Visual Computer bibliographic references

1.

@Article{Namane2018,
author="Namane, Rachid
and Miguet, Serge
and Oulebsir, Fatima Boumghar",
title="A fast voxelization algorithm for trilinearly interpolated isosurfaces",
journal="The Visual Computer",
year="2018",
month="Jan",
day="01",
volume="34",
number="1",
pages="5--20",
abstract="In this work, we propose a new method for a fast incremental voxelization of isosurfaces obtained by the trilinear interpolation of 3D data. Our objective consists in the fast generation of subvoxelized isosurfaces extracted by a point-based technique similar to the Dividing Cubes algorithm. Our technique involves neither an exhaustive scan search process nor a graph-based search approach when generating isosurface points. Instead an optimized incremental approach is adopted here for a rapid isosurface extraction. With a sufficient sampling subdivision criteria around critical points, the extracted isosurface is both correct and topologically consistent with respect to the piecewise trilinear interpolant. Furthermore, the discretization scheme used in our method ensures obtaining thin - one voxel width - isosurfaces as compared to the one given by the Dividing Cubes algorithm. The resultant subvoxelized isosurfaces are efficiently tested against all possible configurations of the trilinear interpolant and real-world datasets.",
issn="1432-2315",
doi="10.1007/s00371-016-1306-0",
url="https://doi.org/10.1007/s00371-016-1306-0"
}

2.

@Article{Zhang2011,
author="Zhang, Qi
and Eagleson, Roy
and Peters, Terry M.",
title="Rapid scalar value classification and volume clipping for interactive 3D medical image visualization",
journal="The Visual Computer",
year="2011",
month="Jan",
day="01",
volume="27",
number="1",
pages="3--19",

abstract="In many clinical scenarios, medical data visualization and interaction are important to physicians for exploring inner anatomical structures and extracting meaningful diagnostic information. Real-time high-quality volume rendering, artifact-free clipping, and rapid scalar value classification are important techniques employed in this process. Unfortunately, in practice, it is still difficult to achieve an optimal balance. In this paper, we present some strategies to address this issue, which are based on the calculation of segment-based post color attenuation and dynamic ray--plane intersection (RPI) respectively. When implemented within our visualization system, the new classification algorithm can deliver real-time performance while avoiding the ``color over-accumulation'' artifacts suffered by the commonly used acceleration algorithms that employ pre-integrated classification. Our new strategy can achieve an optimized balance between image quality and classification speed. Next, the RPI algorithm is used with opacity adjustment technique to effectively remove the ``striping'' artifacts on the clipping plane caused by the nonuniform integration length. Furthermore, we present techniques for multiple transfer function (TF) based anatomical feature enhancement and ``keyhole'' based endoscopic inner structure view. Finally, the algorithms are evaluated subjectively by radiologists and quantitatively compared using image power spectrum analysis.",
issn="1432-2315",
doi="10.1007/s00371-010-0509-z",
url="https://doi.org/10.1007/s00371-010-0509-z"
}