Measurement and Calculation of Complex Building Shapes in Digital Spaces

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SUMMARY

The rapid advancement of global digitalization has made spatiotemporal information and positioning navigation services significant new infrastructure. In this ever-evolving digital era, 3D Real Scene technology is transforming our understanding of and interaction with the world at an unprecedented pace. 3D Real Scene technology, with its high-precision, all-round and three-dimensional characteristics, can truly restore every detail of the earth's surface, from mountains, rivers, lakes and seas to city streets, from microscopic cells to the macroscopic universe, everything is included. Focusing on the global application of 3D Real Scene technology, it aims to construct a complete process for building realistic 3D models through various data sources such as remote sensing satellites, drones, and ground scanning. By integrating advanced technologies like cloud computing, big data, and artificial intelligence, this solution covers multiple aspects including drone aerial photography, satellite imagery, LiDAR SLAM data acquisition, control measurement, aerial triangulation encryption, 3D reconstruction, model refinement, and entity creation. From the release of temporal-spatial information platforms to integrated application services, it forms a comprehensive solution that is quick, efficient, and stable in its application. It offers more scientific and precise government decision-making, more efficient and intelligent enterprise operations, and more convenient and intuitive public participation. It not only helps us better understand and protect our planet but also promotes sustainable economic development globally and enhances the overall well-being of human society. The ReS3D solution is founded on this vision, dedicated to advancing the global popularization and deepened application of 3D Real Scene technology. By collaborating with global partners, we aim to create vivid, accurate, and dynamic depictions of the Earth, contributing technological strength to foster a global community of shared future.
