Subject: IDL Routines Available

Posted by David L. Windt on Thu, 18 Sep 1997 07:00:00 GMT

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I've written many programs in IDL that you're welcome to use if you like. Listed below is a short description of what's available. If you're interested, have a look at <http://www.bell-labs.com/user/windt/idl/> for complete downloading and installation instructions.

Available IDL libraries:

imd - Multilayer optical properties: modeling and curve-fitting

Version 3.0, 17-September-1997

IMD is a point-and-click IDL application that can calculate the optical properties - reflectance, transmittance, and absorptance - of an arbitrary multilayer structure, i.e., a structure consisting of any number of layers of any thickness, and of any material. IMD includes a database of optical constants for over 150 materials, spanning the photon range from the X-ray region to the far infrared. It's also easy to use your own optical constants if necessary, or to create new X-ray optical constants for any compound, using the CXRO tabulated atomic scattering factors for 92 elements. IMD can be used for both modeling, and for parameter estimation by non-linear, least-squares curve-fitting (including confidence interval generation) to your own measured data. IMD can also compute the electromagnetic field intensity vs. depth in a multilayer structure.

For more details, see <http://www.bell-labs.com/user/windt/imd>

topo - Surface topography analysis

Version 2.01, 14-August-1997

The topo library is a set of IDL routines for analyzing 1D or 2D surface topography (i.e., surface roughness) data. I originally wrote these routines in order to analyze WYKO and AFM data of optical surfaces, but the routines are general, and can be used to analyze any type of 1D or 2D topography data.

For more details, see <http://www.bell-labs.com/user/windt/idl/topo.html>

windt - General purpose routines

last updated 10-September-1997

Lot's of different stuff here. Some of the highlights:

-LEGEND, CURVE_LABEL, and PLOT_TEXT: for robust plot annotation

-PLOT_PRINT: an easy-to-use graphical printer interface

-MORE and EROM: to easily write and read vectors to/from ASCII
files

-VALUE_TO_INDEX: given a scalar value, find the closest array
index

-DIALOG: like WIDGET_MESSAGE, but also includes fields and lists

-Several compound widgets for graphics

For more details, see
<http://www.bell-labs.com/user/windt/idl/windt.html>

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