We developed PC processing programs to facilitate the evaluation of physical model data. In addition, these programs provide a basis for the incorporation of new ideas and algorithms with respect to our research in frequency-dependent reflection, transmission and attenuation. These programs are compatible with our recently developed modeling algorithms.

The software was developed with a windows-based FORTRAN compiler from Absoft. We have transferred several of these programs to UNIX without any difficulty. Our first transfer from Windows based-FORTRAN to UNIX took approximately 15-minutes to complete.

A time-migration of a 3D data set (234 X 101 lines), 1s output window, 2ms sampling with a wide-open aperture takes about 2 hours on a 3.2GHz and 1 GB memory PC.

### Examples of Software Application

1. **Raw Seismic**
   - SEISPLOT plots 2D and 3D
   - Numerous display options available

2. **Wavelet Generation**
   - GENWAVE generates Ricker, Ormsby, Gabor, arbitrary amplitude spectrum and frequency-band derivatives, etc. wavelets

3. **Design of Shaping Filter**
   - Wavelet Generation
   - Shaping Filters
   - Convolution

4. **Wavelet Shaping**
   - Wavelet Shaped

5. **3D Time Migration**
   - Migrated

6. **Spectral Analysis**
   - Trace Spectral Analyses
   - Section Spectral Analyses

7. **Time Slices**
   - Inline 51
   - Crossline 96

8. **Derivative Filter**
   - Frequency-derivative Filter
   - Migrated
   - Derivative Filtered Migration