AnaDo

AnaDo is a program to analyse a time serie of data.

AnaDo help you to retreive regulerities in this data (cycles, attractors, frequencies ...).

Use

AnaDo may analyse all serial of mesures or calcul results giving evolution of any variable during the time.
For a maxi compatibility, data may be presented as a text file.
Any line gives only one number : the value of the measured variable.
The times intervals between mesurements are assumed identicals.
The units (Time, Frequency ...) are printed if you want.

Clik on File menu and choose any data file. The Curve Window immediately appear.
Clik on Window menu to see other form of the data or to reorder screen.
The principal window of AnaDo is MDI window : many serial data may be simultaneously visible in screen for comparing them.

Possibilities

For any file you give him, AnaDo will paint :
- The curve presenting evolution of the values during time.
- The two dimensional atractor.
  This obvious any special comportments (Simple or complex cycle, strange attractors or others).
  The atractor is reconstructed folowwing the time delay method:
  It is the set of points those coordinates are :
  $x(t), x(t+s)$
  $x(t+1), x(t+s+1)$
  $x(t+2), x(t+s+2)$
  ... etc
- The Fourier transform of the signal.
  This may see the important frequencies in the signal if there is any.

Licence and Autors

This program as been writen by H Barousse.
The Fourier transform calcul uses other program writen by Guillaume Hérault.

These programs are diffused in shareware.
You can try them free during a few days.
If you like them and follow using, you have to pay a licence.
You will receve a more performing version of the program and a list of others programs of the same autor.

Note that the registered version promise to graduate axis with the units you choose. See example SECTEUR to evaluate interest of the result.

The register price for AnaDo is 25 USA $. This does not include the Fourier transform calcul (that is not of the same autor) For this, you will see the file FFT.DOC in repertory SIGNAL on the same disk.

Langage

AnaDo exist in english and french.
My english is very poor. Sorry. If you know a little french, please see to the french help. If you note any translation error, contact me.

Units

If a units file(.UNT) is associated at the current data file, axes painted on screen will be graduated according to the file units.
Note that you can create yours own units file only if you purchased the licence. if not, only sample SECTEUR have an associated unit file. This promise you to see the result you can obtain.

The dialog permet to choose units and create units file.
Put in Unit name the name you choose. ATTENTION Frequency unit name has to square with time unit. For example Hertz and Second ou MHz et microSecond.
Modify the Sample time editor (Time duration between two samples of the signal) or all duration(of the mesuring). This two numbers are tied : Sample time*NbrEch=All duration. This calcul is done by AnaDo all time you modify one. The maxi frequency (The sampling rate) is calculated by AnaDo to.
Now complete all the editors Graduation (The valors to write on the axes) and under grad (marked with a line but without number).

Examples

Examples files are in the same disk.

Cos.chs

Values calculated by Cos(t). Increment is 0.1 radian, 500 calculated points. 31 waves of 63 points all env. Here the atractor is a simple ellipse what confirm the periodic form of the signal.

Cos.PAS

Is the program (Realy simple) that created Cos.Chs. You may copy this program to create yours own .CHS files.

Courbe.chs

Give values calculated by Cos(t)+2*Sin(3*t). Increment is 0.2 radians. 2000 points calculated. 62 waves of 31 points all env. The atractor still is a line but they have loops. Signal is periodic but with two different frequencies.

Alea.chs

Give 1000 random numbers between -1 and +1. Here the atractor begin a cloud of uniformly sow points. This confirm the probabilist comportment.

Secteur.chs

Give a serial of mesuring of elictric sector all the 3.0207 milli second during 2 secondes about (695 points).
They are difficult conditions : with 7 points the wave, the curve is not visible.
Nevertheless Atractor or Fourier window well give the periodic nature of measured signal. The atractor is an ellipse a little blured by noise. Compare with cos.chs.
There is a sinusoide and a seeming random noise.

This sample too promise to see using AnaDo with units. For yours files, units may be disponible only if you purchased the licence.

XLorenz.chs et ZLorenz.chs

Are done by a calcul on Lorenz transform (Classic of the determinist chaos). It is a sample of results produced by the program LORENZ by the same autor. Program LORENZ is difused separately in shareware and help to study the transform and the determinist chaos.
Here is a beautiful sample of strange atractor.