

Managing survey video data for quick and easy access

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Reaping Operational Benefits through Digital
Technology, Kuala Lumpur, Finding Petroleum /
Digital Energy Journal Oct 2016

Acknowledgements



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Agenda

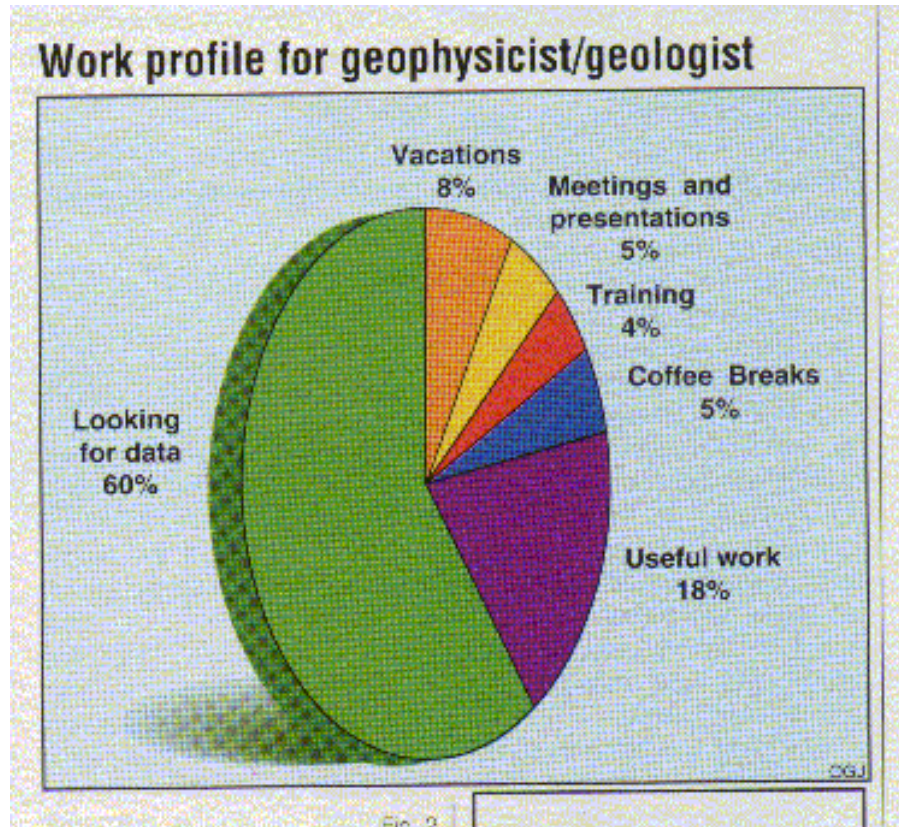
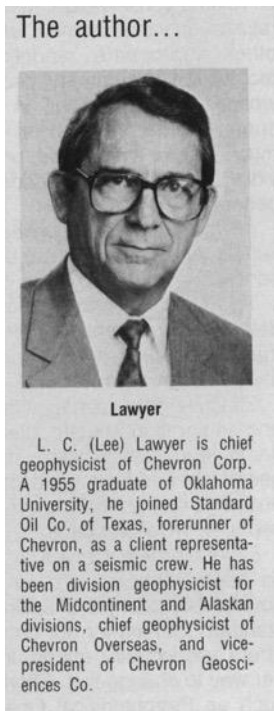
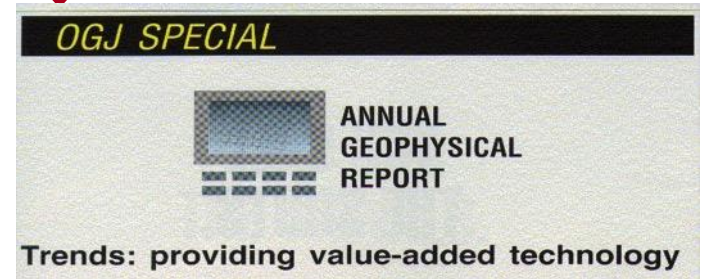
- Introduction
- Capturing and processing data
- Storing & delivering data
- Managing video data for value
- Conclusions

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Status in 1991?



Status 2015

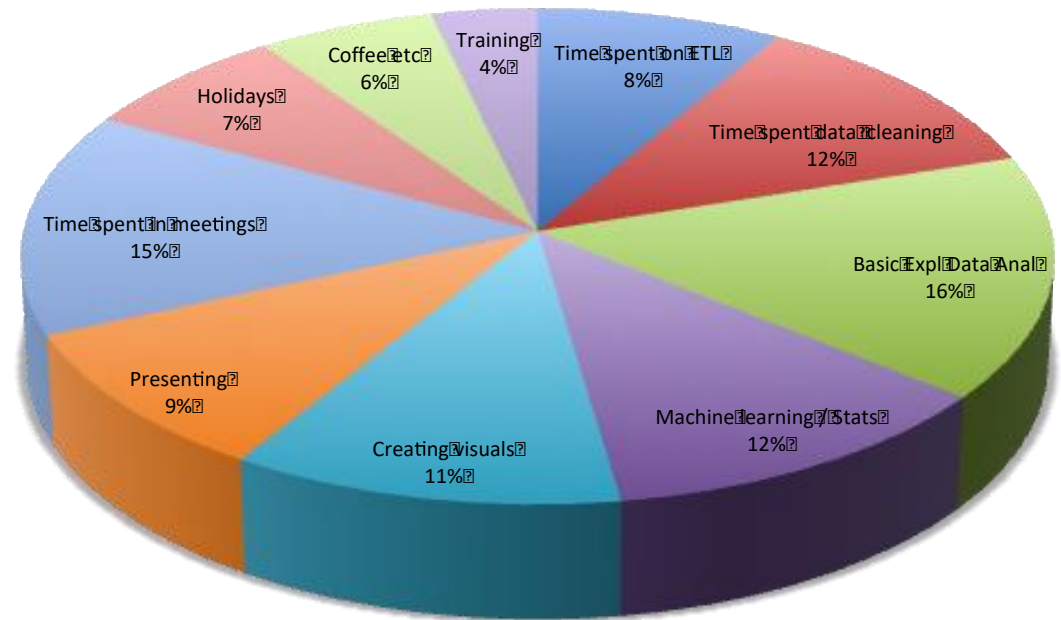
Examples from Analytics in
E&P (Courtesy Teradata)

Well data example

- 50% of time spent preparing data

Seismic / Navigation data example.

- 80% of time spent finding & preparing data

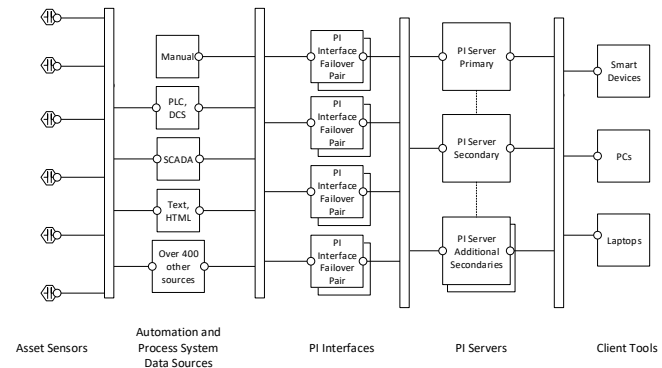


Time spent on Data Science (O'Reilly, 2016)

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Where does our data come from?



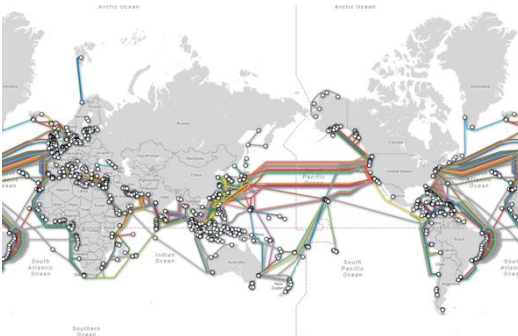
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Data Storage



Data Delivery



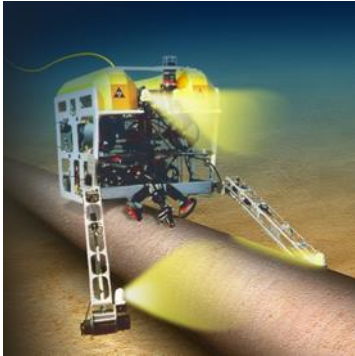
Cable everywhere (nearly) –
massive capacity
Satellite – filling some holes
at predicted speeds
approaching 1Gb/s



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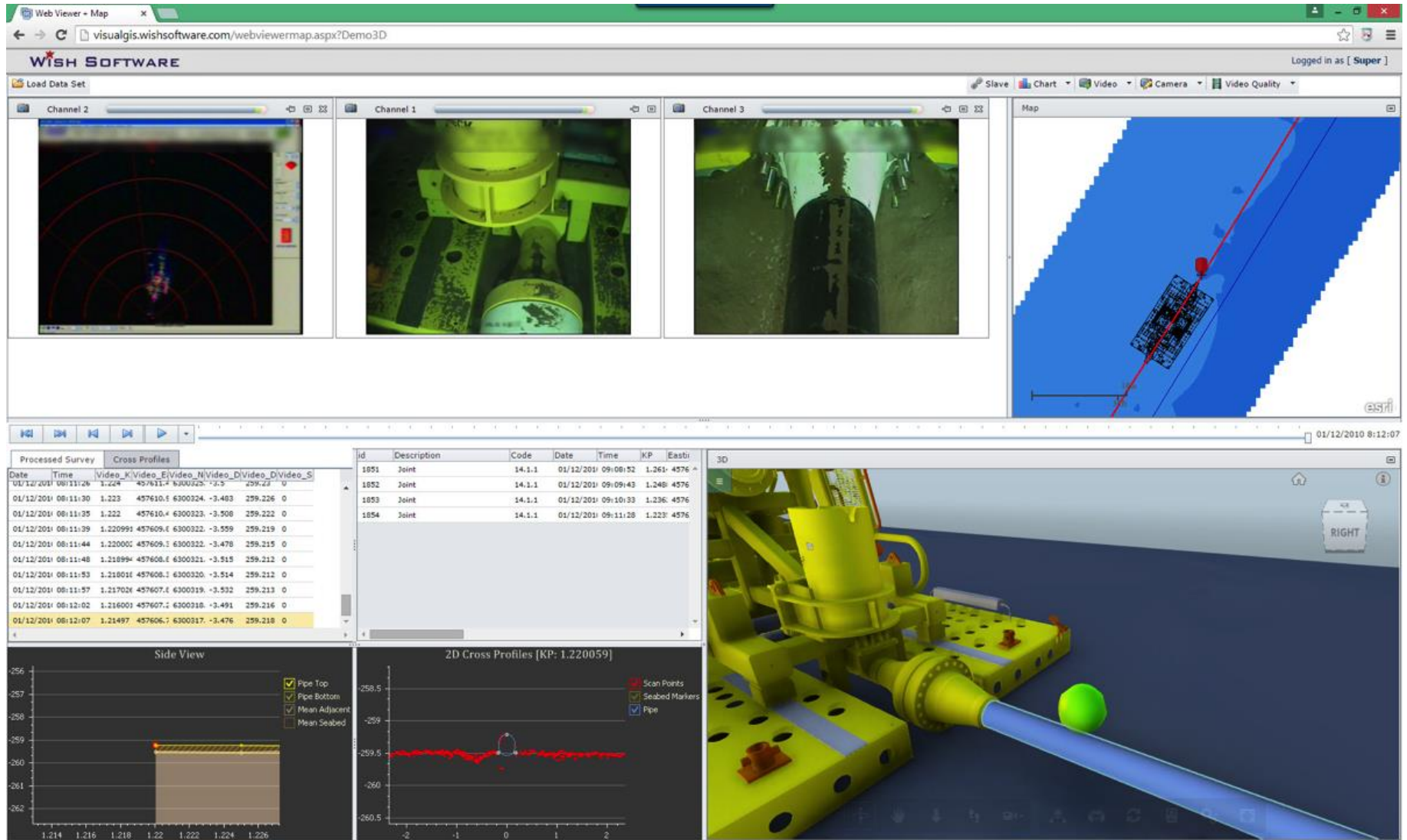
Video surveys



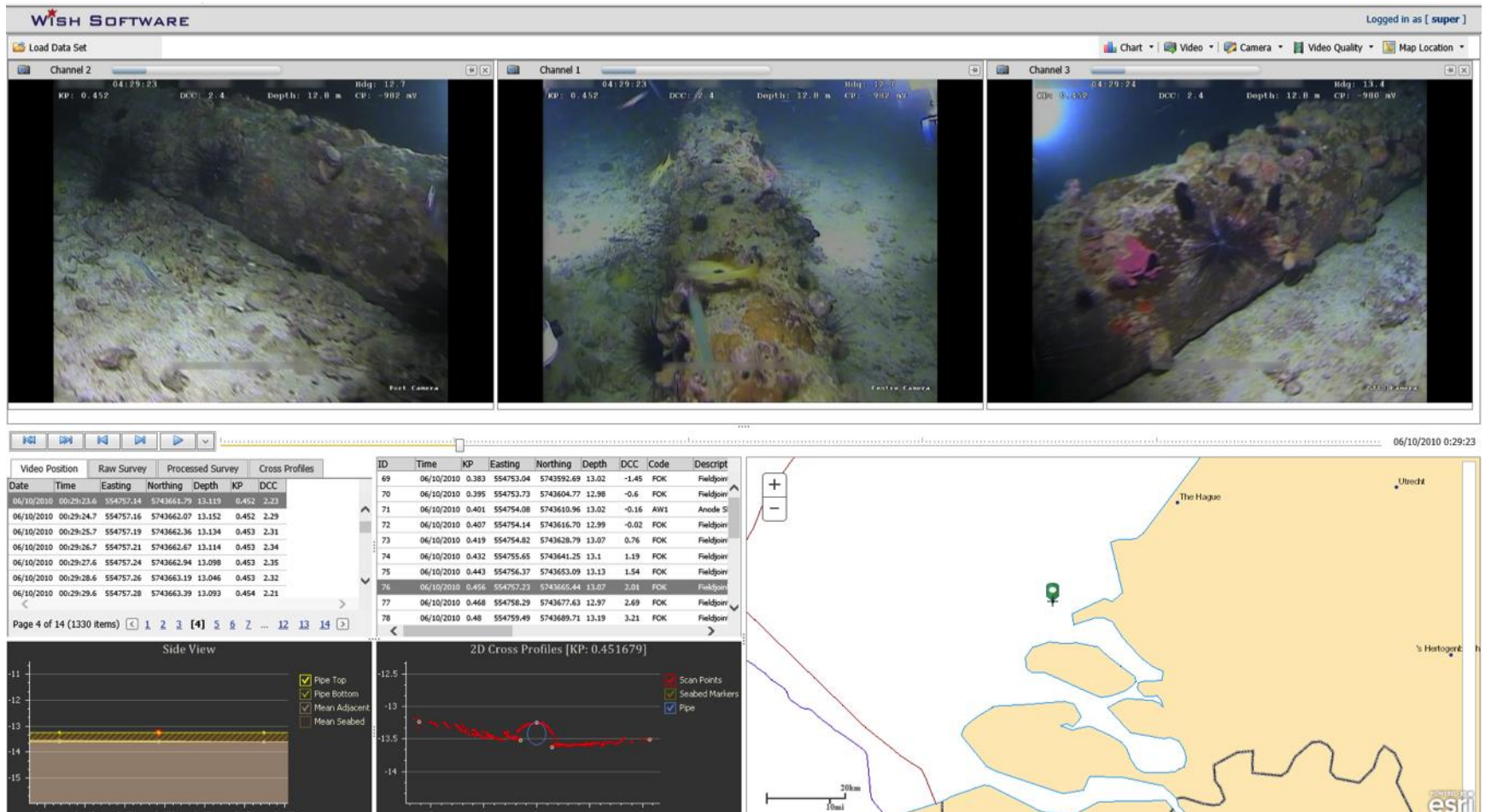
Moving to “modern” technology



Digital Video with GIS and 3D Viewer



Multi camera views



Multi camera with time lapse

The screenshot displays the ArcMap interface with the following components:

- Main Map Window:** Shows a map of a wellhead area with a 'Grout bag' label. The status bar indicates coordinates: 561031.674 6767142.006 Meters.
- Project Tree:** Lists the project structure, including 'NNS', 'pipelines', and 'Shell_2007'.
- Event Data Table:** A table with columns: KP, Time, Date, In..., C., S., D., Description, and Comments. It contains 10 rows of event data.
- Video Playback Windows:** Multiple windows showing time-lapse footage from different cameras. Each window displays a video player with a timeline and a 'Video Controls' panel.
- Survey Data Table:** A table with columns: ASIndex, Time, Date, Easting, and Northing. It contains 14 rows of survey data.

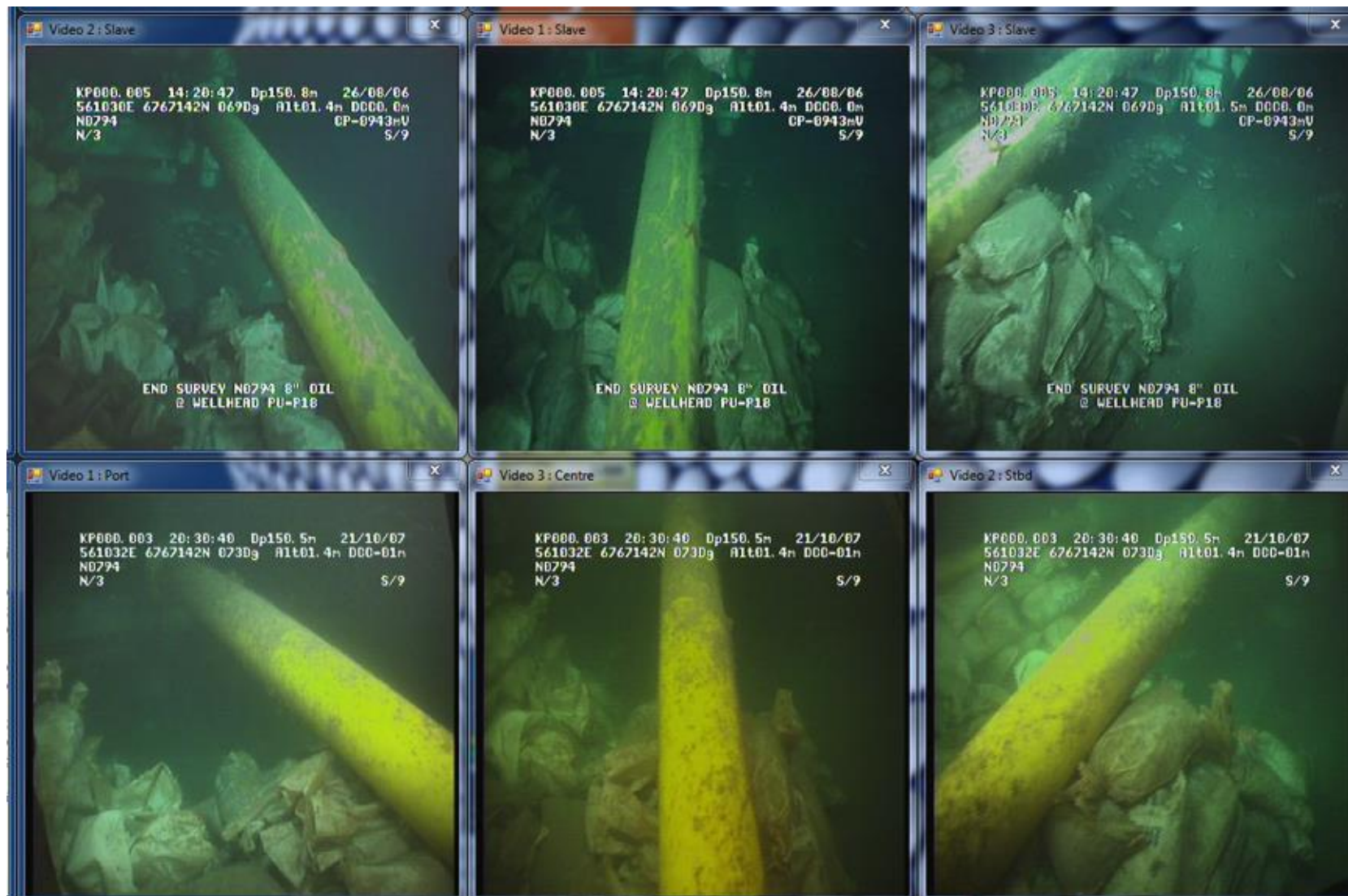
Event Data Table:

KP	Time	Date	In...	C.	S.	D.	Description	Comments
0.044	14:16:14	26/08/06	502	-	H	-	Pipe bend	90deg
0.043	14:16:54	26/08/06	503	-	-	-	Flange	north f
0.043	14:17:47	26/08/06	502	-	H	-	Pipe bend	180deg
0.042	14:18:18	26/08/06	505	-	T	3.	Protective...	te-in st
0.042	14:18:19	26/08/06	503	-	-	-	Flange	south f
0.042	14:19:21	26/08/06	507	-	-	0.	Mechanic...	-
0.015	14:20:31	26/08/06	517	-	V	2.	Protective...	cover
0.003	14:20:50	26/08/06	510	-	G	6.	Grout bag	suppor

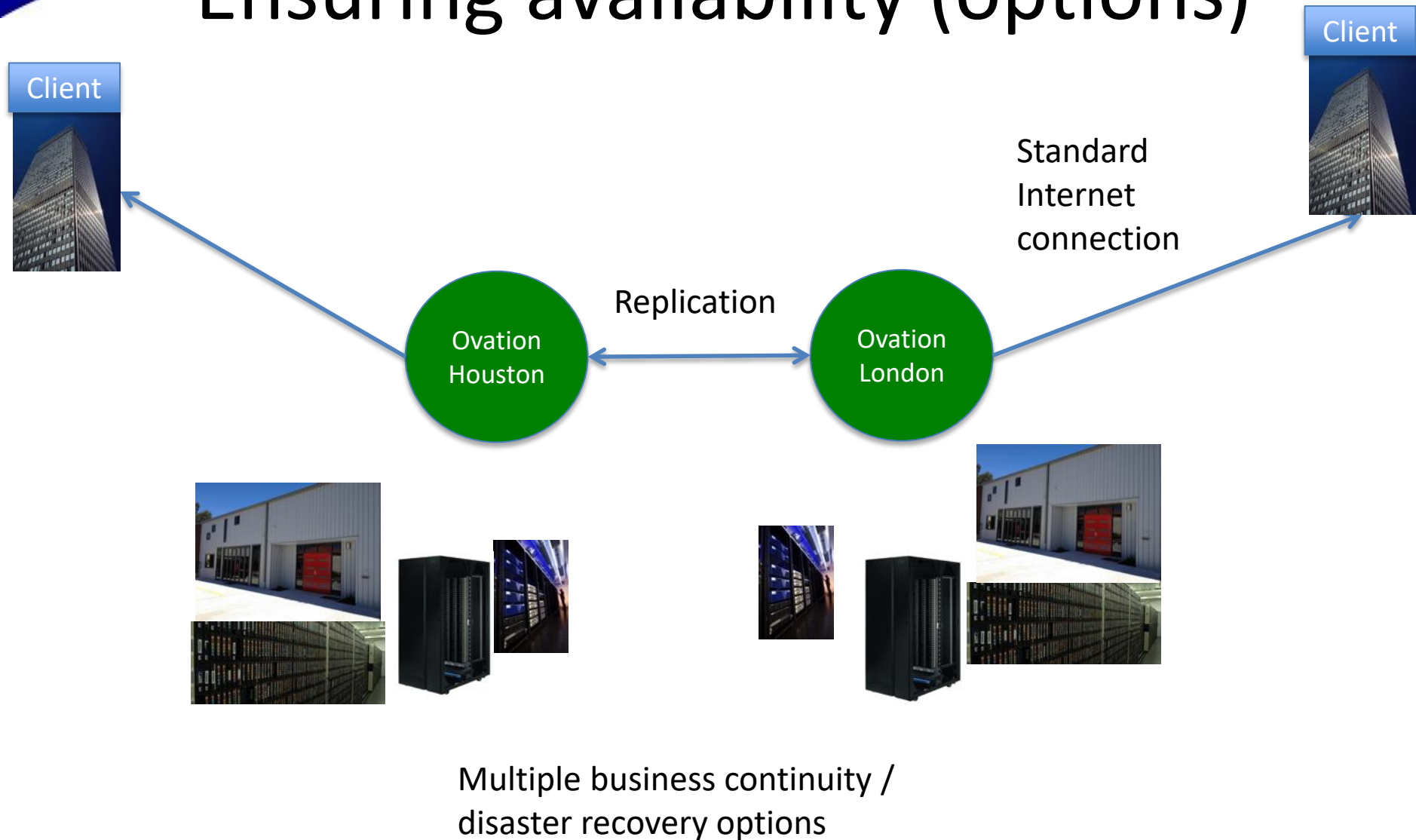
Survey Data Table:

ASIndex	Time	Date	Easting	Northing
00.04.59...	19:30:27.966	21/10/2007	561027.35	6761027.35
00.05.00...	19:30:28.982	21/10/2007	561028.40	6761028.40
00.05.01...	19:30:29.982	21/10/2007	561027.91	6761027.91
00.05.02...	19:30:30.982	21/10/2007	561028.95	6761028.95
00.05.03...	19:30:31.982	21/10/2007	561029.29	6761029.29
00.05.04...	19:30:32.998	21/10/2007	561030.42	6761030.42
00.05.05...	19:30:33.997	21/10/2007	561030.28	6761030.28
00.05.06...	19:30:34.998	21/10/2007	561030.74	6761030.74
00.05.07...	19:30:35.997	21/10/2007	561030.37	6761030.37
00.05.08...	19:30:37.013	21/10/2007	561030.58	6761030.58
00.05.09...	19:30:38.013	21/10/2007	561030.20	6761030.20
00.05.10...	19:30:39.013	21/10/2007	561030.95	6761030.95
00.05.11...	19:30:40.013	21/10/2007	561031.14	6761031.14
00.05.12...	19:30:41.029	21/10/2007	561031.81	6761031.81
00.05.13...	19:30:42.029	21/10/2007	561031.45	6761031.45
00.05.14...	19:30:43.029	21/10/2007	561032.03	6761032.03

Multi camera with time lapse



Ensuring availability (options)



Business advantages

- Data available when you need it
 - Not a few days later
- Can be managed internally or as an outsourced “cloud service”
- Cost of getting data onto this platform is not high
- Benefits far outweigh the costs

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Conclusions

- Managing and delivering data to users through the internet does work!
- Delivering from the “cloud” is a cost effective solution
 - OPEX rather than CAPEX
- Quicker – faster – cheaper

Acknowledgements



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Thanks for your attention

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