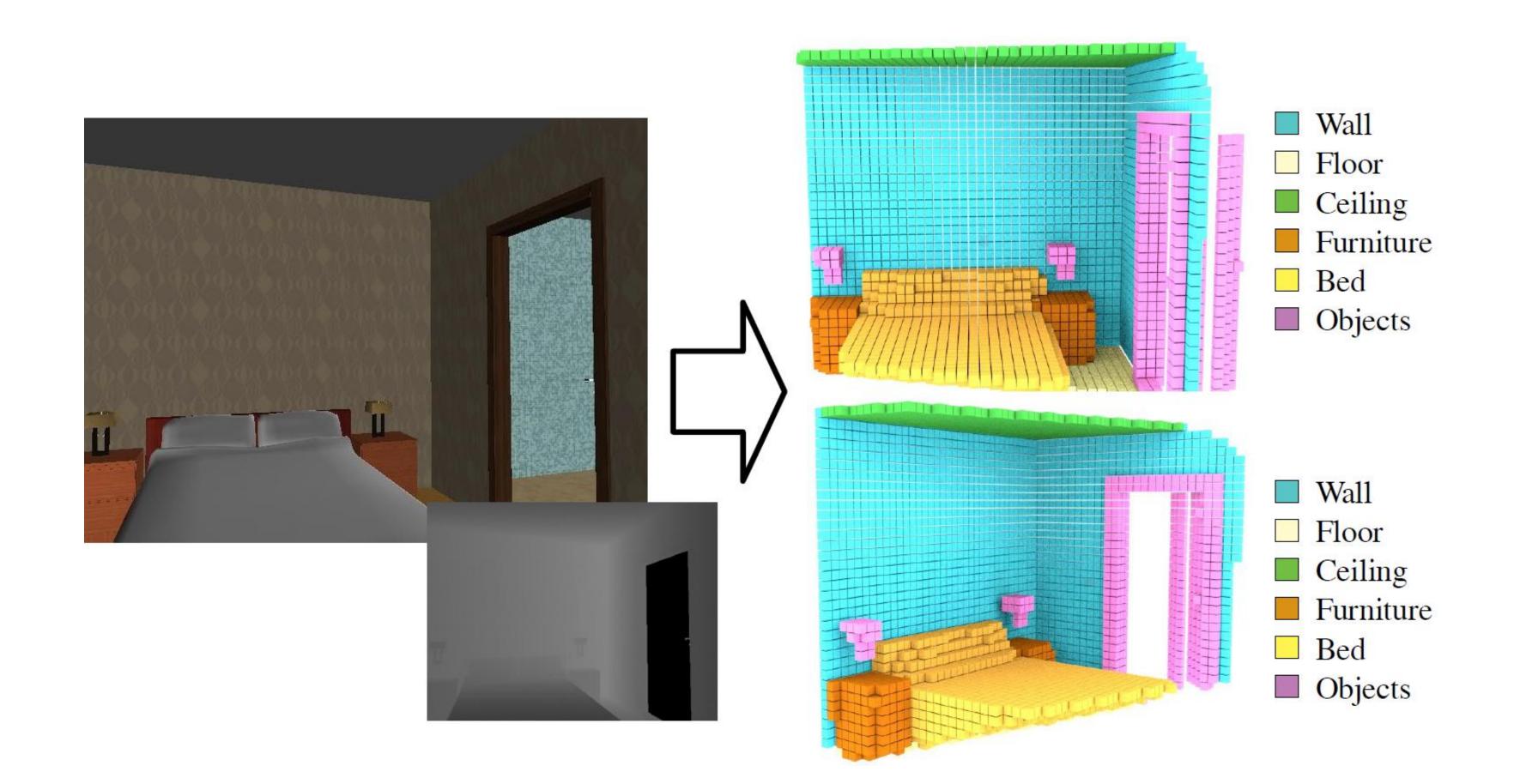


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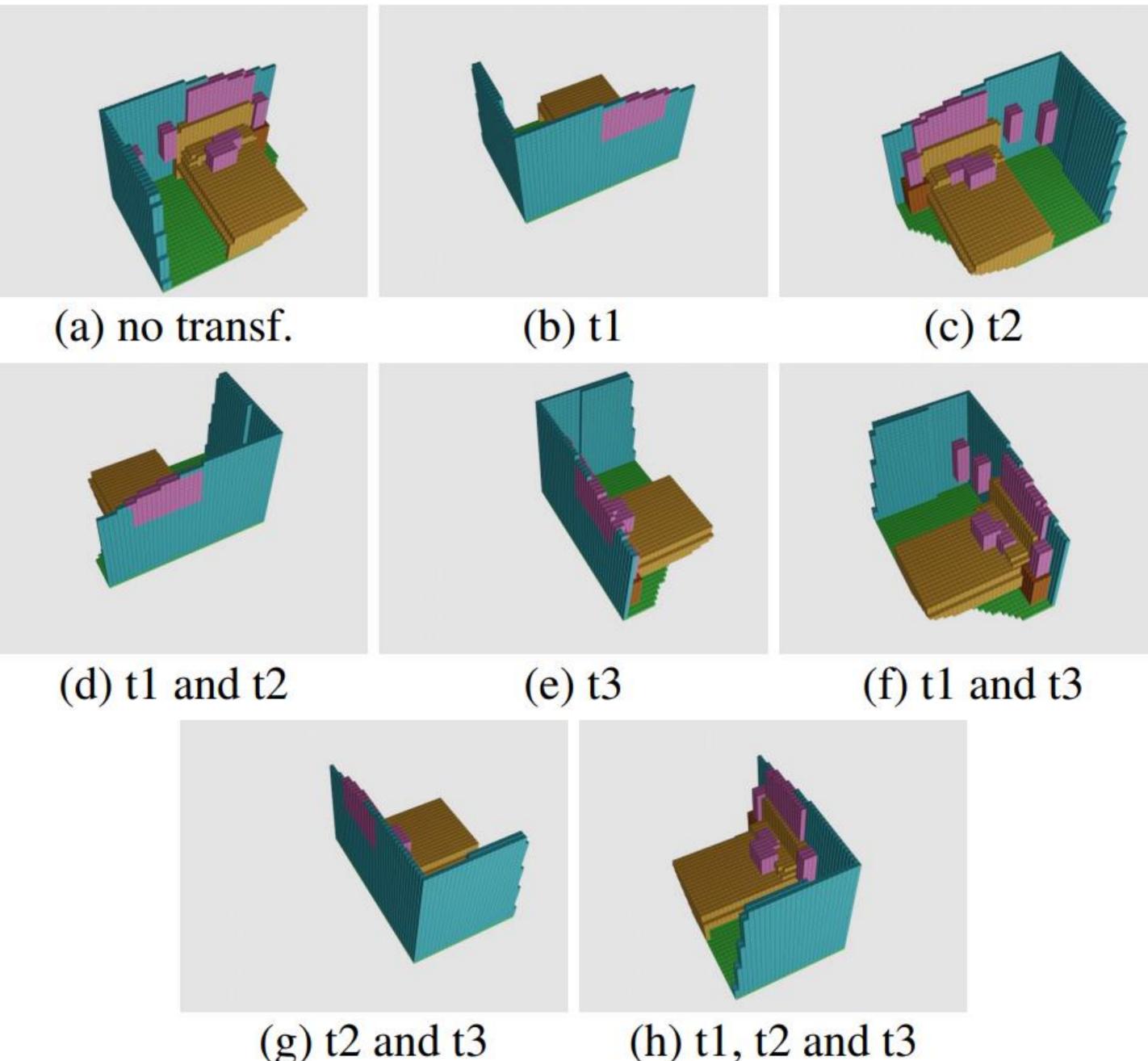
SEMANTIC SCENE COMPLETION (SSC)



Given an RGB-D image, the goal of semantic scene completion is to infer a complete 3D occupancy grid with associated semantic labels. Previous works completely neglect the RGB channels from the input data or require a complex two step training process to merge RGB and depth data.

DATA AUGMENTATION FOR SSC

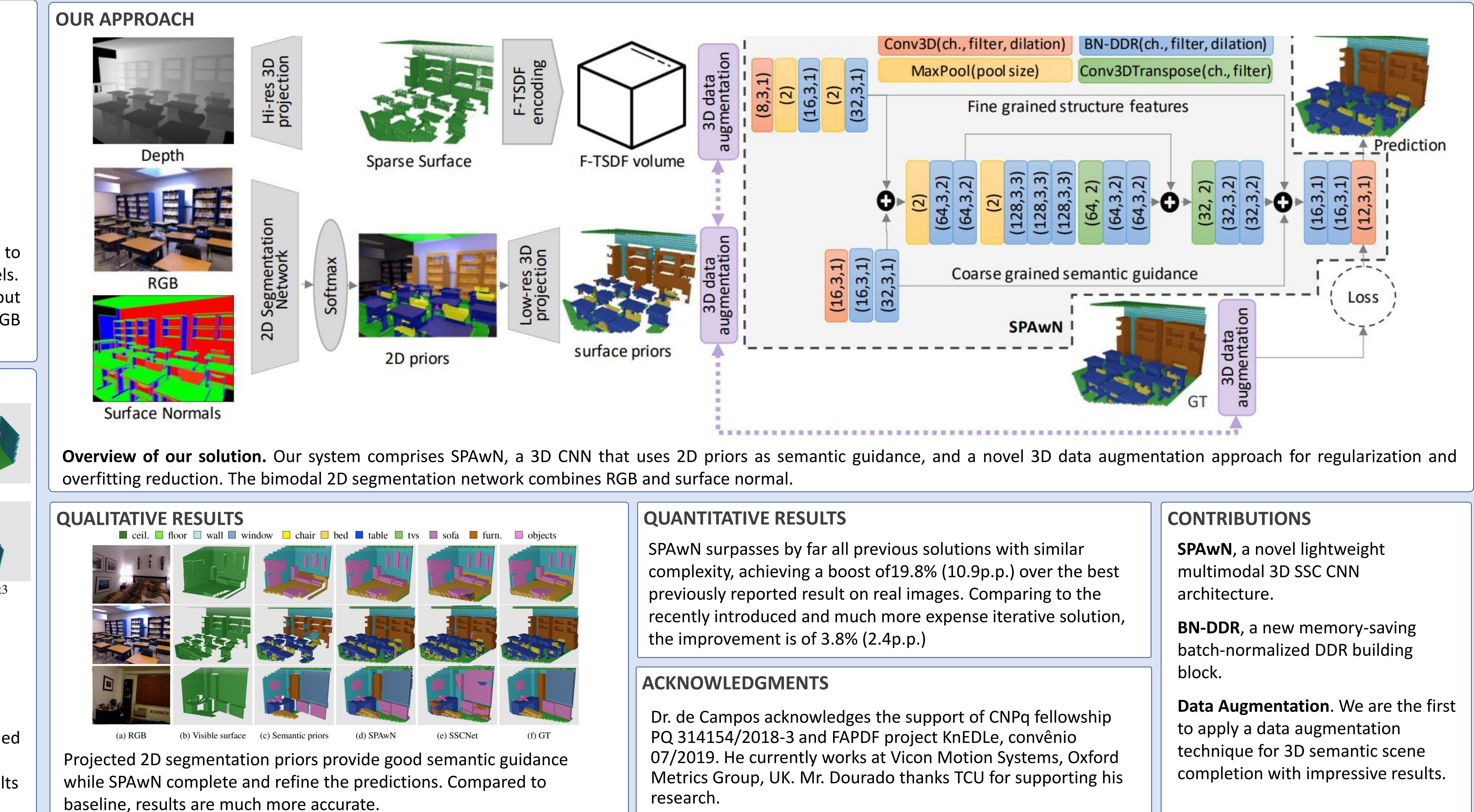
Our data augmentation strategy is applied directly to the projected 3D volumes of the SSC solutions. We randomly rotate the scene in 45degree steps and randomly flip along the horizontal axes. We achieve this augmentation with 3 simple and fast 3D transformations



During training, we randomly choose to apply or not each one of the 3 transformations. The chosen transformations are then applied to the whole 3D mini-batch. In test time, we apply all the eight possible combinations of transformation and ensembled the results for a and more accurate output.

Data Augmented 3D Semantic Scene Completion with 2D Segmentation Priors

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WACV 2022

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