World Class Universities on the Web
A network graph view of Webometrics.info

José Luis Ortega  
jortega@ehu.de

Isidro F. Aguillo  
isidro@ehu.de

Universities are grouped by countries. It is observed countries with a great cohesion degree (Spain, Purple), Japan (Orange) and countries with a scattered network (France, Blue).

Countries with large universities are far from the centre. It may be due to problems retrieving non-Latin characters (China, Japan, or to insufficient international contents (Poland).

Transversal links emerge in Global World networks reducing the Clustering Coefficient (CC=0.27-0.26) and its average path length (L=2-2.2). It also shows scale-free properties such as power law degree distributions ($\lambda=0.81; r=87.73$).

Notice the absence of African countries among South Africa and Middle East countries (except Saudi).

North America and Europe are the regions where most web pages are located, followed by China, Japan, and Australia.

Links flows are mainly established between the US and EU countries. Other flows are set up between the US and East Asian countries and Australia.

The core is dominated by the US and large European countries such as Germany and UK.

The core also shows linguistic and cultural relationships. So, four clusters are detected: German, British, Nordic, and North American.

Methods
Population: 1,000 university web domains from Webometrics.info
Links matrix: 1,000 x 1,000 university web domains from YAHOO!
Attributes:
- Size: number of web pages
- Colour: country
- Layout:
  - Energy: Fruchterman-Reingold
  - Cut-off: 1/20 links
Software: Pajek 1.62

Population: 53 countries from Webometrics.info (1,000 universities)
Links matrix: 53 x 53 countries from YAHOO!

Languages:
- Class: Jenks’ natural breaks
- Hatch map: number of web pages
- Flow map: number of links
Software: MapViewer 6