23rd Cartographer Open House

18-5-7
Grpc and DeleteTrajectory fixes

A caller can load a new frozen map, wait for global SLAM to process it (and re-localize in the new map), and delete the old frozen map (RFC).

Cartographer

- Handle invalid requests. (#1222)
- Avoid uninitialized Nodeld, SubmapId (#1223)
- Add further tests for MapByld (#1226)
- Fix serialization for deleted trajectories. (#1214)
Truncated Signed Distance Functions

- Add TSDF2D Grid (#1209)
- Add Normal Estimation (#1213)
- Separate raycast and grid update (#1216)
Parameter for Pure Localization

Cartographer

- Add max_submaps_with_pure.localization parameter (#1141)
- Make old pbstreams compatible with the new pure.localization.trimmer

Cartographer ROS

- Use new pure localization trimmer options. (#918)
ROS Services for Metrics and TrajectoryState

Cartographer ROS

- Use PoseGraphInterface::TrajectoryState from libcartographer (#910)
- Add internal metric families. (#914)
- Register internal metrics and provide a public interface. (#917)
Tweaks and Fixes

Cartographer

- Fix the local SLAM latency metric. (#1231)
- Add options to (not)collate fixed-frame/landmarks data. (#1224)
- Add `use_online_imu_extrinsics_in_3d` parameter and set it to true
- Extract ground truth generation into a library. (#1215)

Cartographer ROS

- Improve internal naming of local SLAM data. (#908)
- Discard proto data in `pbstream_map_publisher` via RAII. (#912)
- Allow to ignore (un-)frozen submaps in the occupancy grid node. (#899)
Current work

- Generic Pose Graph Design
- Correct DeleteTrajectory to replace maps at run-time
- TSDF
- Robust gRPC client and server
Placeholder for other status reports
Thanks.

Next Open House:
**August 2nd, 5pm CEST**

If you would like to present anything next meeting, please reach out to [cschuet@google.com](mailto:cschuet@google.com)