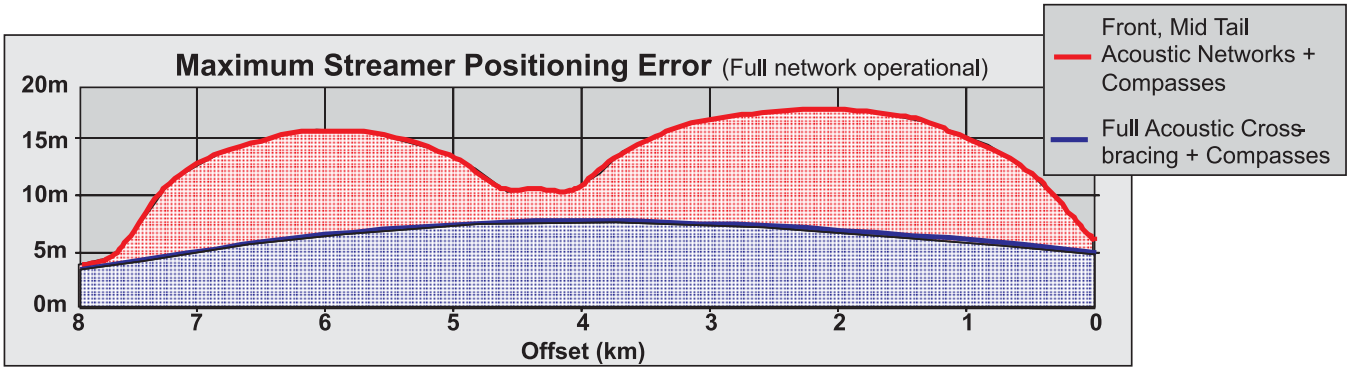

Fig-6. Full acoustic cross bracing provides 60% improvement in maximum error.

strategy advocated here requires revisions to these specifications

Although DigiRANGE II can be used with any integrated navigation system, the next generation of integrated navigation and instrument room data management systems, including ORCA from Concept Systems, support a number of features that have particular application to advanced 3D and 4D surveys. ORCA contains features to allow automated computation of final co-ordinates within a few minutes of the completion of data acquisition. This feature eliminates many of the delays in traditional processing, but it also eliminates the subjectivity associated with individual data processors. Other key ORCA advances to improve 3D and 4D image quality while increasing operational efficiency include advanced planning and data acquisition techniques such as intelligent line selection and steering strategies to optimize 3D coverage and/or 4D repeatability.

A final word ….

"Time-lapse comparisons of data that have had the benefit of more highly resolved positioning information are always more detailed and compelling...."

"Positioning is the single most important aspect for maintaining integrity between different datasets"

Helmut Jakubowicz, Veritas DGC

"It may be worth extra expenditures to acquire data more carefully for 4D"

Ola Eiken, Statoil

From
"Expert Answers : MultiSource/Multistreamer acquisition"
Leading Edge, May 2005

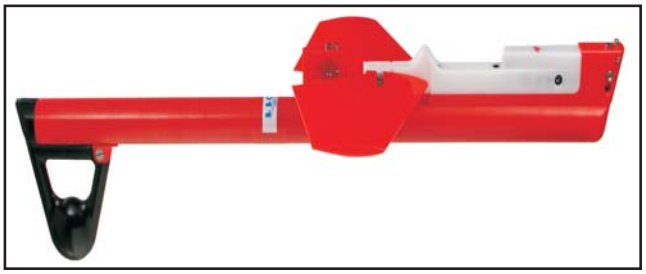

Fig-7. DigiRANGE II Acoustic Bird

References and Further Reading

1) "Reliability analysis in dynamic systems: Implications for marine positioning networks", Gikas, V., Cross, P.A., Ridyard, D., Geophysics, 1999; vol. 64, issue 4 (July/August), p. 1014

2) "Spatially and temporally correlated navigation errors: how do they manifest themselves in seismic data?" Archer, S., Gikas, V., Pinel, C., Ridyard, D., Cross, P.A., First Break, 1999; vol. 17, issue 11 (November), p. 355