Outstanding Performance in Underwater Technology
Agenda
Scott McLay

• Tritech
• Sonar
• Profiler
• Multibeam
• Issues!
• Questions?

Outstanding Performance in Underwater Technology
Tritech
Who we are and what we do
About Us
Tritech

- Underwater products
- Variety of markets
- Two key applications
- Over 20 years experience
- International presence

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Sonar
What is sonar?
1. Sonar transmit an acoustic signal and then listens

2. Signal is reflected from the object and received by the sonar

   The time taken to receive a signal back tells us the distance to the object(s)
1. Sonar transmit an acoustic signal and then listens
2. Sonar transducer turns and transmits again, repeating process
3. The object reflects the pulse this time
Sonar
Making use of sonar for imaging

Targets 2 and 3 appear at the same range. There is no height discrimination.
Sonar
What it looks like

Hammerhead image of a pier structure, The Underwater Centre, Fort William

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Profiler
How sonar products are all different
Profiler
The options

- Single Beam
- Mechanical Scanning
- Multibeam

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Multibeam Profiler
The Gemini 620pd
Gemini 620pd

What is it

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Gemini 620pd

What is the HUB

GPS = Global Positioning System
SVP = Sound Velocity Profiler
MRU = Motion Reference Unit
SCU = Surface Control Unit

- Ethernet link
- RS232 link
- optional RS232 link
  (required depending on which survey software is in use)

- PPS link
- Graphics link

Note: unused port should have a blanking cap fitted
Gemini 620pd
How it works

Beam Spacing

- Equidistant
- Equiangular
- Inverse Sinusoidal
- Fixed

256 Beams over 130 degrees

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Gemini 620pd

How it works

Digitisation

- Amplitude
- Phase
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How it works

Other key 620pd points

- Automatic Gate Digitisation
- Roll Correction
- Selectable Ping Spacing
Gemini 620pd

In action
Multibeam Survey Issues
Discussion of related sensors and key topics
Multibeam Survey Issues

What's important

It's all in the preparation

- Installation
- Repeatability
- Processing

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Multibeam Survey Issues
What's important

It’s also in the understanding

• Experience
• Limits
• Value

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That's all Folks!

Questions