**代码整理**

**1、ROS主题整理**

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| **主题** | **类型** | **回调函数** | **作用** | **标志位** | **文件位置** |
| laser\_cloud\_sharp | 订阅 | laserCloudSharpHandler | 获取时间戳，并将ROS消息转换到cornerPointsSharp | newCornerPointsSharp | laserOdometry.cpp |
| 发布 |  | 主角点 |  | scanRegistration.cpp |
| laser\_cloud\_less\_sharp | 订阅 | laserCloudLessSharpHandler | 获取时间戳，并将ROS消息转换到cornerPointsLessSharp | newCornerPointsLessSharp | laserOdometry.cpp |
| 发布 |  | 次角点（包含了主角点） |  | scanRegistration.cpp |
| laser\_cloud\_flat | 订阅 | laserCloudFlatHandler | 获取时间戳，并将ROS消息转换到surfPointsFlat | newSurfPointsFlat | laserOdometry.cpp |
| 发布 |  | 主平面点 |  | scanRegistration.cpp |
| laser\_cloud\_less\_flat | 订阅 | laserCloudLessFlatHandler | 获取时间戳，并将ROS消息转换到surfPointsLessFlat | newSurfPointsLessFlat | laserOdometry.cpp |
| 发布 |  | 次平面点（包含主平面点） |  | scanRegistration.cpp |
| imu\_trans | 订阅 | imuTransHandler | 获得点的位置、速度、开始时的三个角和结束时的三个角 | newImuTrans | laserOdometry.cpp |
| 发布 |  |  |  | scanRegistration.cpp |
| laser\_cloud\_corner\_last | 订阅 | laserCloudCornerLastHandler | 获取时间戳，将ROS消息转换到laserCloudCornerLast | newLaserCloudCornerLast | laserMapping.cpp |
| 发布 |  | 上一帧的角点 |  | laserOdometry.cpp |
| laser\_cloud\_surf\_last | 订阅 | laserCloudSurfLastHandler | 获取时间戳，将ROS消息转换到laserCloudSurfLast | newLaserCloudSurfLast | laserMapping.cpp |
| 发布 |  | 上一帧的平面点 |  | laserOdometry.cpp |
| velodyne\_cloud\_2 | 订阅 | laserCloudFullResHandler |  | newLaserCloudFullRes | laserOdometry.cpp |
| 发布 |  | 所有的16线激光的点云 |  | scanRegistration.cpp |
| velodyne\_cloud\_3 | 订阅 | laserCloudFullResHandler | 获取时间戳，将ROS消息转换到laserCloudFullRes | newLaserCloudFullRes | laserMapping.cpp |
| 发布 |  |  |  | laserOdometry.cpp |
| laser\_odom\_to\_init | 订阅 | laserOdometryHandler | 获得时间戳、四元数转换成旋转角 | newLaserOdometry | laserMapping.cpp |
| laserOdometryHandler |  |  | transformMaintenance.cpp |
| 发布 |  |  |  | laserOdometry.cpp |
| imu/data | 订阅 | imuHandler | 获得imu的时间戳、yaw、roll和pitch |  | laserMapping.cpp |
| imuHandler | 获得时间戳、三个轴向角和线加速度 |  | scanRegistration.cpp |
| 发布 |  |  |  |  |
| laser\_cloud\_surround | 订阅 |  |  |  |  |
| 发布 |  |  |  | laserMapping.cpp |
| velodyne\_cloud\_registered | 订阅 |  |  |  |  |
| 发布 |  |  |  | laserMapping.cpp |
| velodyne\_cloud\_Feature | 订阅 |  |  |  |  |
| 发布 |  |  |  | laserMapping.cpp |
| aft\_mapped\_to\_init | 订阅 | odomAftMappedHandler |  |  | transformMaintenance.cpp |
| 发布 |  |  |  | laserMapping.cpp |
| integrated\_to\_init | 订阅 |  |  |  |  |
| 发布 |  |  |  | transformMaintenance.cpp |
| /velodyne\_points | 订阅 | laserCloudHandler | 每一帧的原始点云，计算c值，选取角点和平面点 |  | scanRegistration.cpp |
| 发布 |  |  |  |  |

**2.各头文件非回调函数整理**

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| **头文件** | **作用** | **函数名** |
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