Assignment 3. World Population Map
Out: week 8, due week 10

Goal:
To apply the self-organizing feature map (SOM) to portray complex correlations in multidimensional statistical data.

Data Source:
PRB's 2001 World Population Data Sheet contains the latest world population estimates, projections, and other key indicators for 200 countries, including births, deaths, natural increase, infant mortality, total fertility, percent of young and aging population, life expectancy, urban population, HIV/AIDS prevalence, contraceptive use, land area, and population per square mile.

Task
1. Create a data set by selecting about 10-15 features characterizing the population of about 100 countries
2. Design a two-dimensional SOM
3. Train SOM to cluster the data
4. Label the map by applying the vectors representing the countries. Draw a map with the location of each country.
5. Write a brief report including:
   • description of data (features and countries)
   • SOM design and training (number of competitive neurons, type of the neighborhood, training epochs)
   • results
   • discussion and interpretation of the results

Enclose your Matlab code.

Submission: both hard copy and by e-mail to: irena@it.usyd.edu.au.
Deadline: 16 May 2002 (Thursday, week 10)