cmake\_minimum\_required(VERSION 2.8)

project(gmapping)

find\_package(catkin REQUIRED nav\_msgs nodelet openslam\_gmapping roscpp tf rosbag\_storage)

find\_package(Boost REQUIRED)

include\_directories(${Boost\_INCLUDE\_DIRS} ${catkin\_INCLUDE\_DIRS})

include\_directories(src)

catkin\_package()

add\_executable(slam\_gmapping src/slam\_gmapping.cpp src/main.cpp)

target\_link\_libraries(slam\_gmapping ${Boost\_LIBRARIES} ${catkin\_LIBRARIES})

if(catkin\_EXPORTED\_TARGETS)

add\_dependencies(slam\_gmapping ${catkin\_EXPORTED\_TARGETS})

endif()

add\_library(slam\_gmapping\_nodelet src/slam\_gmapping.cpp src/nodelet.cpp)

target\_link\_libraries(slam\_gmapping\_nodelet ${catkin\_LIBRARIES})

add\_executable(slam\_gmapping\_replay src/slam\_gmapping.cpp src/replay.cpp)

target\_link\_libraries(slam\_gmapping\_replay ${Boost\_LIBRARIES} ${catkin\_LIBRARIES})

if(catkin\_EXPORTED\_TARGETS)

add\_dependencies(slam\_gmapping\_replay ${catkin\_EXPORTED\_TARGETS})

endif()

install(TARGETS slam\_gmapping slam\_gmapping\_nodelet slam\_gmapping\_replay

ARCHIVE DESTINATION ${CATKIN\_PACKAGE\_LIB\_DESTINATION}

LIBRARY DESTINATION ${CATKIN\_PACKAGE\_LIB\_DESTINATION}

RUNTIME DESTINATION ${CATKIN\_PACKAGE\_BIN\_DESTINATION}

)

install(FILES nodelet\_plugins.xml

DESTINATION ${CATKIN\_PACKAGE\_SHARE\_DESTINATION}

)

if(CATKIN\_ENABLE\_TESTING)

find\_package(rostest REQUIRED)

if(TARGET tests)

add\_executable(gmapping-rtest EXCLUDE\_FROM\_ALL test/rtest.cpp)

target\_link\_libraries(gmapping-rtest ${catkin\_LIBRARIES} ${GTEST\_LIBRARIES})

add\_dependencies(tests gmapping-rtest)

endif()

# Need to make the tests more robust; currently the output map can differ

# substantially between runs.

catkin\_download\_test\_data(

${PROJECT\_NAME}\_basic\_localization\_stage\_indexed.bag

http://download.ros.org/data/gmapping/basic\_localization\_stage\_indexed.bag

DESTINATION ${CATKIN\_DEVEL\_PREFIX}/${CATKIN\_PACKAGE\_SHARE\_DESTINATION}/test

MD5 322a0014f47bcfbb0ad16a317738b0dc)

catkin\_download\_test\_data(

${PROJECT\_NAME}\_hallway\_slow\_2011-03-04-21-41-33.bag

http://download.ros.org/data/gmapping/hallway\_slow\_2011-03-04-21-41-33.bag

DESTINATION ${CATKIN\_DEVEL\_PREFIX}/${CATKIN\_PACKAGE\_SHARE\_DESTINATION}/test

MD5 e772b89713693adc610f4c5b96f5dc03)

catkin\_download\_test\_data(

${PROJECT\_NAME}\_basic\_localization\_stage\_groundtruth.pgm

http://download.ros.org/data/gmapping/basic\_localization\_stage\_groundtruth.pgm

DESTINATION ${CATKIN\_DEVEL\_PREFIX}/${CATKIN\_PACKAGE\_SHARE\_DESTINATION}/test

MD5 abf208f721053915145215b18c98f9b3)

catkin\_download\_test\_data(

${PROJECT\_NAME}\_test\_replay\_crash.bag

https://github.com/ros-perception/slam\_gmapping\_test\_data/raw/master/test\_replay\_crash.bag

DESTINATION ${CATKIN\_DEVEL\_PREFIX}/${CATKIN\_PACKAGE\_SHARE\_DESTINATION}/test

MD5 bb0e086207eb4fccf0b13d3406f610a1)

catkin\_download\_test\_data(

${PROJECT\_NAME}\_test\_turtlebot.bag

https://github.com/ros-perception/slam\_gmapping\_test\_data/raw/master/test\_turtlebot.bag

DESTINATION ${CATKIN\_DEVEL\_PREFIX}/${CATKIN\_PACKAGE\_SHARE\_DESTINATION}/test

MD5 402e1e5f7c00445d2a446e58e3151830)

catkin\_download\_test\_data(

${PROJECT\_NAME}\_test\_upside\_down.bag

https://github.com/ros-perception/slam\_gmapping\_test\_data/raw/master/test\_upside\_down.bag

DESTINATION ${CATKIN\_DEVEL\_PREFIX}/${CATKIN\_PACKAGE\_SHARE\_DESTINATION}/test

MD5 3b026a2144ec14f3fdf218b5c7077d54)

set(LOCAL\_DEPENDENCIES gmapping-rtest ${PROJECT\_NAME}\_basic\_localization\_stage\_indexed.bag

${PROJECT\_NAME}\_test\_replay\_crash.bag

${PROJECT\_NAME}\_test\_turtlebot.bag

${PROJECT\_NAME}\_test\_upside\_down.bag

${PROJECT\_NAME}\_hallway\_slow\_2011-03-04-21-41-33.bag

${PROJECT\_NAME}\_basic\_localization\_stage\_groundtruth.pgm

slam\_gmapping

slam\_gmapping\_replay

)

add\_rostest(test/basic\_localization\_stage.launch DEPENDENCIES ${LOCAL\_DEPENDENCIES})

add\_rostest(test/basic\_localization\_stage\_replay.launch DEPENDENCIES ${LOCAL\_DEPENDENCIES})

add\_rostest(test/basic\_localization\_stage\_replay2.launch DEPENDENCIES ${LOCAL\_DEPENDENCIES})

add\_rostest(test/basic\_localization\_symmetry.launch DEPENDENCIES ${LOCAL\_DEPENDENCIES})

add\_rostest(test/basic\_localization\_upside\_down.launch DEPENDENCIES ${LOCAL\_DEPENDENCIES})

add\_rostest(test/basic\_localization\_laser\_different\_beamcount.test DEPENDENCIES ${LOCAL\_DEPENDENCIES})

endif()