_geometry,
                           ST_geometry ) /1000 AS distance;

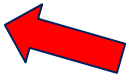
    distance
----------------
 14044.01780568
(1 row)
```





# Greatest distance

```
icecream=# WITH distance AS (SELECT i.id AS id1, i2.id AS id2,
icecream(#                          ST_Distance_Sphere( ST_GeomFromText('Point(' || ROUND(DMS2DD(i.lon),9) || ' ' || ROUND(DMS2DD(i.lat),9) || ')', 4326)::geometry,
icecream(#                                              ST_GeomFromText('Point(' || ROUND(DMS2DD(i2.lon),9) || ' ' || ROUND(DMS2DD(i2.lat),9) || ')', 4326)::geometry ) AS distance
icecream(#                    FROM images i,
icecream(#                         images i2
icecream(#                   WHERE i.id != i2.id
icecream(#                ORDER BY 3)
icecream-#    SELECT d.id1, d.id2, ROUND(d.distance) / 1000 AS distance
icecream-#      FROM distance d
icecream-#  ORDER BY distance DESC
icecream-#     LIMIT 5;
 id1 | id2 | distance
-----+-----+----------
  63 | 157 | 15285.709
 157 |  63 | 15285.709
 157 |  65 | 15284.916
  65 | 157 | 15284.916
 157 | 116 | 15284.874
(5 rows)
```



# Picture 63

| filename | image_id | time | time | name | distance |
|---|---|---|---|---|---|
| IMG_20130923_125934.jpg | 63 | 2013-09-23 09:28:46+02 | 2013-09-23 10:02:40+02 | Jalsa | 0.541274475056 |
| IMG_20130923_125934.jpg | 63 | 2013-09-23 09:28:46+02 | 2013-09-23 08:25:05+02 | EMC India [illegible]of Excellence | 0.638146463129 |

(2 rows)



**Lunch in a restaurant**

# Picture 157

| filename | image_id |
|---|---|
| IMG_20150525_150432.jpg | 157 |
| IMG_20150525_150432.jpg | 157 |
| IMG_20150525_150432.jpg | 157 |

**Key West, Florida**



# Thank you

