# An application to a topographic problem.

## Introduction

Good afternoon. Maybe only a few of you know that the Euroforum is placed in S. Lorenzo del Escorial, and not in El Escorial. El Escorial, which means 'slag heap' is a very old village founded a long time ago, whereas S. Lorenzo was founded by Philippe II. He found this village to be the residence of the court while he was at El Monasterio. This monument was destined to be the burial place of all the kings and queens of Spain. Why did the king found it here?. Several reasons were given: the mild weather, the proximity to Madrid,... But why in that exact point?. There is an old legend which says that the place where La Baslica is situated is really the gate to hell.

As long ago as Romans' times all this area was believed to be a magic place. Strong storms were frequent at the same place. Abantos, which is the highest mountain in the zone was also a sacred place for the primitive habitants os Spain. In fact, for the Celtiberians *'abantos'* is a bird of prey, similar to the vulture, which carries the souls of the warriors fell in combat.

Now we are going to use the package I have developed not to do sorcery, exorcism or black magic but to calculate the distance and the azimuth from Abantos to El Monasterio. This is called the inverse geodetic problem. Our data are the geodetic coordinates of Abantos and El Monasterio.

## Load the package

In[1]:=