

**A new *a posteriori* error estimate for the BEM
in 2D- and 3D-acoustics**

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We introduce a new *a posteriori* error estimate for the BEM in acoustics. It is based on a new localization technique of the H^s -norms using a « localization » operator \mathbf{L} applied to the residual of the equation. It is reliable, efficient and local. Its main advantage, on the contrary to other estimates of the litterature, is that it is asymptotically exact with respect to the energy norm of the error. We give a possible extension to the EFIE using the Helmholtz-Hodge decomposition of the residual.