Large-Scale, Real-Time 3D Image Reconstruction Using Multi-View Stereo Algorithms

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Progress

- Fixed code in PMVS2 that was incompatible with how I organized the Bundler-CMVS-PMVS2 code.

- After testing with various image sets, the system is now running and outputting the expected results.

- Identified bottlenecks in Bundler software:

  - Sift algorithm, which is used to find keypoints

  - KeyMatchFull, which is used to match keypoints

- Have begun swapping out Sift with SiftGPU, which uses GPU to accelerate the SIFT algorithm.

- Created repository to better manage the increasing size and complexity of the code.

Upcoming Goals

- Get SiftGPU functioning correctly in the code.

- Write or find and integrate code that will implement KeyMatchFull for GPU.

- Look into where and how to parallelize the code for further speed-up.

- Determine more specific bottlenecks in Bundler and PMVS2 and find solutions to address the issues.

Culture

← Fengjia Night Market, Taichung

Downtown Hsinchu →

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