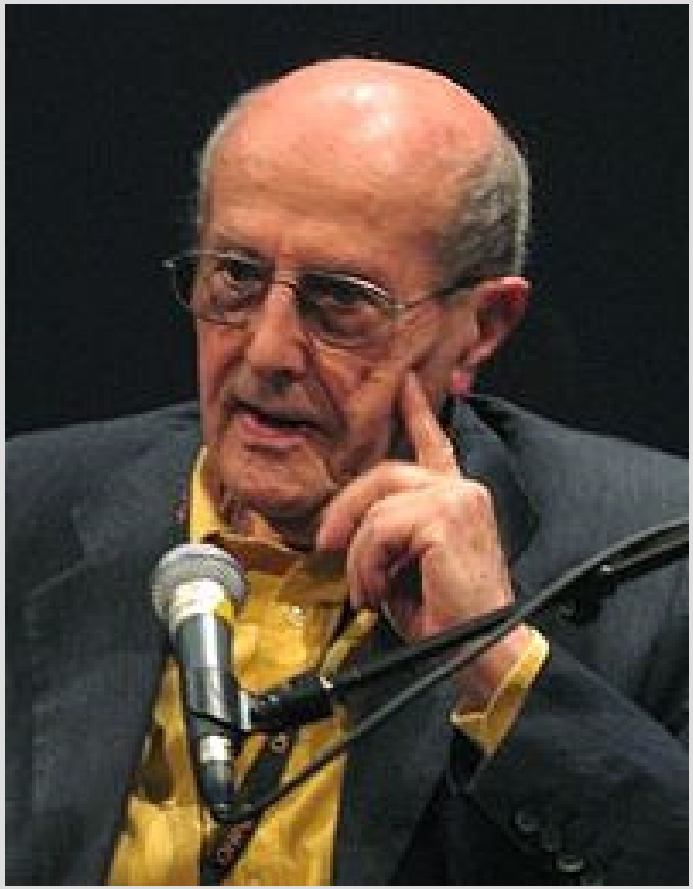
João Agria Torres

jatorres@iol.pt

- *about 60*
  - *wife, daughter, son*
    - *2 dogs*
      - *2 fishes*
        - *2 birds*

That's me!



Manoel de Oliveira
(Porto, Cedofeita, December 11, 1908)

National champion in pole vault
Car racing
Bohemian

32 feature films
Several prizes (Cannes, etc.)


1916

Gago Coutinho
(Lisbon, 17 February 1869 – 18 February 1959)

Gago Coutinho at the Geographical Society of Lisbon March 18 1920

Create a course with special academic skills, as well as fitness, for the portuguese boys, that is needed to the great task that is expected in the colonies

Dear Internet
Can you please find the most famous surveyor ever?
Thanks
João

What is this meeting about?

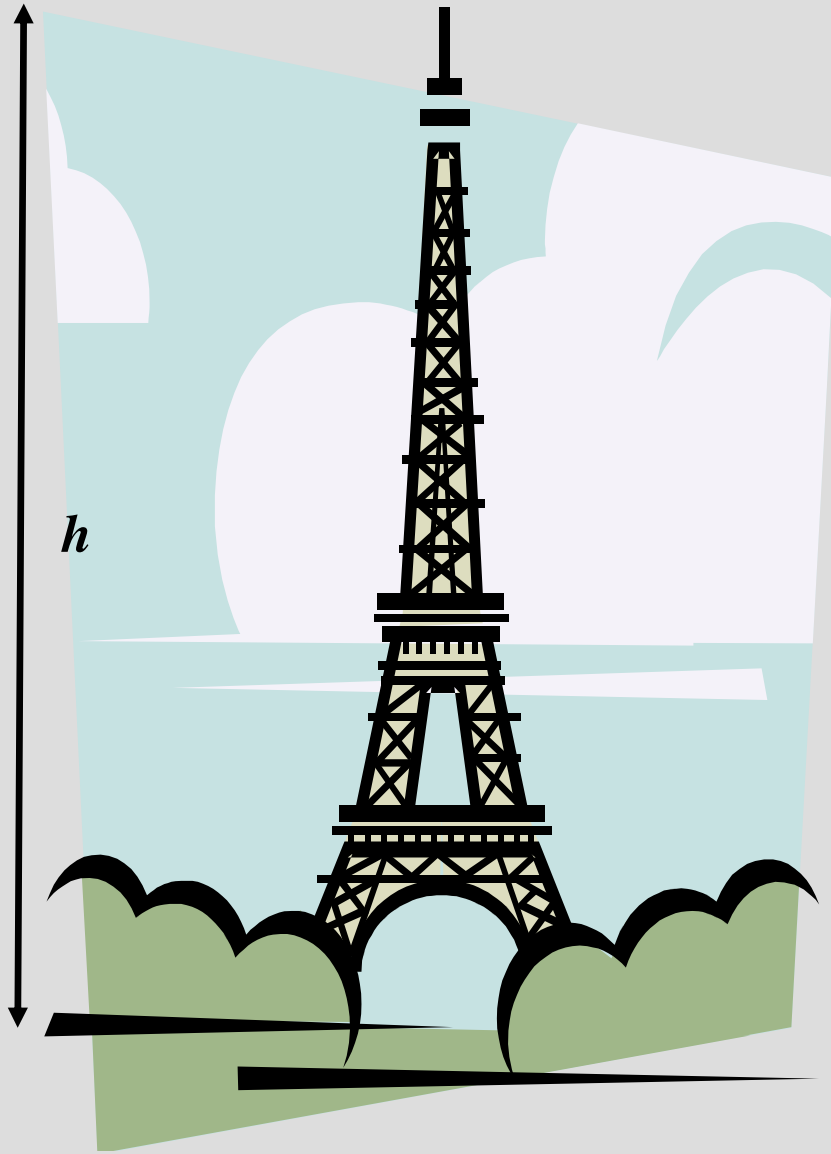
Networking!

Asking questions to get answers

Problem to solve in a test, after the lessons on the variation of pressure with height:

How can you compute the height of a tall building with the aid of a barometer?

Free adaptation of the text
'La mystification mathématique'
from Alain Bouvier

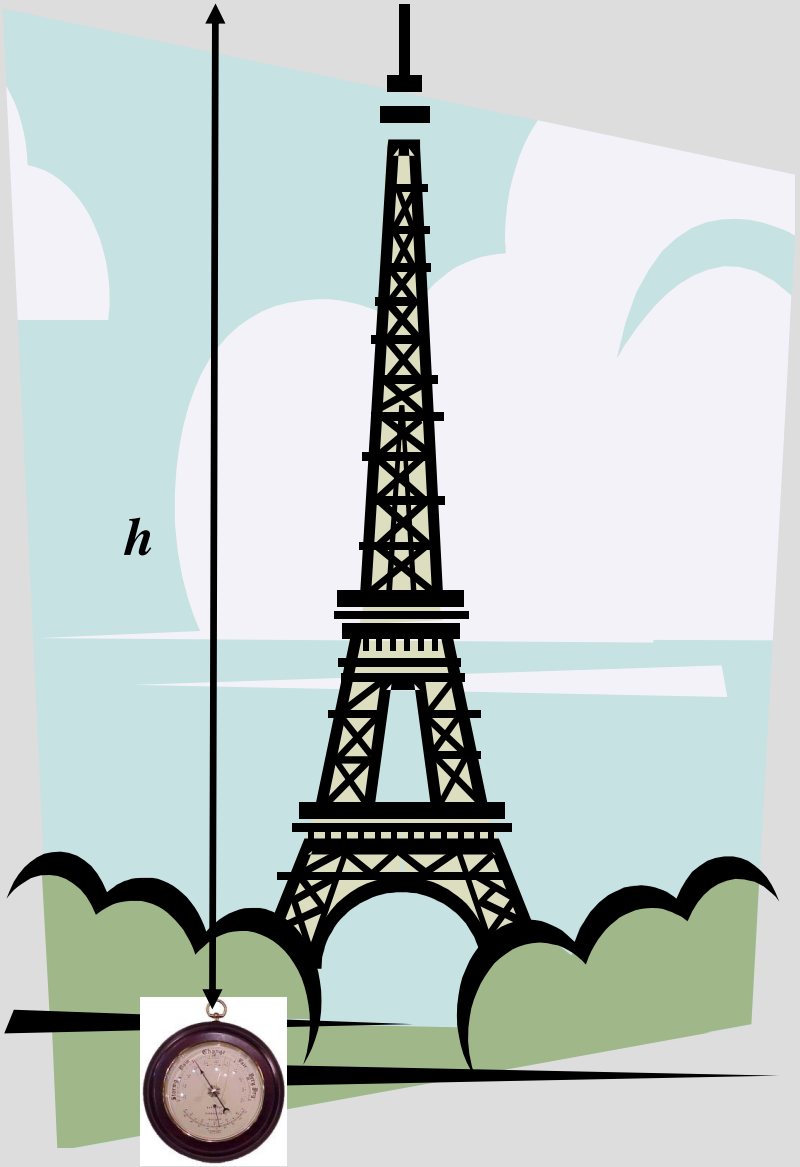


Solution 1:

Tie a rope to the barometer

Carry it to the top and let it go down to the ground

Measure the lenght of the rope (h)



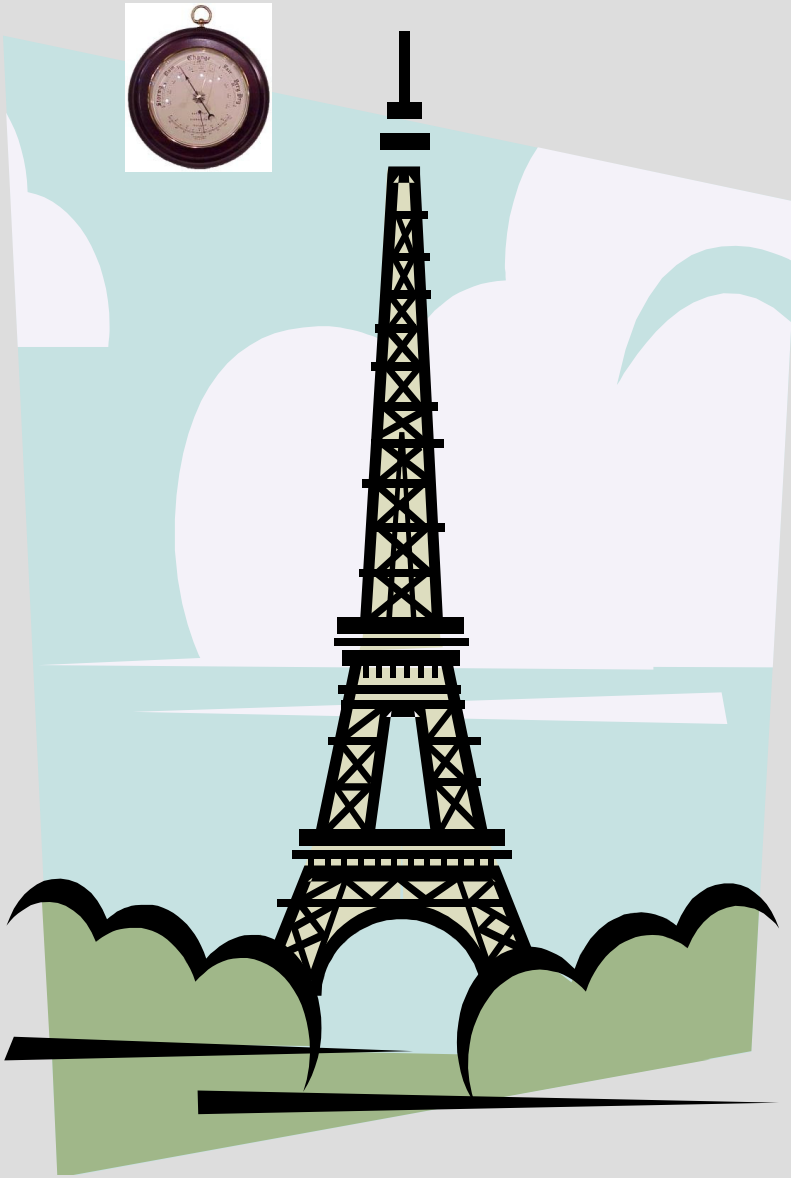
Solution 2:

Take the barometer to the top

Let it fall down

Measure the time of fall (t)

Knowing the value of the gravity acceleration (g), use the equation $h=gt^2/2$



Experience 1

President of the College of Geographical Engineering for 6 years (1990's)

- *Big projects In Portugal*
- *Great technical development worlwide*
- *Globalization*

- *Creation of a "esprit de corps" within the professionals*
- *Organization of several capacity building initiatives*
- *Affiliation to FIG*

Solution 3:

Measure the shadows of the barometer (b) and the building (e)

Using geometric principles, compute h=el/b

l

b

e

h

Solution 4:

Go up by the stairs, taking the barometer with you

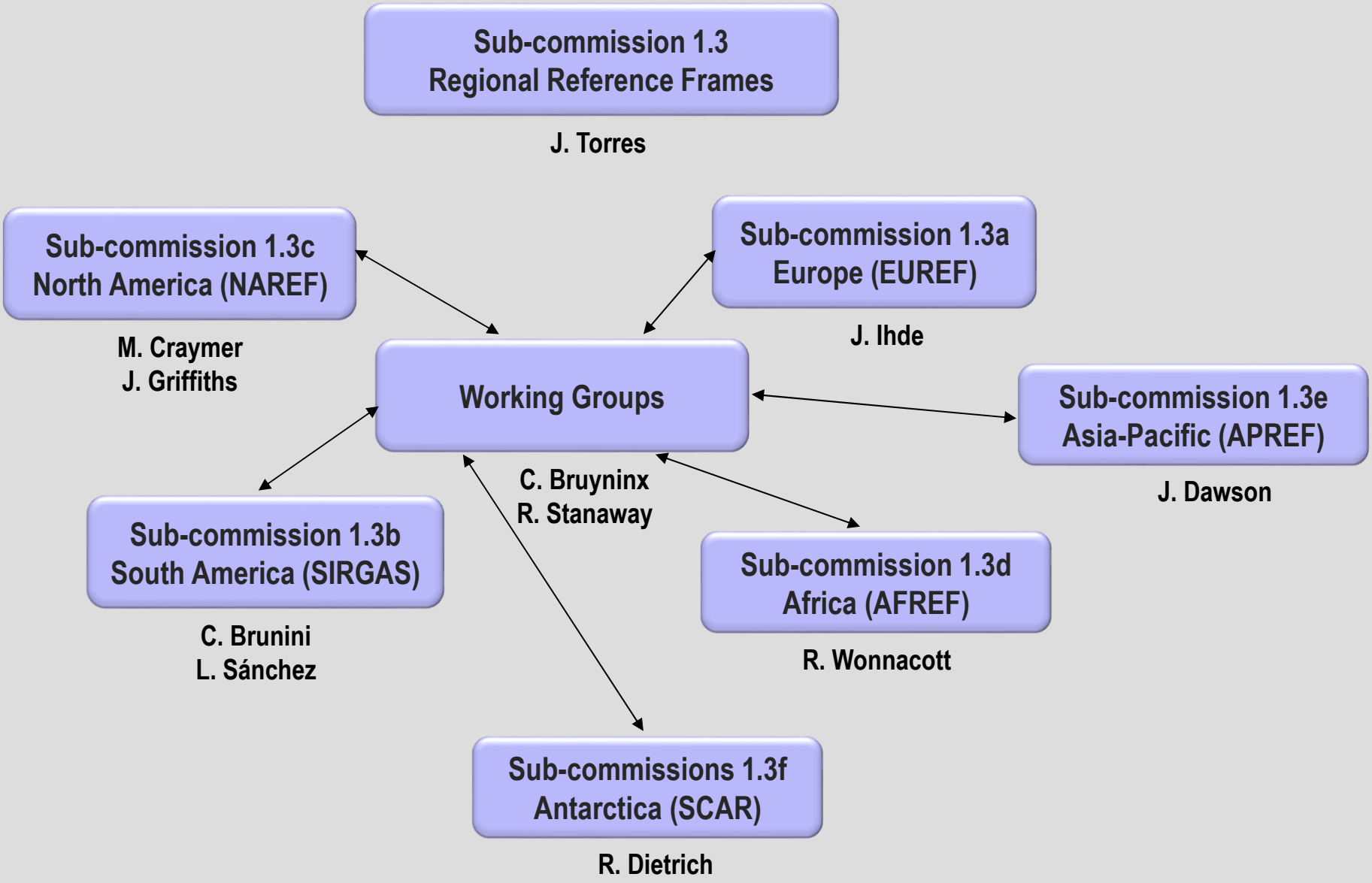
Use the dimension of the barometer (l) as a measuring unity

Record the number of barometers (n)

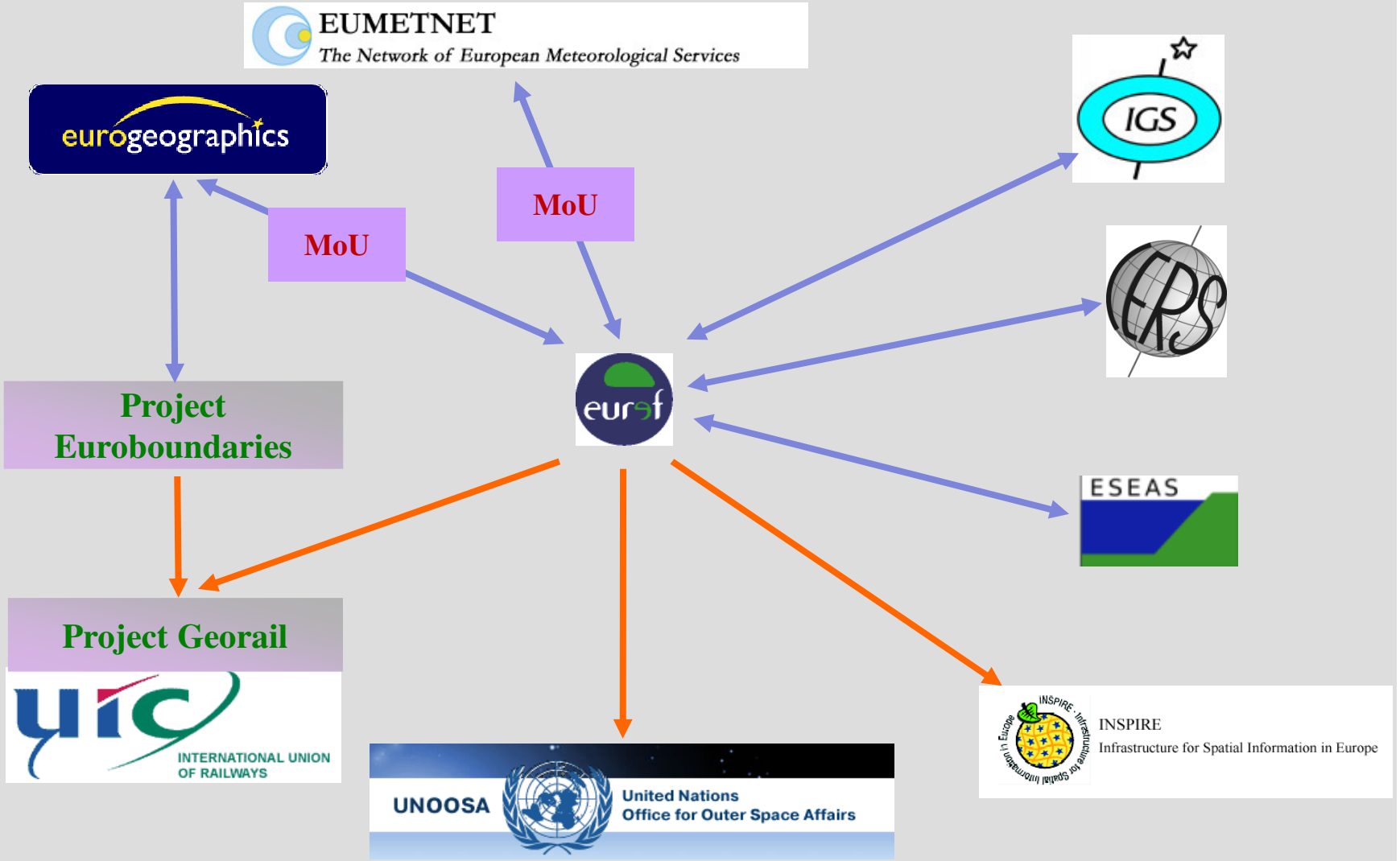
Compute h=nl

l

Experience 2



Experience 2



Experience 2

Chairman of EUREF (1999-2007)

- *To consolidate the activity*
- *To promote the adoption of ETRS89 and EVRS*
- *To adapt technology and science results to the user needs*
  - *ITRF, real-time GNSS (Ntrip), ...*
- *Be aware of the different cultures, traditions, etc.*
- *Creation of a good environment for cooperation*
- *Paying attention to technical/scientific issues and their relationship with the user requirements*

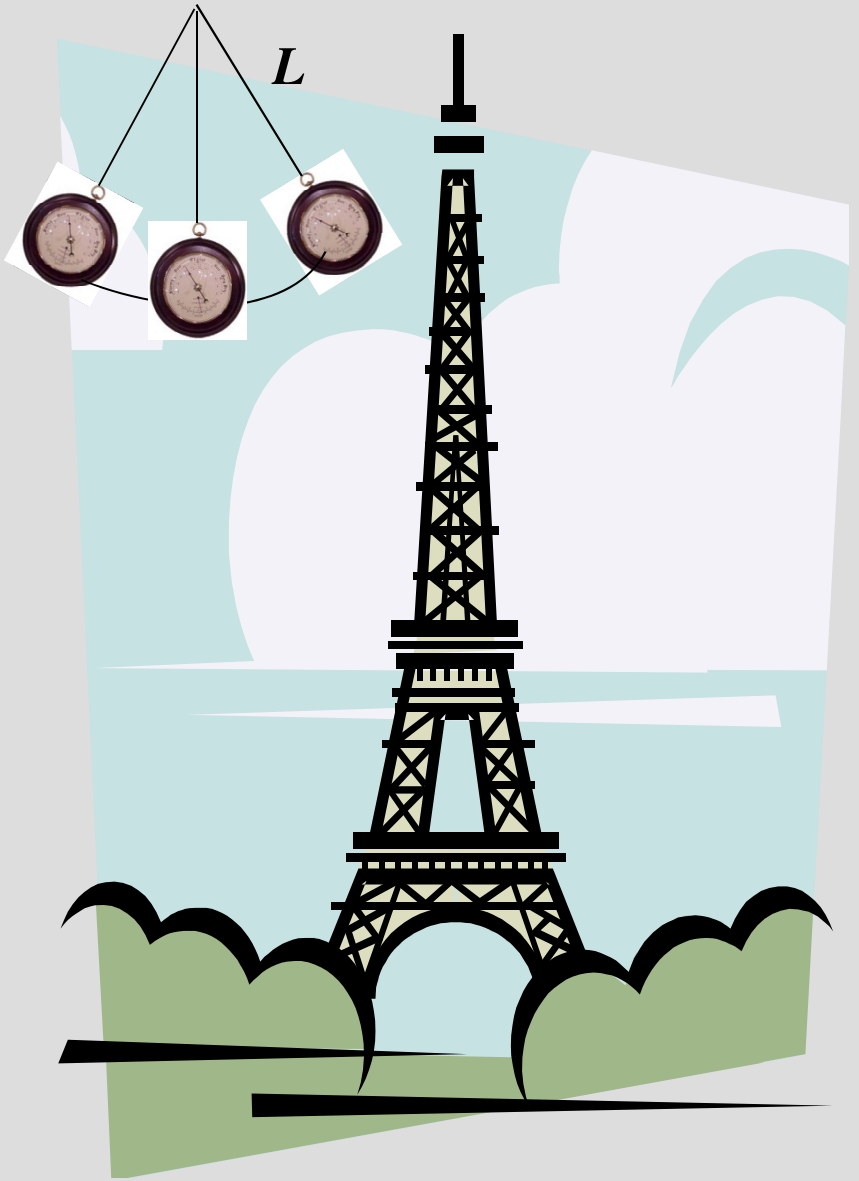
Solution 5:

Suspend the barometer and make it oscillate like a pendulum

Measure the oscillation period on top (T_h) and ground (T_0)

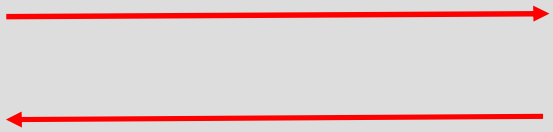
Use the pendulum law to compute the gravity acceleration on top (g_h) and ground (g_0) ($g = 4\pi^2 L/T^2$)

Knowing the value of the vertical gradient of gravity acceleration (G), compute $h=(g_h-g_0)/G$



Solution 6:

Offer the porter the barometer in exchange of the information on the height (h) of the building



h

Experience 3

Facilitator of INSPIRE TWG on CRS and GGS (2008-2009)

INfrastructure for SPatial InfoRmation in Europe

- ***Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing INSPIRE was published in the official Journal on the 25th April 2007***

- ***The INSPIRE Directive entered into force on the 15th May 2007***

Addresses 34 spatial data themes needed for environmental applications

These themes are subdivided in the three annexes of the directive

Annex I

1. Coordinate reference systems
2. Geographical grid systems
3. Geographical names
4. Administrative units
5. Addresses
6. Cadastral parcels
7. Transport networks
8. Hydrography
9. Protected sites

Annex II

1. Elevation
2. Land cover
3. Orthoimagery
4. Geology

Annex III

1. Statistical units
2. Buildings
3. Soil
4. Land use
5. Human health and safety
6. Utility and Government services
7. Environmental monitoring facilities
8. Production and industrial facilities
9. Agricultural and aquaculture facilities
10. Population distribution – demography
11. Area management / restriction / regulation zones & reporting units
12. Natural risk zones
13. Atmospheric conditions
14. Meteorological geographical features
15. Oceanographic geographical features
16. Sea regions
17. Bio-geographical regions
18. Habitats and biotopes
19. Species distribution
20. Energy resources
21. Mineral resources

Experience 3

Facilitator of INSPIRE TWG on CRS and GGS (2008-2009)

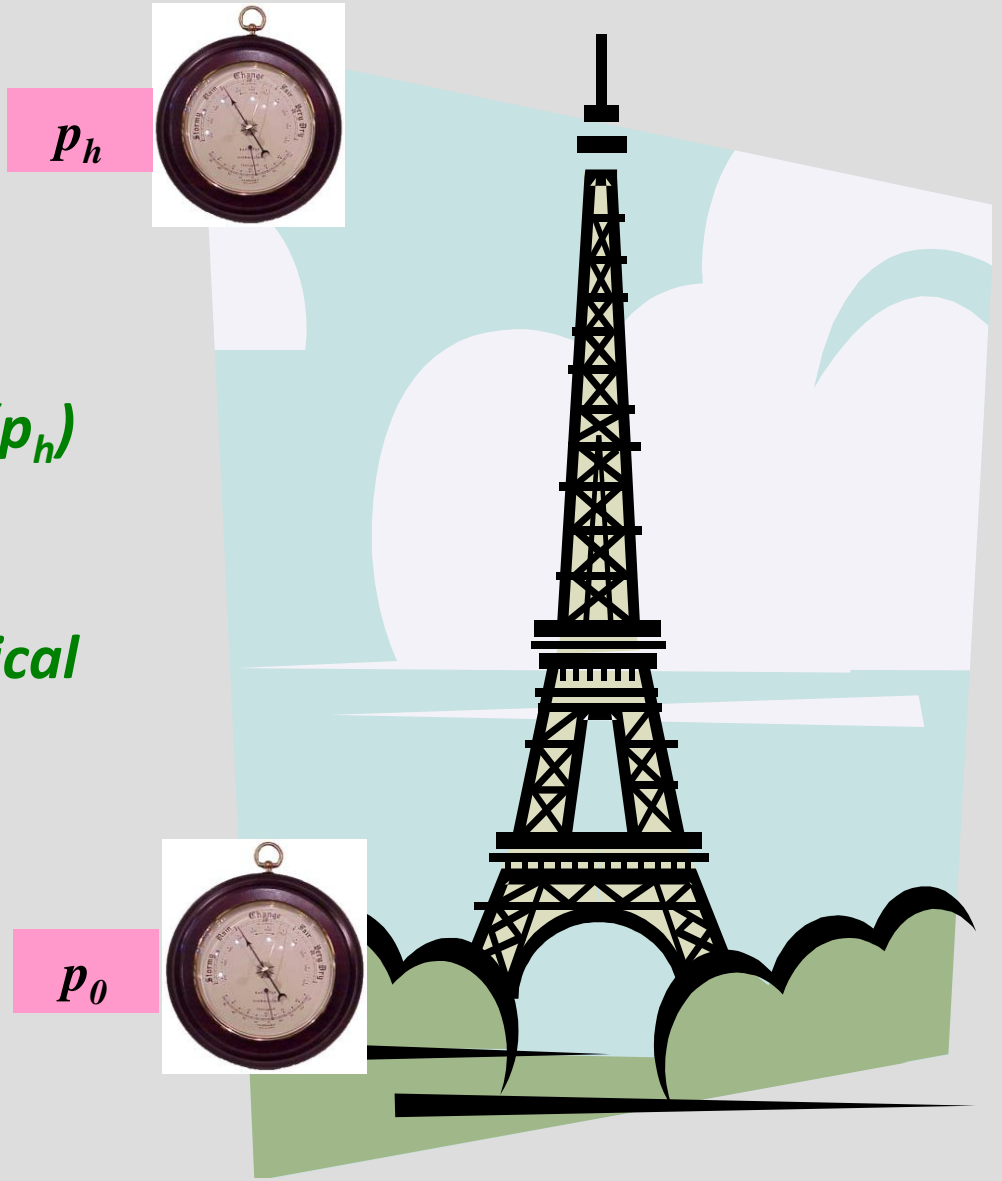
- *To create the specifications for use of common systems*
- *To use the international standards as much as possible*

- *Be aware of the different types of user communities*
- *Promote the dialogue and exchange of information*
- *Paying attention to technical/scientific issues and their relationship with the user requirements*

…and there is still Solution 7:

Measure the pressure on top (p_h) and ground (p_0)

Knowing the value of the vertical gradient of pressure (P), compute $h=(p_h-p_0)/P$



THREATS

- *Overlap of areas of expertise*
- *Technological democratization*
- *Rate of technological change*

COGNITIVE ELEMENTS

- *Acquire the necessary knowledge*
- *Adapt to problem resolution*
- *Training*
- *Capacity to learn with the others*
- *Initiative, capacity to decide*
- *Focus on target*
- *Professional communication*

BEHAVIORAL ELEMENTS

- *Motivate cooperation and team work*
- *Have leadership and self-control capacities*
- *Develop the confidence from the others (clients)*
- *Show professional ethics and personal integrity*
- *Follow quality and good practice principles*
- *Engage on professional development*
- *Stimulate mobility*

Dear João

I found the most famous surveyor ever!

Click to see picture!

Regards

Internet


THE UNITED STATES OF AMERICA
ONE DOLLAR

The Geodetic Infrastructure in Europe - today and tomorrow

THE GEODETIC INFRASTRUCTURE BEHIND THE NEW CONCEPTS OF REFERENCE SYSTEMS

João Agria Torres
SPUIAGG

IAG Sub-commission 1.3: Regional Reference Frames
jatorres@iol.pt

International Association of Geodesy

... advancing geodesy ...

2011 June 22-23

Umeå

SESSION 1.2

REGIONAL AND NATIONAL REFERENCE SYSTEMS

João Agria Torres
International Association of Geodesy
(jatorres@iol.pt)

Being a father and uncle surveyour

Dear Young Surveyors

I wish you all the best

Follow your dreams, unless they are stupid

Regards

João