Petrosystems
a CGG company

GEOVECTEUR® PLUS

A NEW APPROACH

TO SEISMIC DATA PROCESSING

THE BEST OF TWO WORLDS

Geovecteur Plus, the new generation of CGG's seismic data processing software, integrates the best of two technological worlds:

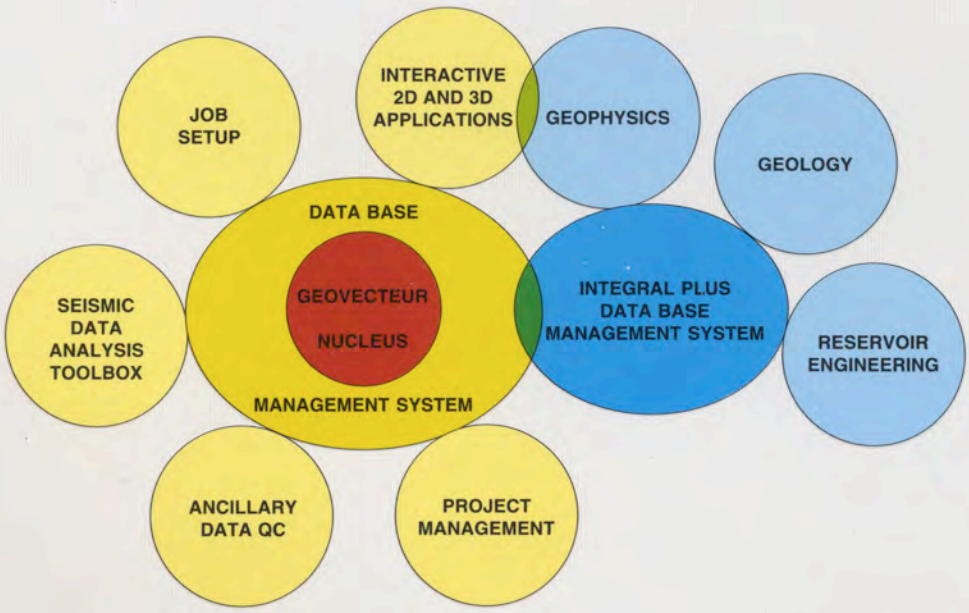
- renowned seismic processing technology based on the long-standing experience and advanced research of a leading geophysical contractor
- advanced software engineering capabilities based on extended experience in developing and maintaining interactive applications for the oil industry.

The Geovecteur Plus project combines the advantages of today's user interface and data management technology with a complete spectrum of proven 2D and 3D geophysical applications. The graphic user interface adheres to X Window™ and OSF/Motif™ industry standards, thus complying with the POSC recommendations.

This new product fulfills the needs of both expert and trainee or occasional users. It offers today's geophysicists a unique and comprehensive set of functionalities:

- intuitive operational features for job setup and parameter entry, to help capitalize on a rich set of application programs by optimal structuring of processing sequences
- a broad range of 2D and 3D interactive applications to carry out geometry QC, first break picking, velocity analysis, mute definition, model setup, etc.
- comprehensive seismic data "analysis toolbox" to optimize parameter selection
- a variety of utility programs to display, edit and QC ancillary data such as survey notes, statics, velocities, etc. in a convenient spreadsheet format
- a SQL-accessible relational DBMS to manage all survey data and to support project management facilities, monitoring tools, and access protection
- compatibility with Integral Plus to improve model-based processing by providing access to a broad base of geological information.

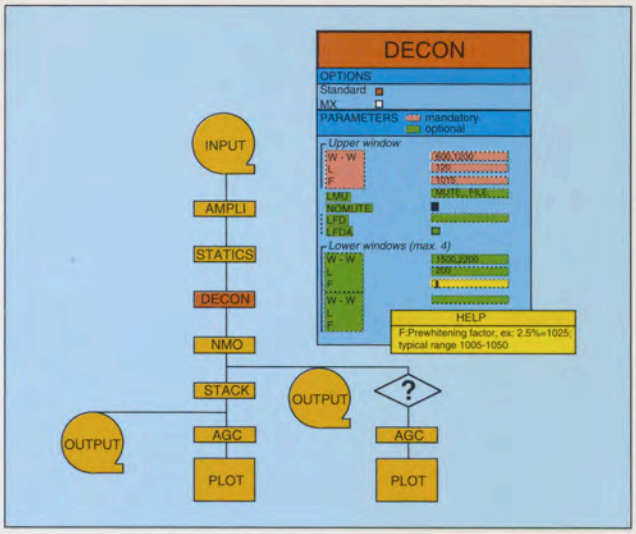
Geovecteur Plus interactive and batch applications are supported on a variety of UNIX®-based platforms, allowing scalable configurations from single-user workstations, such as IBM RS 6000 or CDC 4000 series, to multi-user mainframes including Convex, IBM and CRAY.



Integral Plus is the integrated E & P software system developed by Petrosystems - CGG's software development and marketing arm. With the combined experience of CGG and major international oil companies, Integral Plus offers the most comprehensive set of applications available today to geophysicists, geologists and reservoir engineers.*

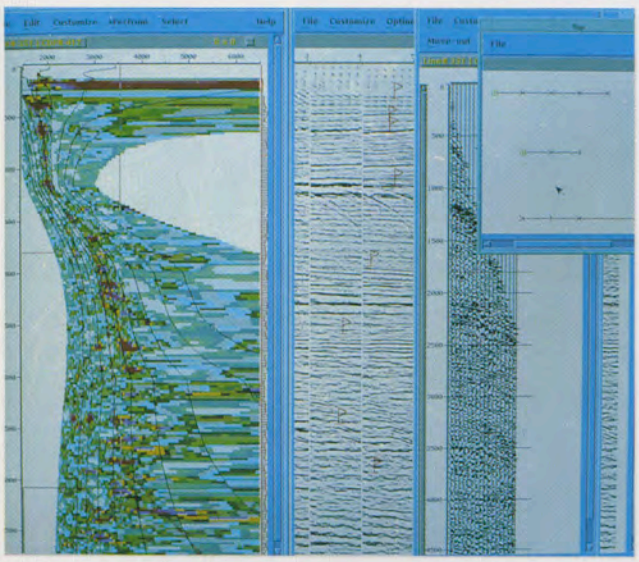
JOB SETUP

Jobs are conveniently created with interactive flowchart design functions facilitating sequences definition and parameter selection. Geovecteur's flexibility in structuring processing steps is greatly enhanced in Geovecteur Plus by clear graphic displays, allowing geophysicists to concentrate on the geophysical aspect of processing.

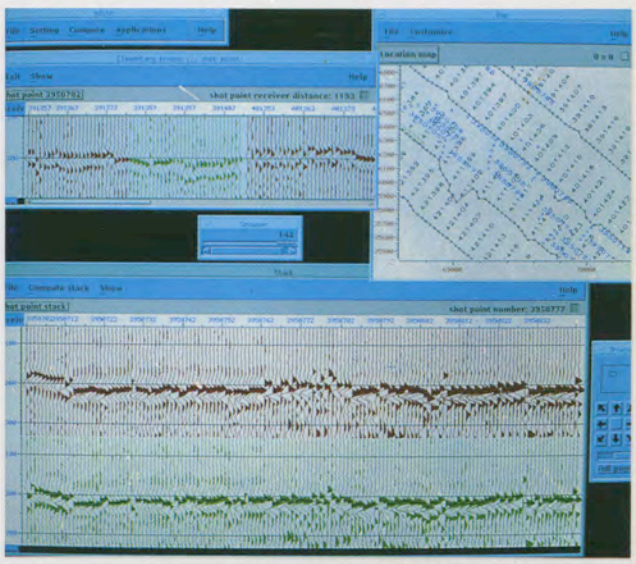


INTERACTIVE 2D AND 3D APPLICATIONS

The efficiency of data processing geophysicists is enhanced by a comprehensive set of interactive applications: velocity analysis, geometry QC and statics calculation from first break stacks, first break picking, long wavelength statics calculation, trace editing, mute definition, FK filter design, wavelet processing, migration model setup, ray tracing, stratigraphic inversion.



Velocity analysis.



3D geometry QC and statics calculation from first break stacks.

PROJECT MANAGEMENT

During data processing, a variety of relevant information is automatically stored in the database. Through its relational DBMS, Geovecteur Plus also provides users with an interactive spreadsheet program to help customize project management documents such as follow-up reports, job status displays, progress diagrams, accounting tables, etc. Automatic updating of preset displays can be generated directly from the database.

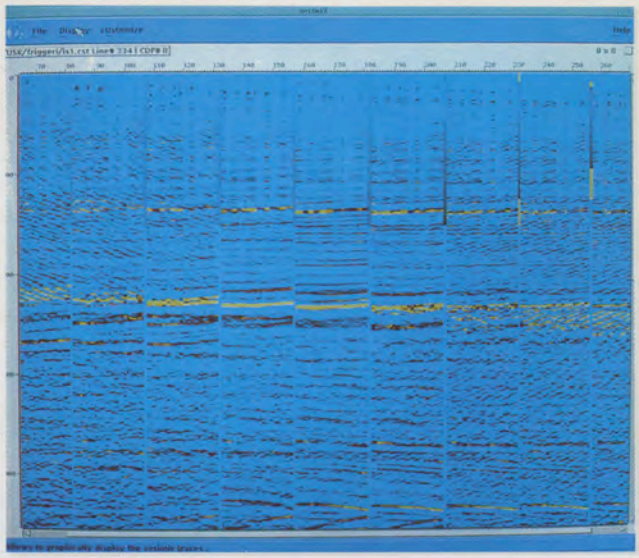
SEISMIC DATA ANALYSIS TOOLBOX

On-screen seismic data analysis offers decisive advantages over conventional approaches using paper:

- efficient decision-making to complement high-speed job execution time
- enhanced visual evaluation and comparison to refine processing parameters and sequences

The Geovecteur Plus interactive "analysis toolbox" enables geophysicists to:

- customize seismic data displays to focus on the objective of their analysis
- compute and display in real time seismic amplitude, spacing, dip, spectra, time shift, etc.
- compare different versions of a given section using concertina display mode, difference section, cross-correlation etc.



Comparison of stacked data using different velocity functions.

ANCILLARY DATA QC

Ancillary data such as survey notes, statics, velocities, geometry, etc. can be readily retrieved and displayed in tabular format. Data are conveniently checked and edited with an interactive spreadsheet program associated with data-specific graphic displays. Data discrepancies are readily identified and remedied by specific functions. The tabular format also facilitates data conversion to and from external formats.

3D velocity field:
in-line isovelocity display and editing.

GEOVECTEUR WORLDWIDE COVERAGE

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