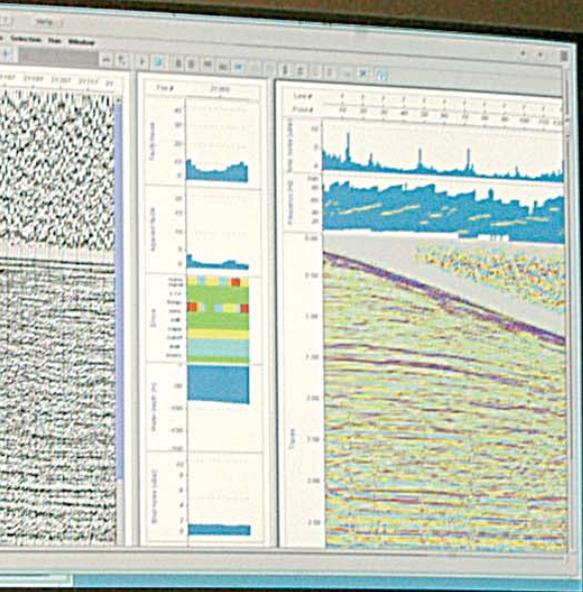


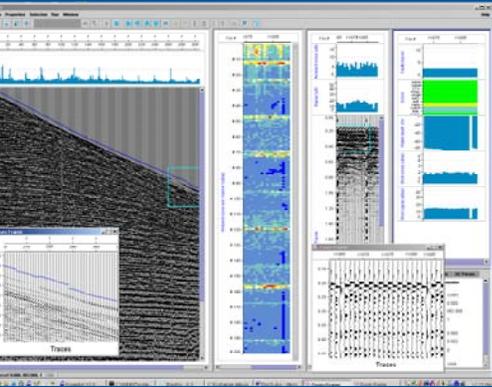
ESQC-PRO

REAL-TIME, ON-LINE OR REMOTE SEISMIC QC FOR
LAND, MARINE AND SEA BED OPERATIONS



Ahead of the CurveSM

eSQC-Pro



REAL-TIME, ON-LINE OR REMOTE SEISMIC QC FOR LAND, MARINE AND SEA BED OPERATIONS

eSQC-Pro is an optional hardware and software package that can be implemented on-line with the 400 Series family of products and Seal data acquisition systems to provide a real-time QC of seismic data, without the need for any tape manipulation.

Keeping all the advantages provided by the Zero-Dead-Time architecture of the 400 Series and Seal Central Units, all QC functions are performed in parallel with the seismic data acquisition without slowing down 2-D or 3-D crew operations.

eSQC-Pro gives the ability to access and monitor the quality of the seismic data through the web from any authorized PC.

ON-LINE OR REMOTE ACCESS

eSQC-Pro software is made of a server package and a client package. eSQC-Pro Server is installed on a PC with Linux Operating System. It is linked in the doghouse to the 408UL, 428XL or Seal Central Unit through a 100 Mb/s Ethernet connection.

eSQC-Pro Client can be installed on any PC with Windows Operating System that has access to the eSQC-Pro Server package through an Internet connection from anywhere in the world. The remote connection to eSQC-Pro Server is secured by a dedicated firewall and can be direct or done through an Intranet network. eSQC-Pro offers the same functions whether it is used directly from the doghouse or from any remote location. When accessed from a remote PC via Internet, all the selected seismic data are compressed before transmission by eSQC-Pro Server and decompression is managed locally by eSQC-Pro Client.

REAL-TIME QC

All the seismic data is simultaneously sent to the recording drive and to eSQC-Pro for shot display, automatic generation of trace attributes, and trace header analysis. The operator defines the list of attributes to be displayed in real time for every shot record.

ATTRIBUTE COMPUTATION

In addition to the high-resolution seismic record display with enhanced AGC, filtering and equalization, eSQC-Pro software includes display of the following attributes:

- automatic first break picking
- theoretical first break for control of the geometry
- ambient noise level
- seismic signal level
- signal-to-noise ratio
- seismic trace frequency analysis
- geophone group resistance
- geophone group tilt
- geophone group leakage

Each display can be a combination of seismic data and attributes.

Some attributes related to the closest line to the source can be displayed:

- signal level
- level of noise emitted by the source (ground roll)
- average level of correlation

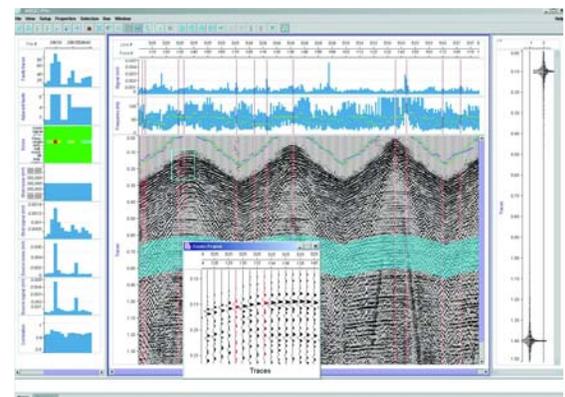
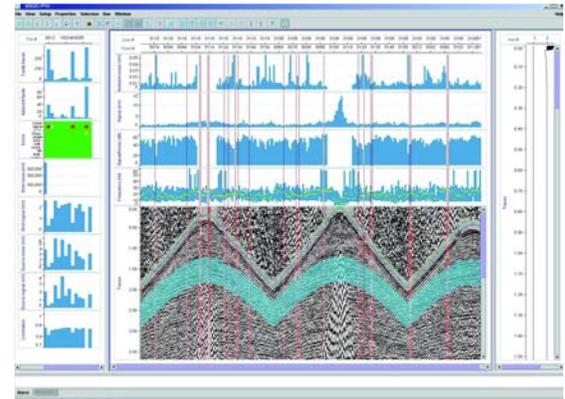
ESQC-PRO

HIGH RESOLUTION CUSTOMIZABLE DISPLAY

Multiple graphic tools are available for optimal QC Processing:

- individual window zoom
- trace header display using cursor/pointer
- test operations
 - Field test
 - Source test
 - Similarity test
- display of traces exceeding a given threshold for the following attributes
 - ambient noise
 - seismic signal
 - signal-to-noise ratio
 - frequency analysis
 - single frequency (i.e. 50-60 Hz)
- selection of different types of receivers
- color or “wiggle” display

Multiple windows can be activated in an easy-to-use interactive manner to perform extensive and continuous QC analysis of seismic data.



SHOT-BY-SHOT ATTRIBUTE DISPLAY (HISTORY)

Using bar graphs, eSQC-Pro displays a summary of some important computed values, shot after shot:

- number of faulty traces with details of the problems
- average level of ambient noise
- level of emitted noise on the closest line to the source
- level of seismic signal on the closest line to the source
- average level of correlation on the closest line to the source

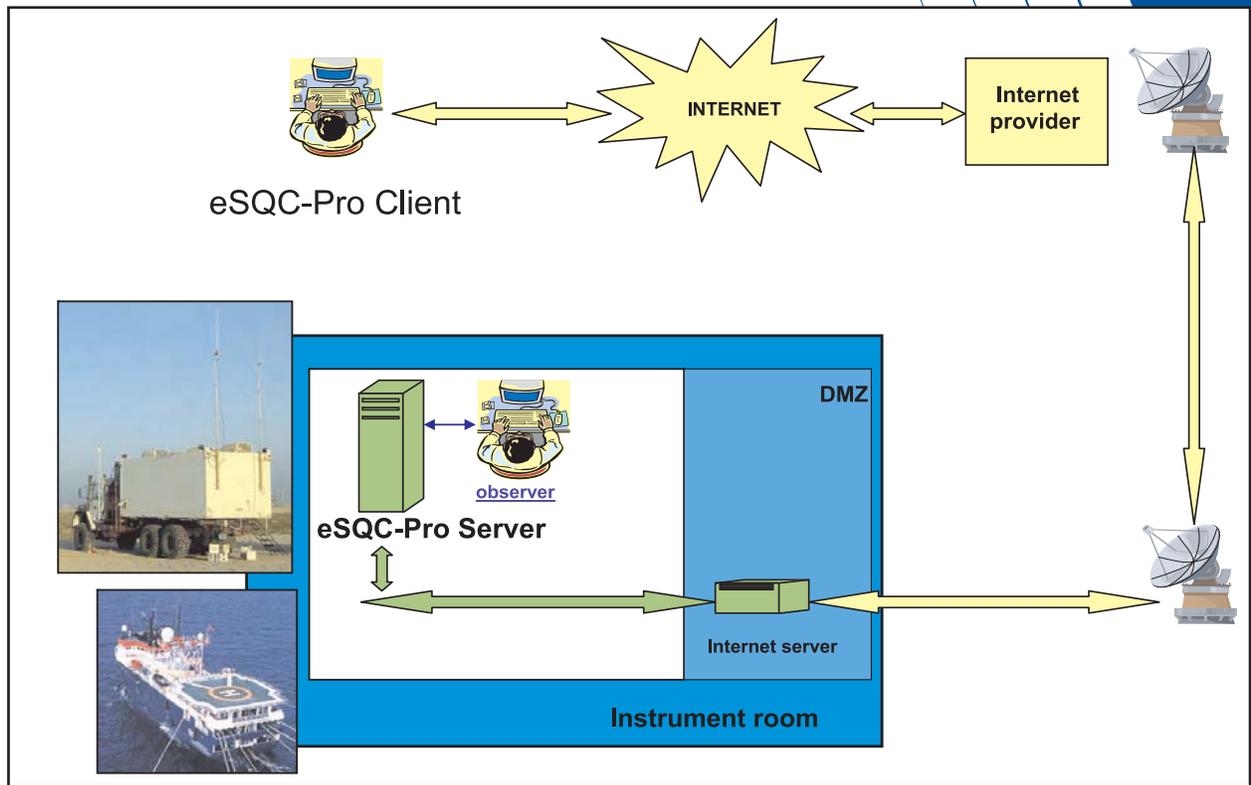
REPLAY CAPABILITY

eSQC-Pro lets users replay one of the previous shots stored in the database for off-line analysis of a particular shot. This can be done simultaneously with the real-time QC processing.

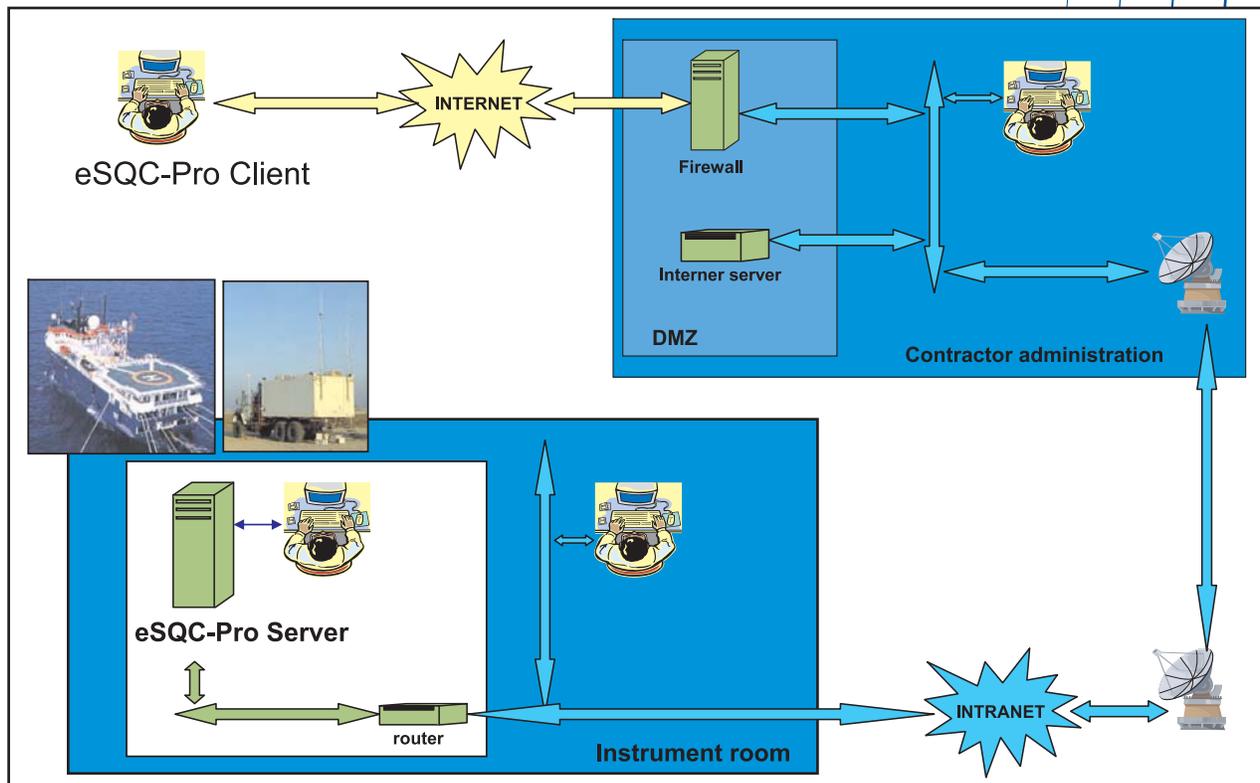
FILE EXPORT

eSQC-Pro can generate in real-time or in play-back mode both the file of the edited traces in ADS-TE format and the file of the computed attributes in ADS-TA format. The SEG-D files can also be forwarded to a hard-disk.

ESQC-PRO - DIRECT CONNECTION



ESQC-PRO - INTRANET CONNECTION



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