Publications on science mapping


BRILLIANT DISPLAY

From a jewel-like bird, rarer than any diamond, to the delicately poetic swirls generated inside aircraft engines, the pursuit of knowledge turns up its fair share of beauty. This issue, *Nature* wraps up the year with an arresting series of images from 2006. We've divided them into the art of the natural world, planet-scapes both domestic and extraterrestrial, and the splendour of modern technology. Just because something enhances our knowledge doesn't mean it can't also be bewitching.

Researched and written by Emma Morris.
Journal mapping

- 16,000+ journals clustered using bib coupling of references and keywords
- 554 clusters formed, cluster layout out on a sphere
- Mercator projection of the spherical solution
- There is one rotation of the spherical solution (i.e. from near the “South Pole”) that gives a near circle

Consensus among experts

The circle of science

Scopus data – single year (2007)

Count references & apply threshold

2.1 M highly cited references

Cluster references using co-citation

84,000 clusters (paradigms)

Fractionally assign current papers to paradigms

5.6M current papers (2003-2007)

Order 80,000 paradigms around perimeter of a circle

For visualization purposes

Calculating research leadership / IDR

Start with 84,000 paradigms
Threshold using market share
High market share paradigms
Cluster paradigms using university papers
Identify university strengths
Calculate leadership quantities, sizes
Identify distinctive competencies
Locate distinctive competencies within the circle

For visualization purposes

University departments

Dynamics is next