The Next Best Underwater View:  
Supplementary Material

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Abstract

The supplementary material details the compensation of small misalignment, caused by slight error in the camera pose.

Compensating For Pose Error

There are small errors in \( \phi_c(t) \). An error in \( \phi_c(t) \) leads to a small misalignment during texture mapping in Eqs. (31) in [1]. To counter misalignment, phase correlation [2] is used to perform local fine alignment of \( \hat{\rho}(x_{\text{texture}}, t) \). We apply alignment per texture-map triangle \( Y_k \). This is illustrated in Fig. 1 here.

References


Figure 1. Compensating for small misalignments. Albedo maps are estimated per frame at \( t = 1 \) and \( t = 2 \). Face \( T_k \) is marked by a red triangle, and mapped to \( Y_k \in \mathcal{Y} \) at \( t = 2 \) and \( t = 1 \). The small misalignment between the images is corrected. [Bottom] superimposing the images in false magenta and green displays the alignment.