Why is it so difficult to connect users to data?

Alan H Smith

Luchelan Limited

Agenda

- Introduction
- Delivering data to the user – a brief history
- Moving to the internet age
- Example - MultiClient seismic data
- Where next?

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Status in 1991?

NPD

WEEK OF NOVEMBER 4, 1991
A PennWell Publication

OIL&GAS JOURNAL

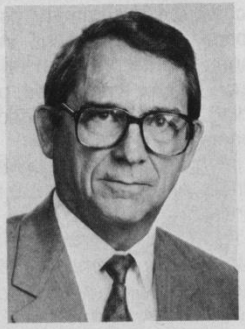
International petroleum news and technology

OGJ SPECIAL

ANNUAL GEOPHYSICAL REPORT

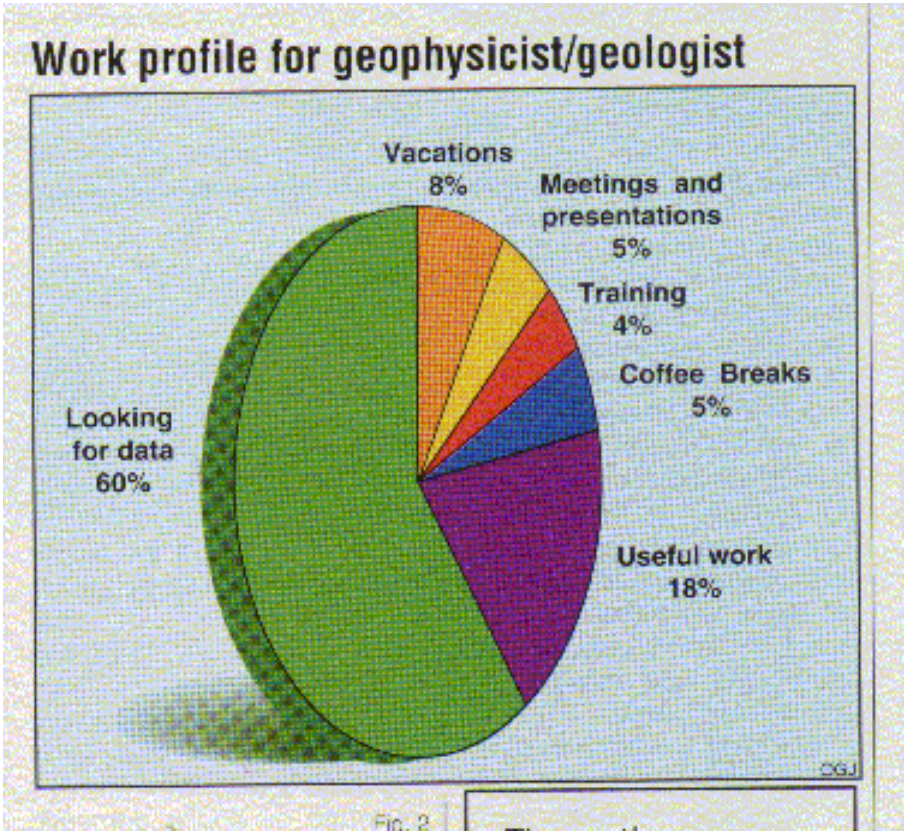
Trends: providing value-added technology

The author...



Lawyer

L. C. (Lee) Lawyer is chief geophysicist of Chevron Corp. A 1955 graduate of Oklahoma University, he joined Standard Oil Co. of Texas, forerunner of Chevron, as a client representative on a seismic crew. He has been division geophysicist for the Midcontinent and Alaskan divisions, chief geophysicist of Chevron Overseas, and vice-president of Chevron Geosciences Co.



After Tonstad, 2002

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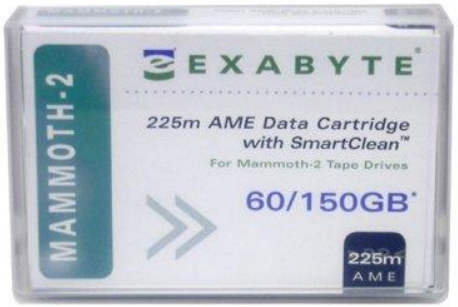
Technology in the 90s

Data delivery in 1990’s



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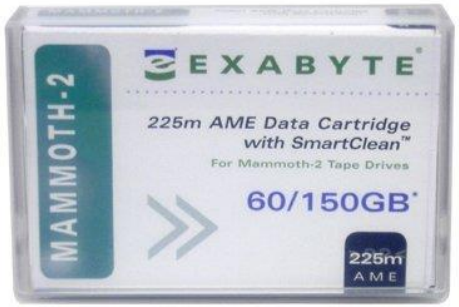
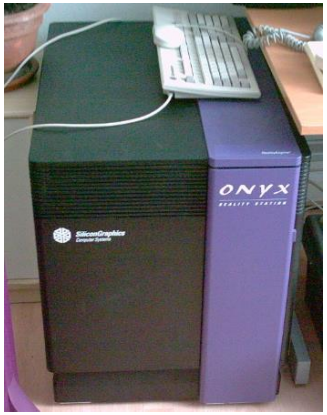
Technology about 2005

Data delivery in 2000’s





Technology from ~2015

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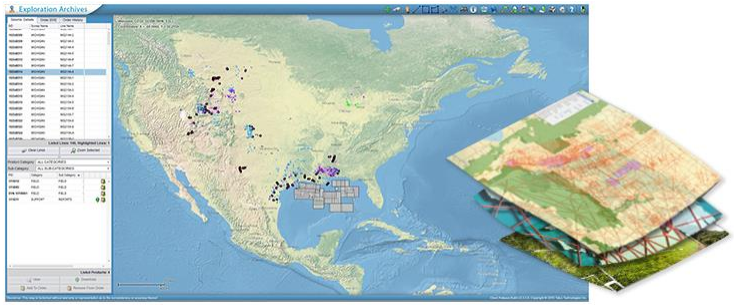
Modern Data Delivery



CDA Shared data solutions for the UK offshore oil industry

DISKOS
NORWEGIAN PETROLEUM DATA

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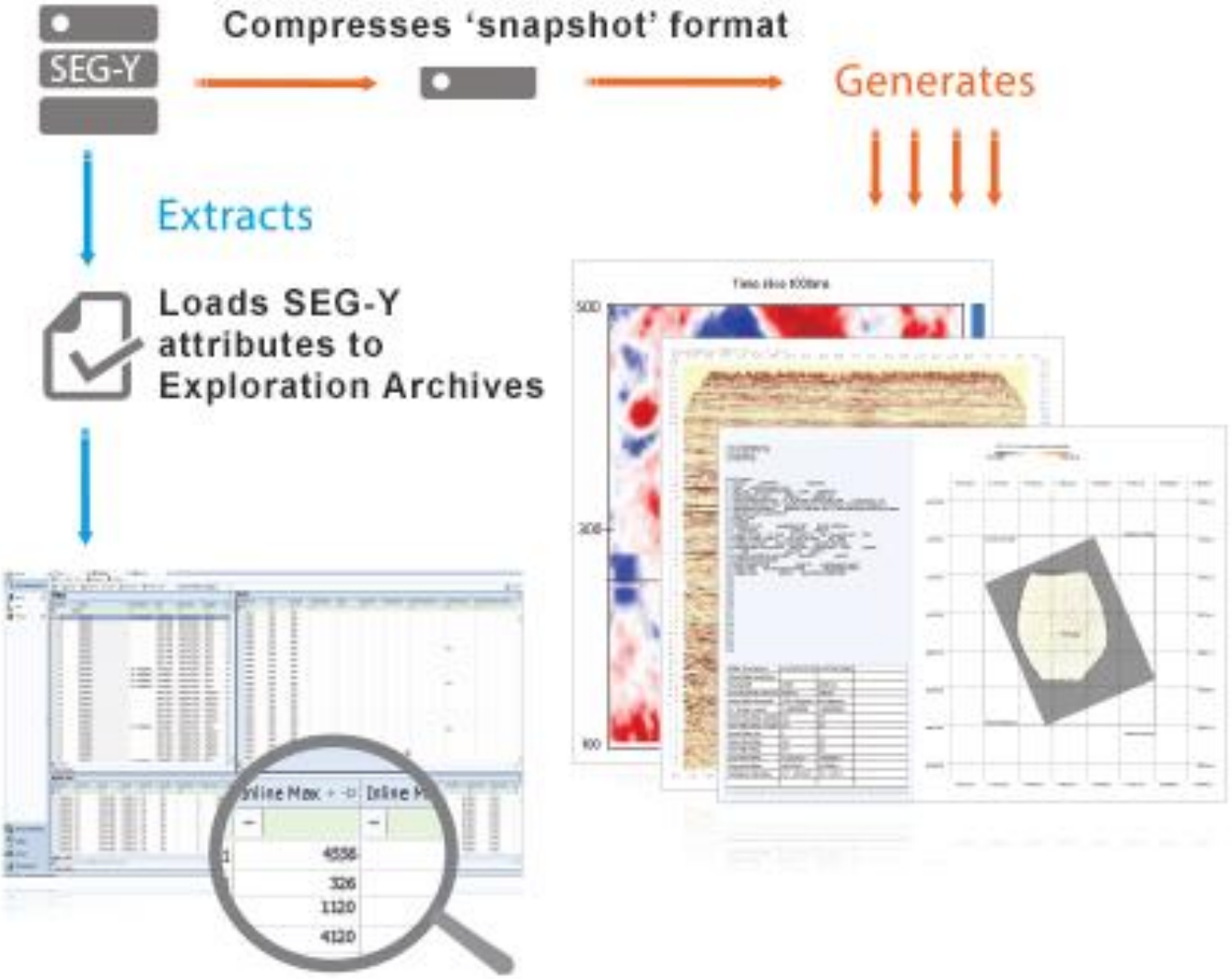
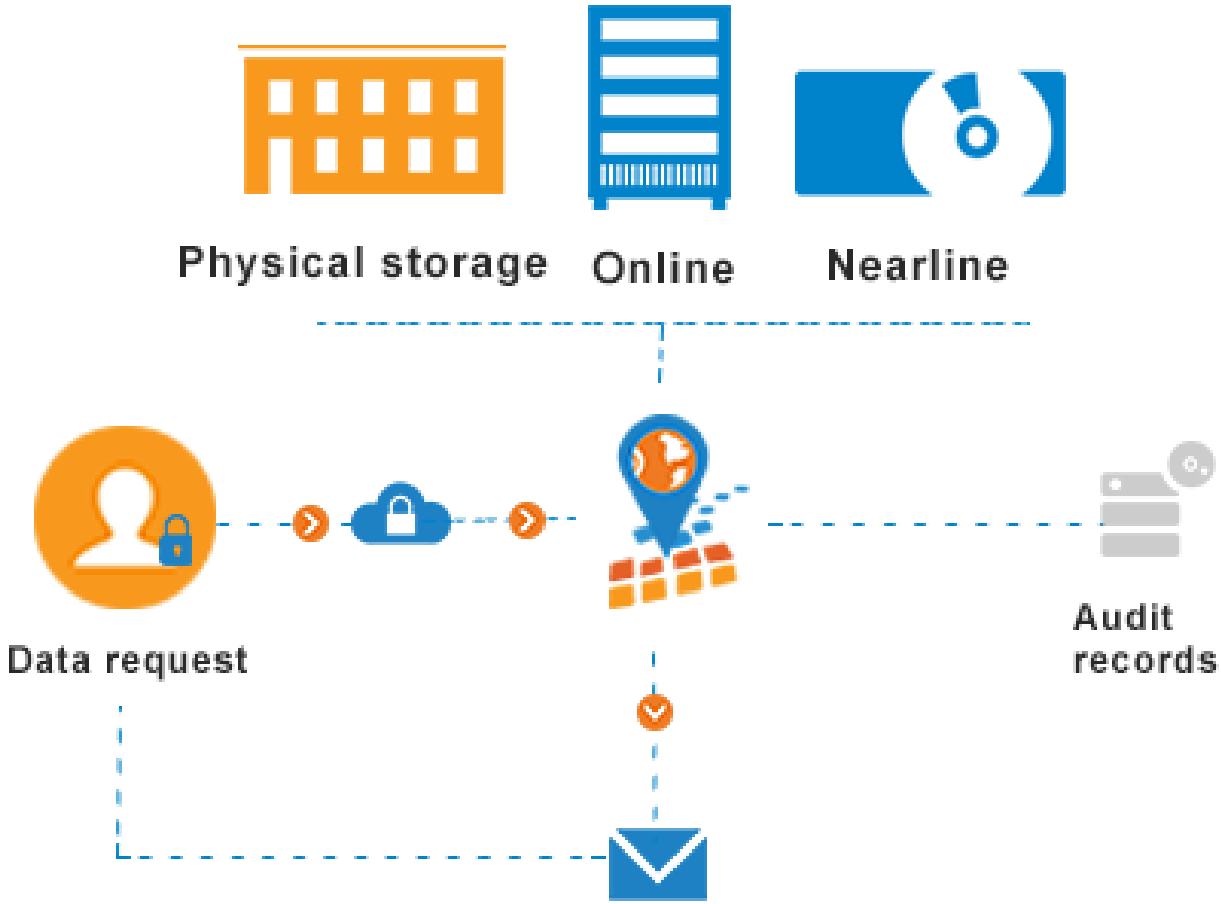
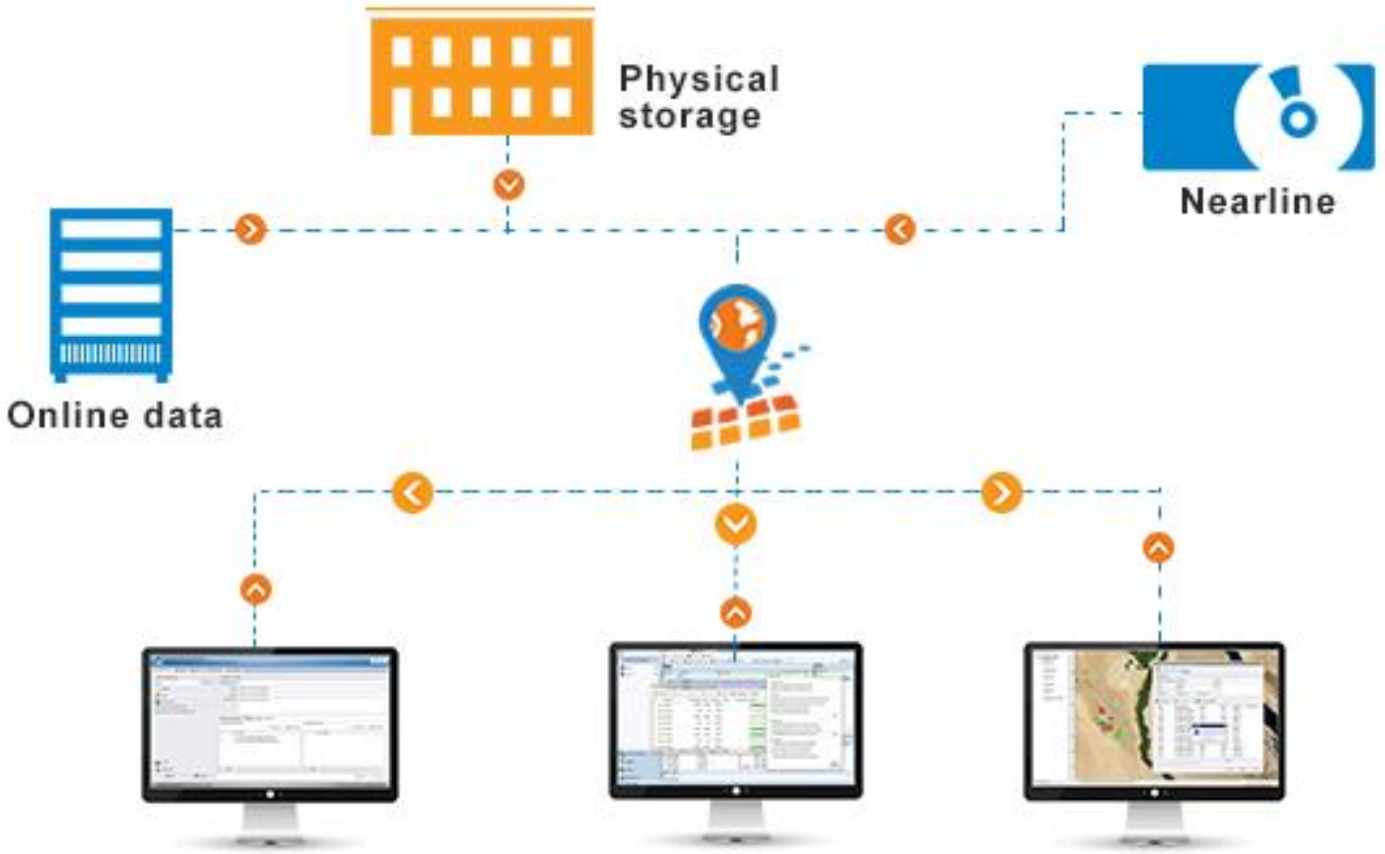
Data loading



Data request



Data delivery



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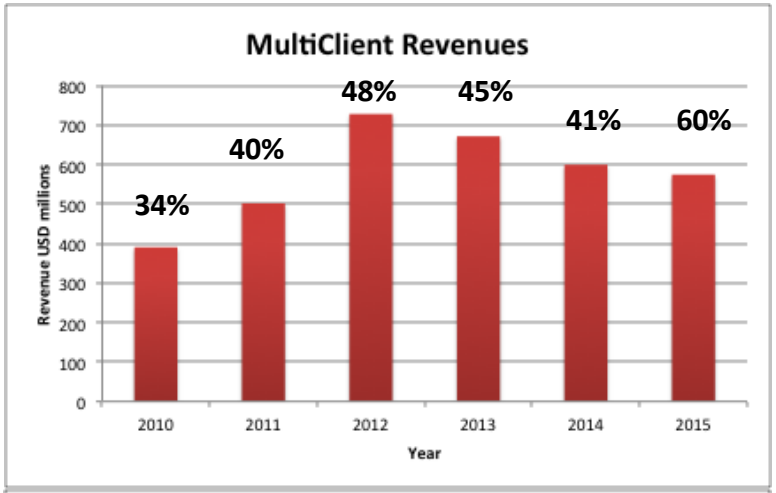
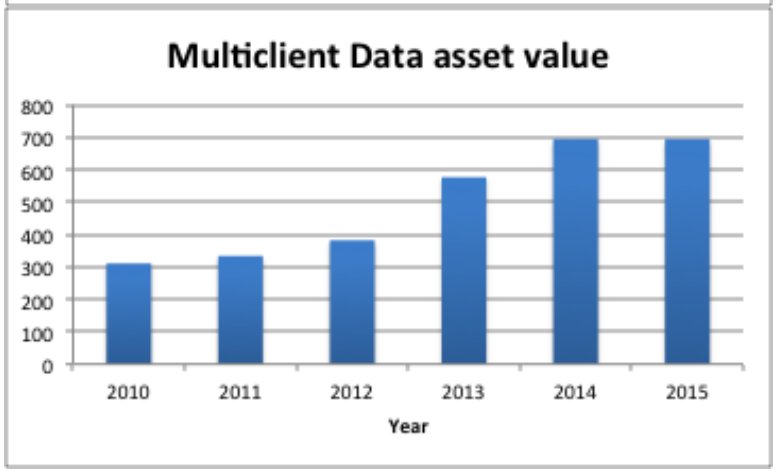
The statistics – PGS MultiClient





- Important Balance Sheet item
- Significant proportion of vessel time
- Significant revenues
- Huge data volumes acquired
- Long shelf life
- Shelf life “reset” with reprocessing etc
- Pre- and Post-Stack and Ancillary products all equally important for exploration purposes

Data from PGS Annual reports

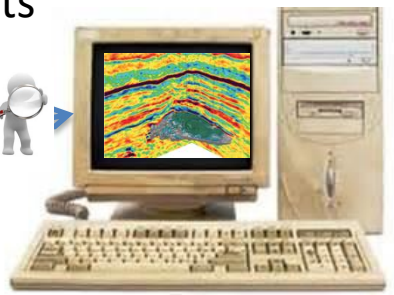
PGS MultiClient Data delivery

- Heritage system developed in 1990s
  - Outsourced service provision
  - Slow & restricted functionality by current standards
  - Only really handled post stack
  - Barrier to exit very high
- New system
  - Still outsourced
  - Trace handling, not processing *(sensu stricto)*
  - Handles pre and post stack data efficiently
  - Modern database integrated with IT infrastructure and other enterprise software systems

Multiclient seismic management

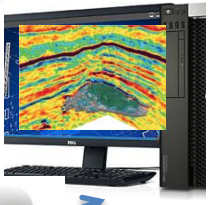
Old

Final products

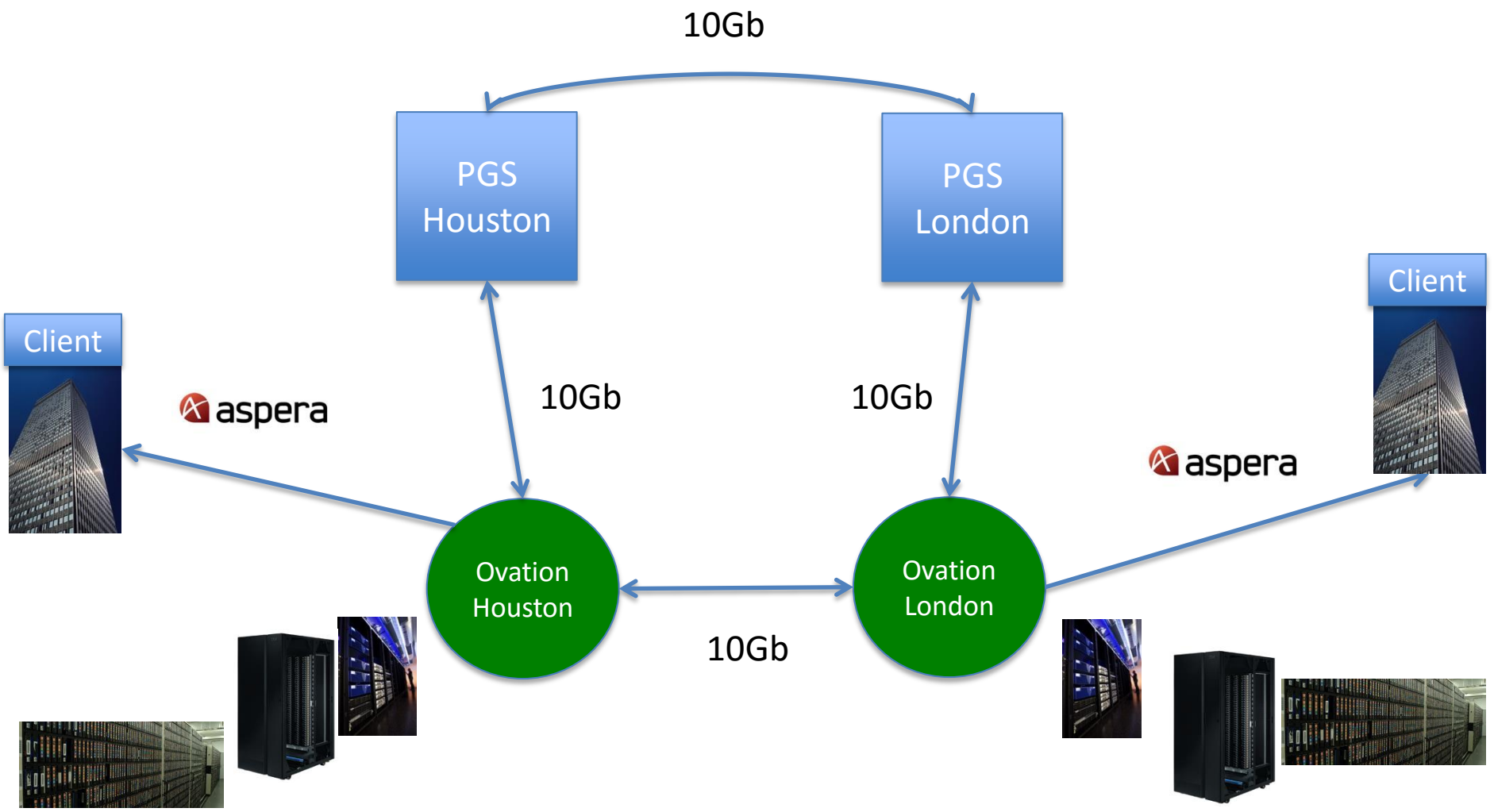


Field & Interim products

New



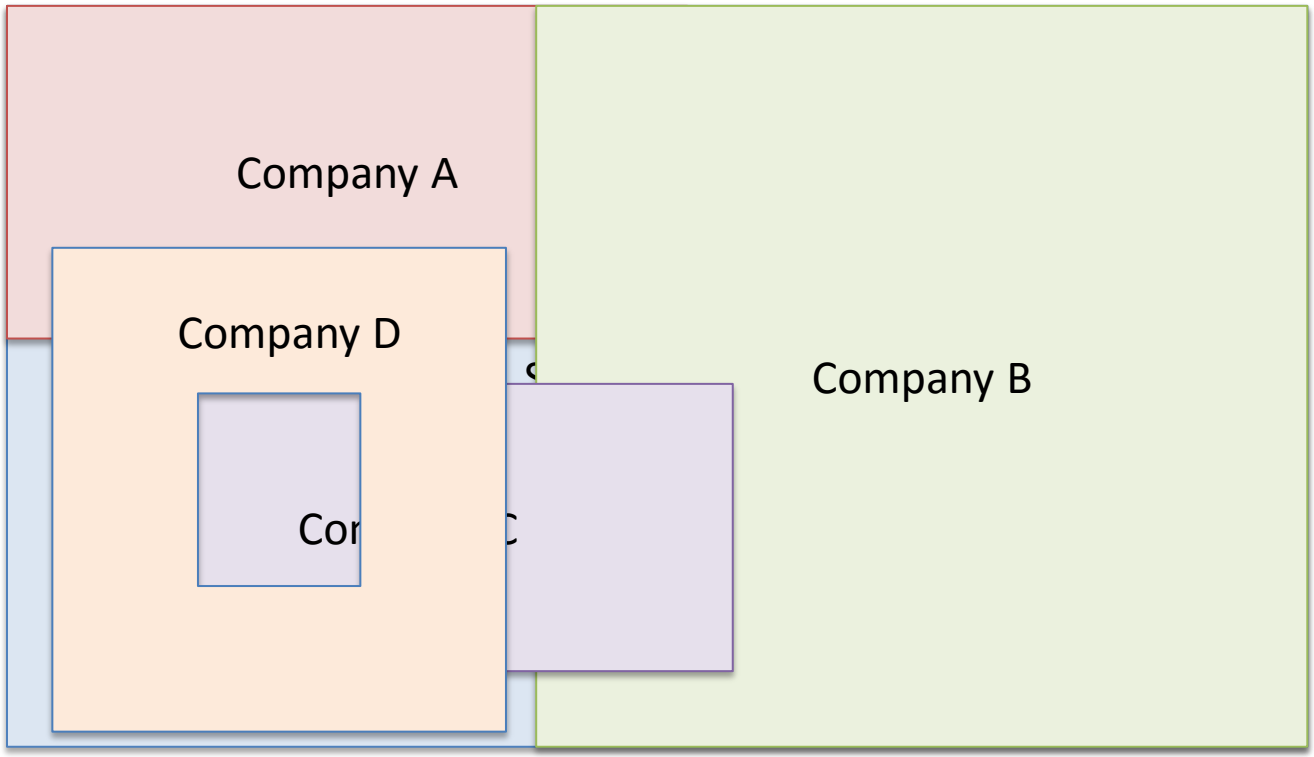
Ensuring availability



MultiClient complications

What are they getting?

- Prestack (options)
- Stack
- Migration
- Velocities
- …

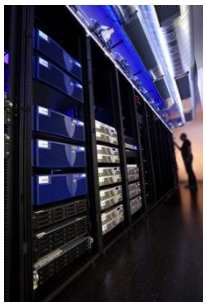


All need cutting to correct coordinates

Historic
Manual handling
Manual intervention

Now
Automatic

Analytics
Parallel processing



The impact

Faster – Cheaper - Better

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Data moving

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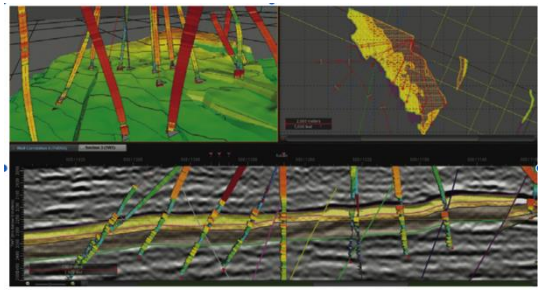
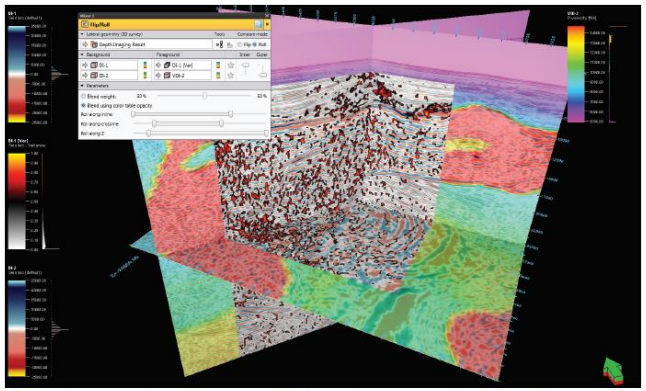
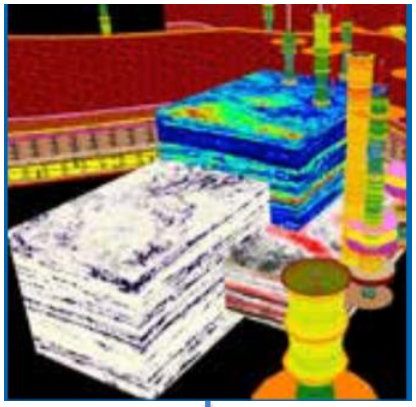
Leave the data where it is



DecisionSpace® Geosciences 10ep delivers a true interpretation environment with unprecedented integration across multi-domain workflows and data types.

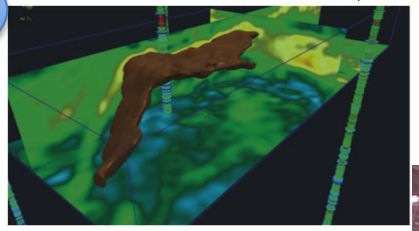


Mixer covisualization capabilities include flip/roll, RGB/CMYK blending, and masking. (Data courtesy of WesternGeco)



What about bandwidth?

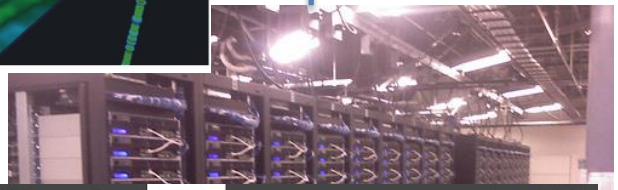
Format "A"



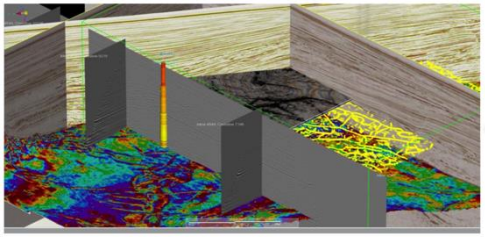
Format "B"

Format "C"

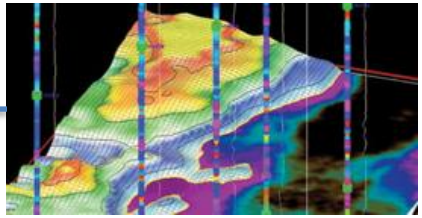
What about security?



What about latency?



SeisEarth 3D Canvas



Conclusions

- Large volumes of data can be “live” on the internet
- Still issues to tackle if it is to become a reality
- Some interpretation will be automated (rules based)
- Analytics will play a bigger part in interpretation
- It will come!

Acknowledgements

PGS

OvationData
Total Data Management Solutions

TALUS™

Thanks for your attention

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