A Data visualization project

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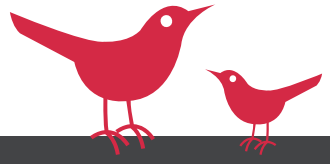
IUAV University of Venice
Processing Workshop with Till Nagel
IxD Studio I (2010 - 2011)

Concept

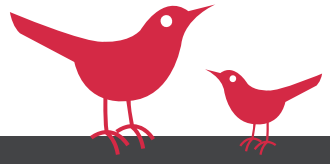
A program that shows ***tweets*** (a post on Twitter) about meals around the world. It's a tool for showing the contrast of meal times in different regions and how arbitrary meal times can sometimes be.

It also shows the range of languages used when tweeting about breakfast, lunch or dinner.



Design

Different tweets are placed accordingly to their location, time and description in a map. Each meal is represent by a shape and color and placed respectively on the map according to the information retrieved from Twitter.

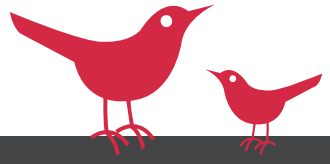


How

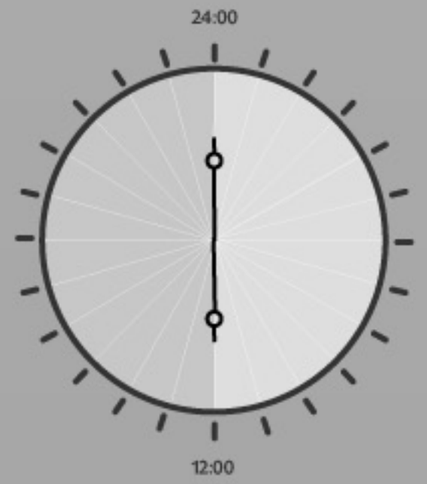
We combined Processing with Twitter using the Processing XML Library.

Tweets were compiled using specific search criteria.

Each post was possible to retrieve thanks to Twitter's API console for specific parameters (e.g. geocode)



MealTweet



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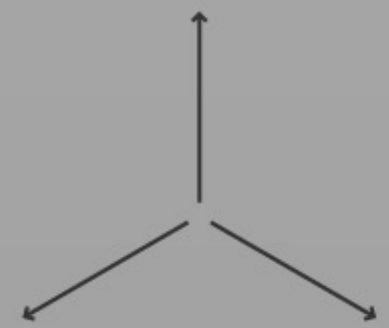


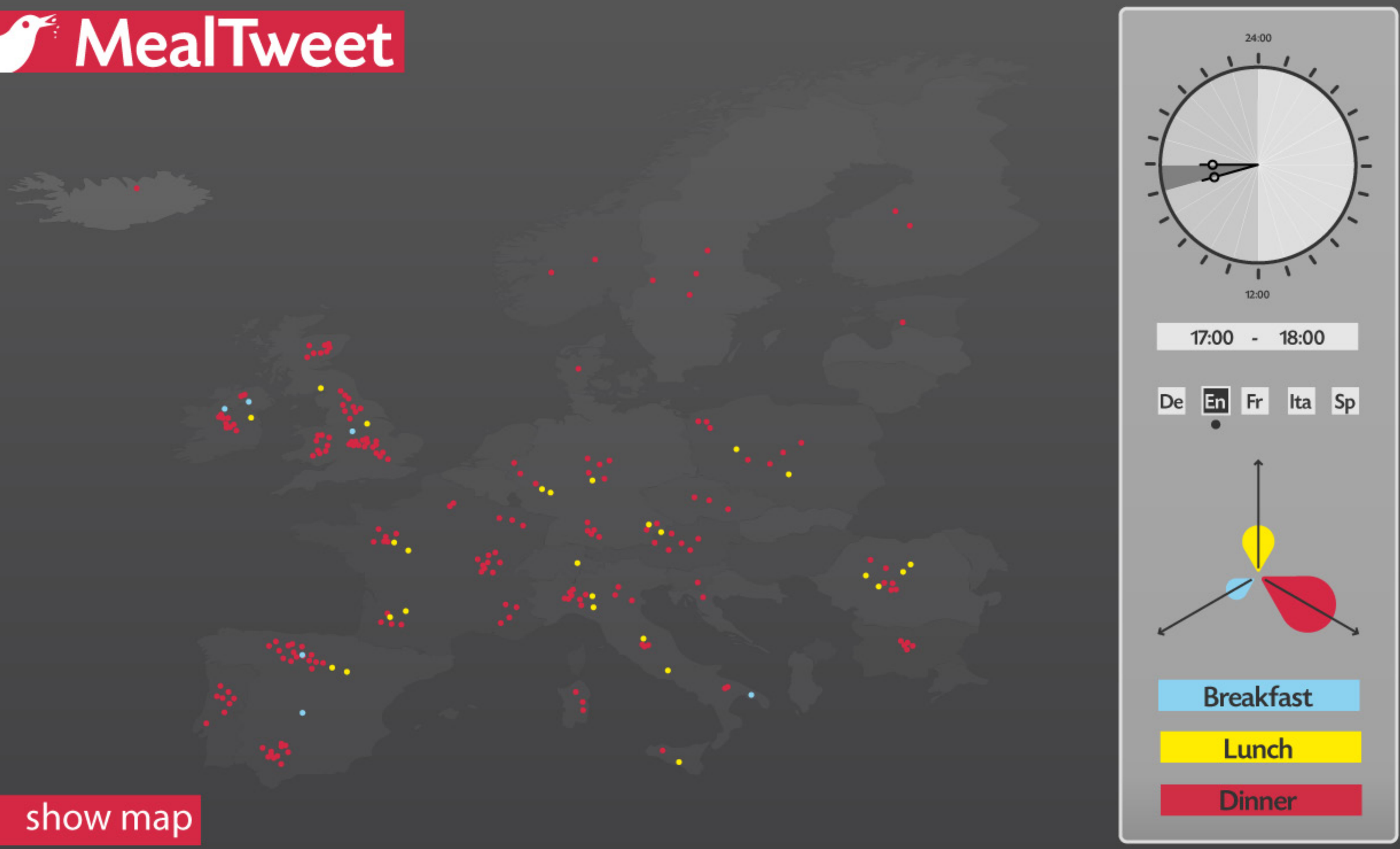
Breakfast

Lunch

Dinner

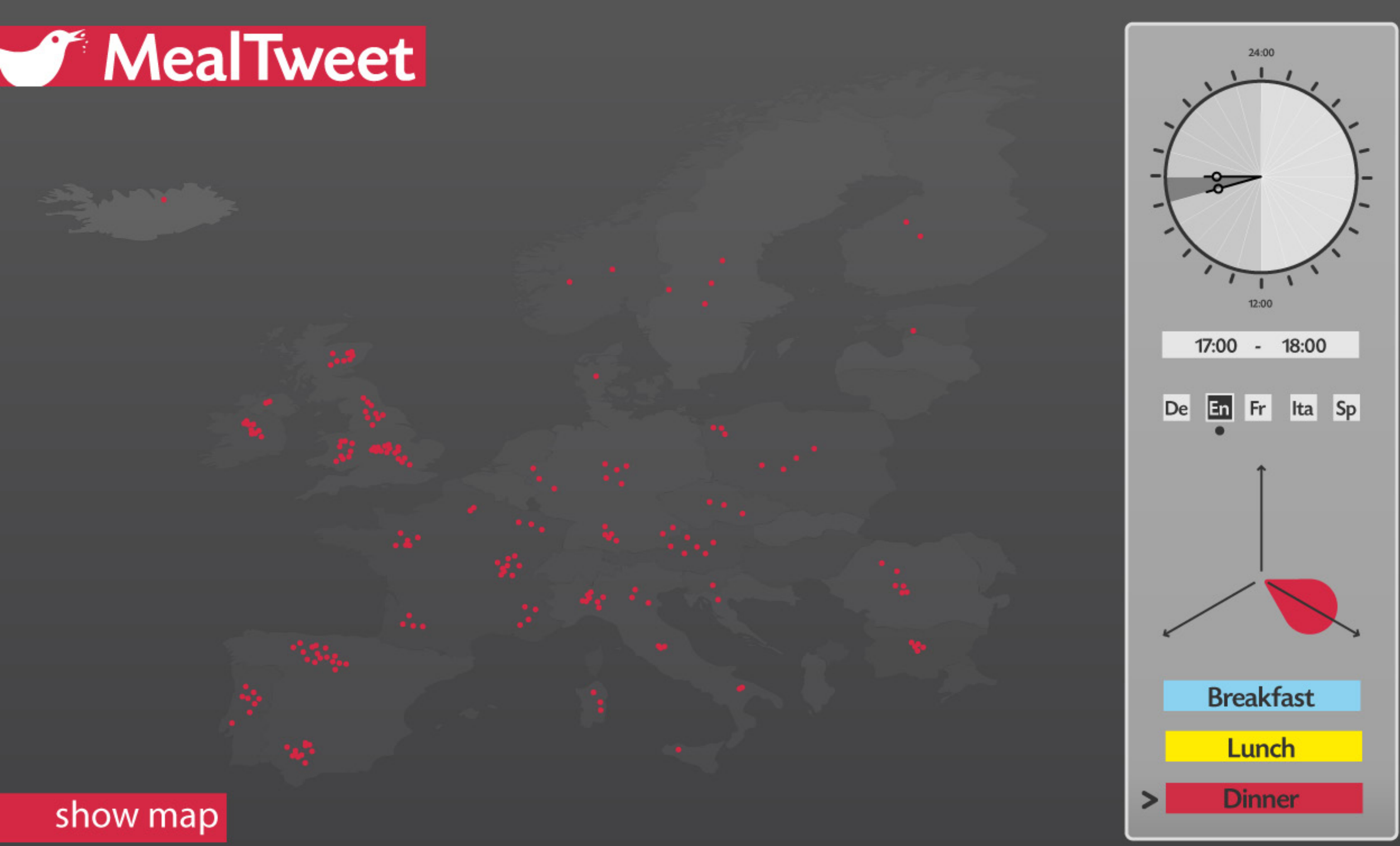
show map

MealTweet



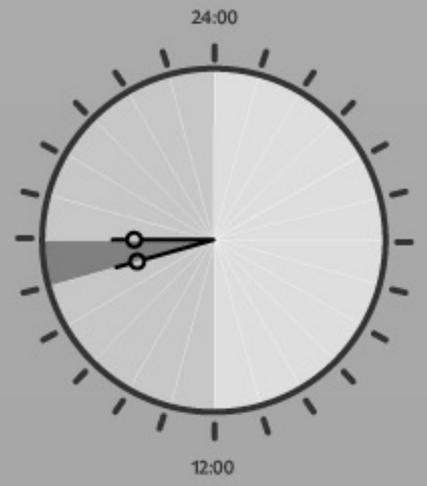
show map

MealTweet



show map

MealTweet



17:00 - 18:00

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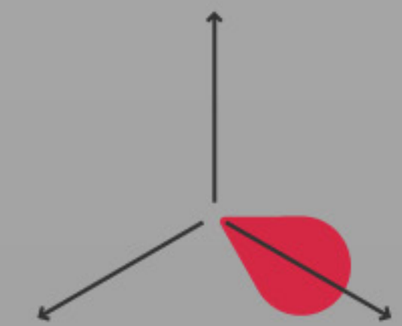


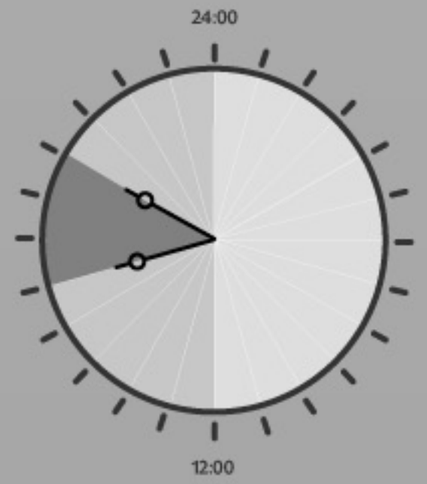
Colazione

Pranzo

> Cena

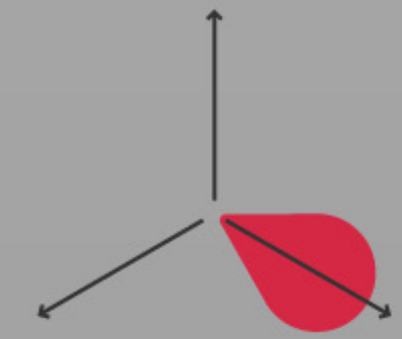
show map

MealTweet



17:00 - 20:00

De En Fr Ita Sp



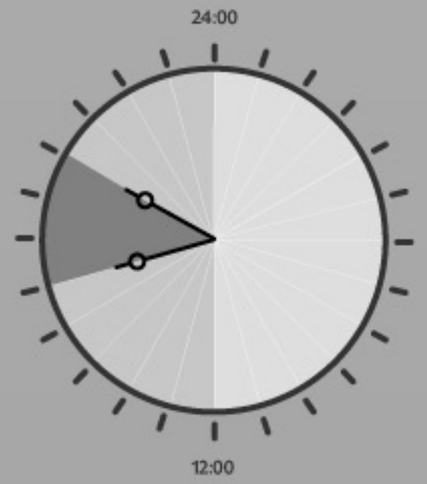
Colazione

Pranzo

> Cena

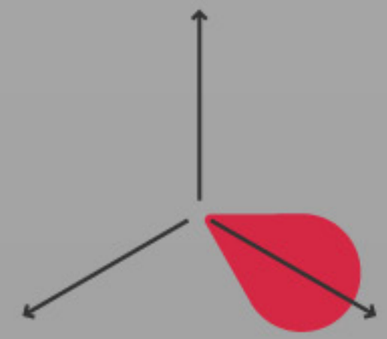
show map

MealTweet



17:00 - 20:00

De En Fr Ita Sp



Colazione

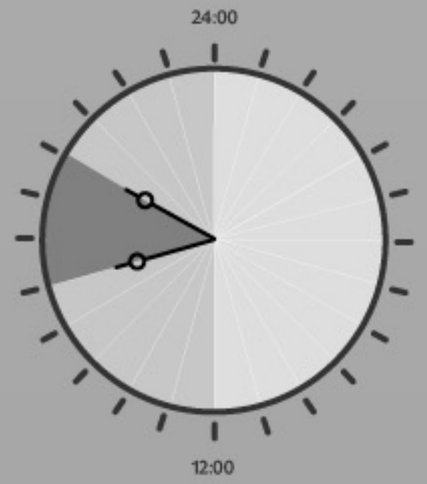
Pranzo

Cena

show map

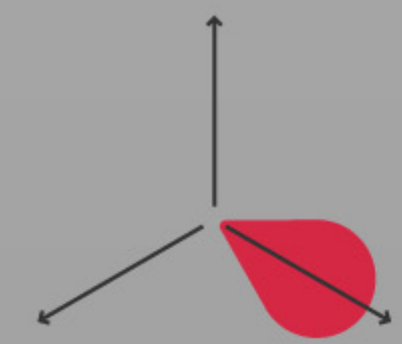
MealTweet

hide map



17:00 - 20:00

De En Fr Ita Sp



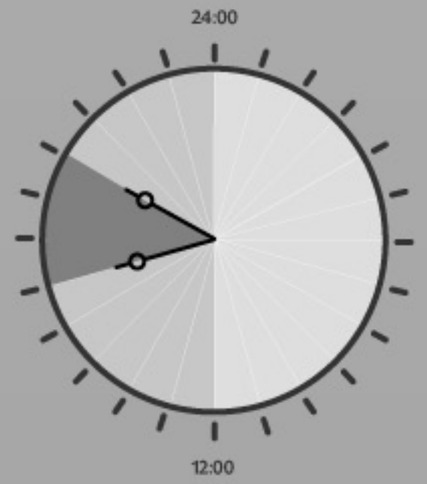
Colazione

Pranzo

> Cena

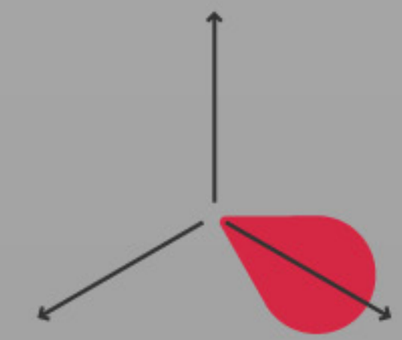
MealTweet

show map



17:00 - 20:00

De En Fr Ita Sp



Colazione

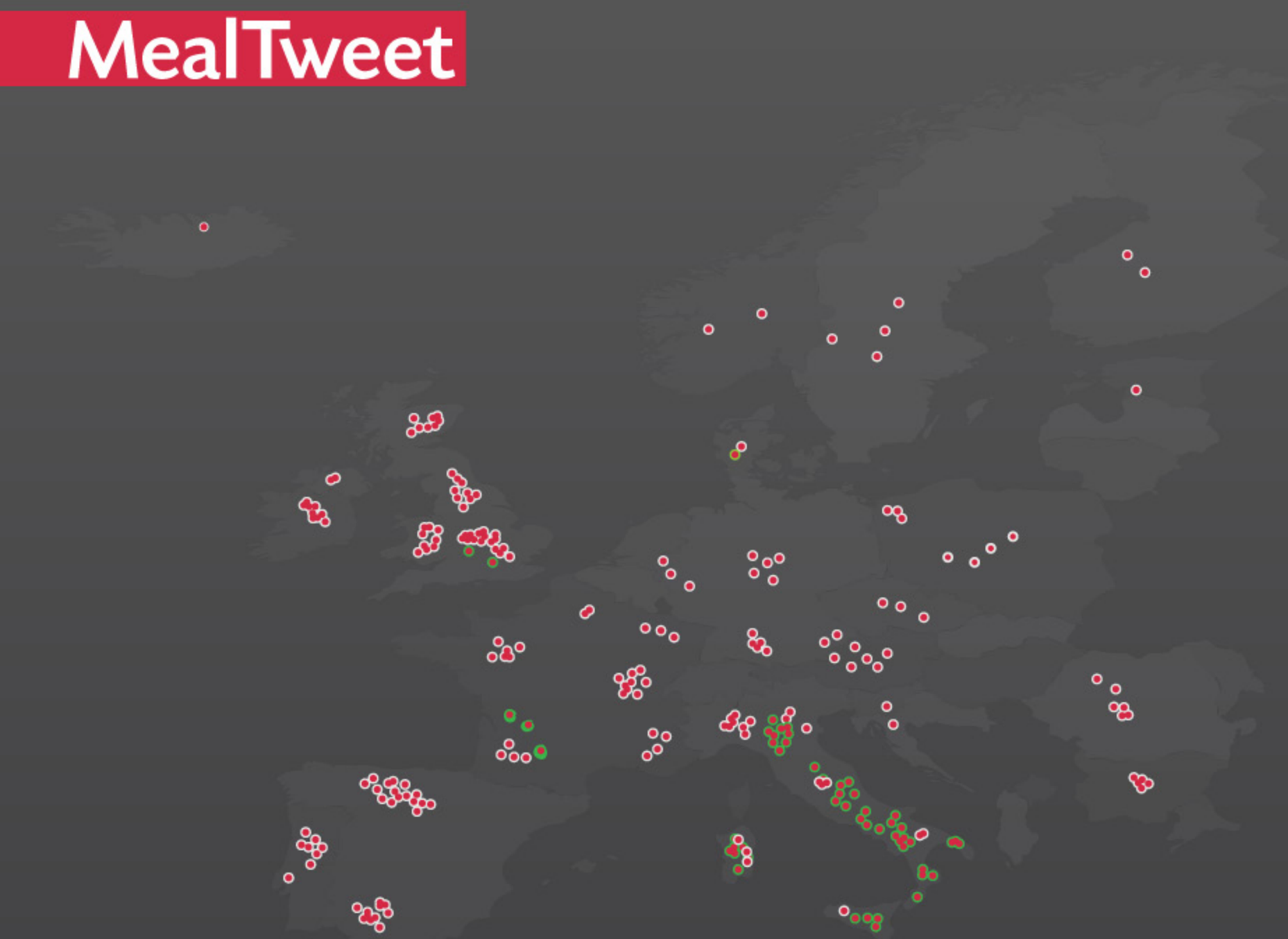
Pranzo

> Cena

MealTweet

show map

MealTweet



6:00 - 10:00

De En Fr Ita Sp

Colazione

Pranzo

Cena

show map

Code

```
// Load RSS feed
String url = "http://search.twitter.com/search.atom?q=breakfast&geocode=53.540307,10.107422,2500km&rpp=100";
String url2 = "http://search.twitter.com/search.atom?q=lunch&geocode=53.540307,10.107422,2500km&rpp=100";
String url3 = "http://search.twitter.com/search.atom?q=dinner&geocode=53.540307,10.107422,2500km&rpp=100";
```

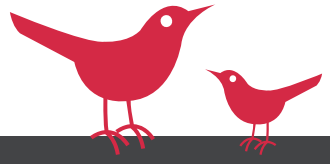
url

search query

returns tweets by location

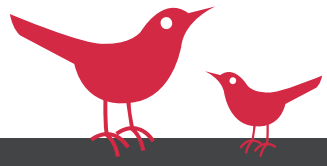
```
String url= "out-breakfast-20101015-130000.xml"; ////////same hour H13
String url2= "out-lunch-20101015-130000.xml";
String url3= "out-dinner-20101015-130000.xml";
```

loads xml file (works for our prototype)



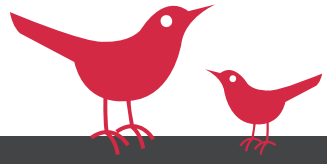
Code

```
// Get title of each element
XMLElement[] entryXMLElements = rss.getChildren("entry");
XMLElement[] entryXMLElements2 = rss2.getChildren("entry");
XMLElement[] entryXMLElements3 = rss3.getChildren("entry");
println("We found " + entryXMLElements.length);

// Points in the map
placeMarkers = readMarkersFromXML(entryXMLElements, "breakfast", color (139,209,240));
placeMarkers2 =  readMarkersFromXML(entryXMLElements2, "lunch", color (255,236,0));
placeMarkers3 = readMarkersFromXML(entryXMLElements3, "dinner", color (212,40,68));

numberTweets_Breakfast = placeMarkers.size();
numberTweets_Lunch = placeMarkers2.size();
numberTweets_Dinner = placeMarkers3.size();
```



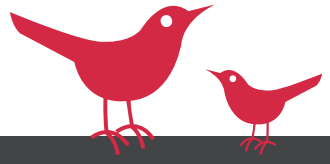
Code

```
ArrayList markers = new ArrayList();

for (int i = 0; i < entryXMLElements.length; i++) {
  String title = entryXMLElements[i].getChild("title").getContent();
  String geoLocation = entryXMLElements[i].getChild("google:location").getContent();
  try {
    String[] locs = geoLocation.split(", ");
    if (locs.length == 2) {
      float lat = new Float(locs[0]);
      float lng = new Float(locs[1]);
      println(meal + "  lat=" + lat + ", lng=" + lng + ", tweet=" +title);

      PlaceMarker marker = new PlaceMarker(title, lat, lng, col);
      markers.add(marker);
    }
  }
  catch (NumberFormatException e) {
    println(meal + " Tweet not used, as location is: " + geoLocation);
  }
}

return markers;
```



Code

```
color cp = europaaa.get(mouseX,mouseY);
//println (cp);
////////////////////////////////////
Biceland = false;
if(cp == -16776961) {
  Biceland = true;
}
else {
  Biceland = false;
```



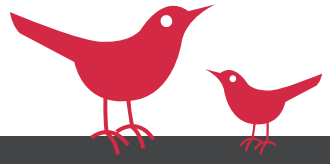
Improvement

Retrieve specific ingredients on each meal in order to create a stronger contrast between countries and regions.

Making each point in the map interactive. For instance, clicking a point will take the user to the original tweet or shows which tweets are connected.

An adequate solution to showing every tweet in every language available by the visualization.

A counter for measuring each meal.



Thank You.