

설명서

20201780 곽창민

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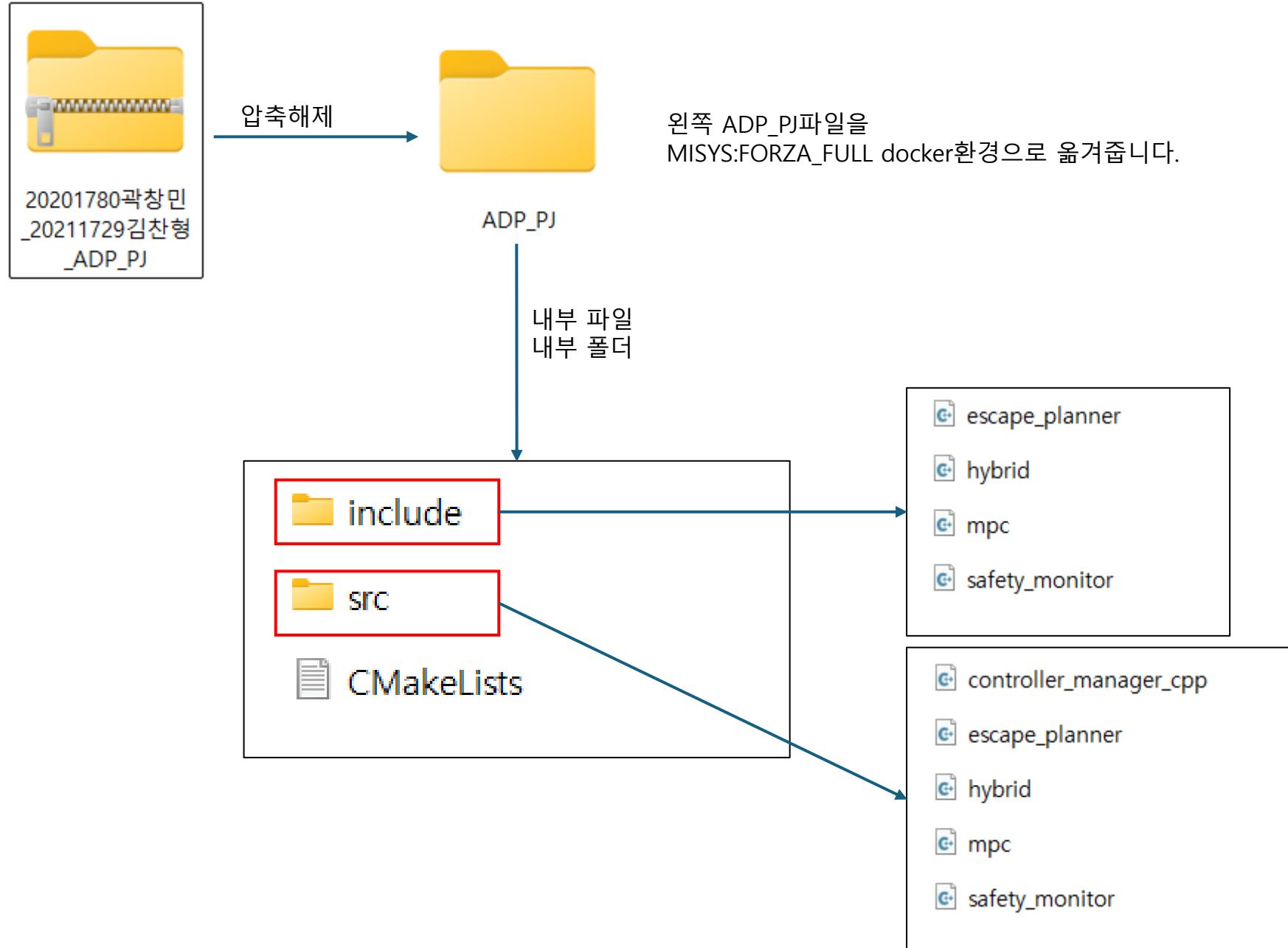
❖ 각 터미널에 환경 설정

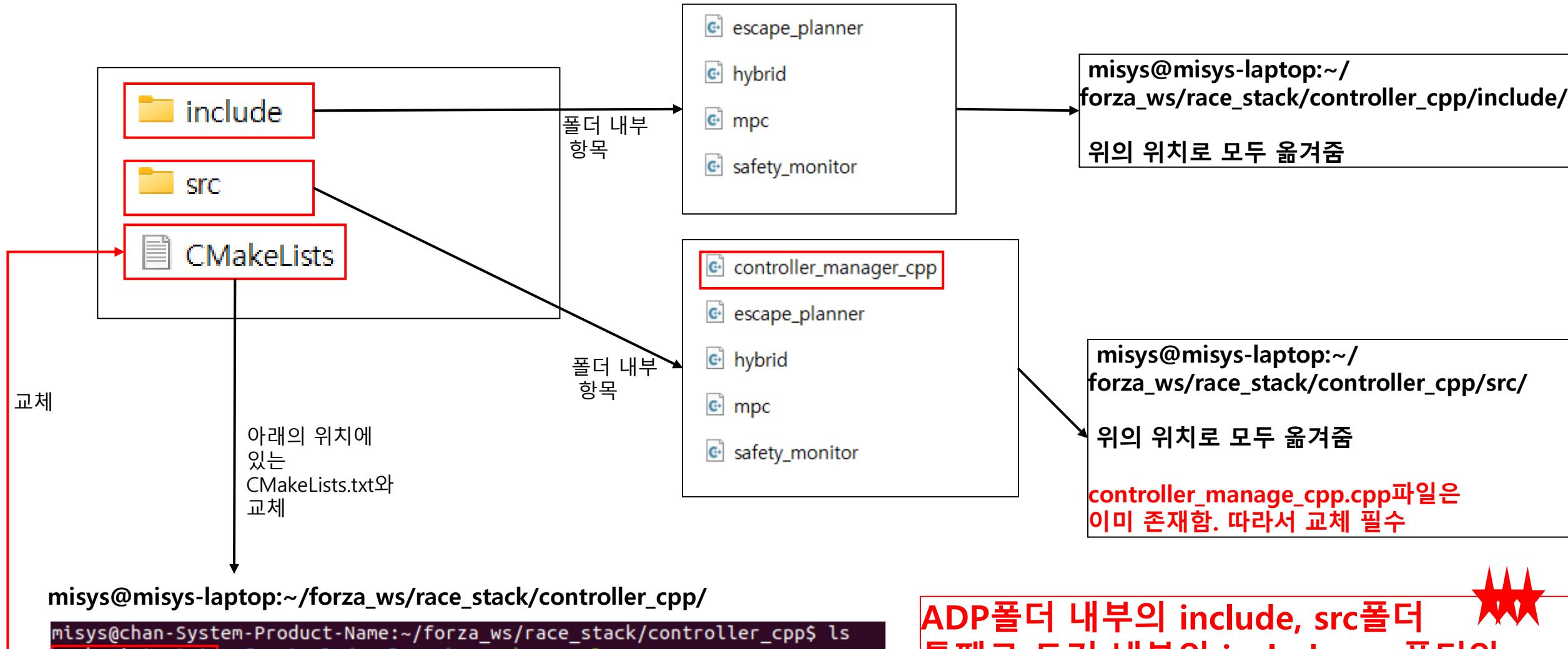
[Terminal 1]

- misys@misyss-laptop:~\$ cd forza_ws/race_stack/
- misys@misyss-laptop:~/forza_ws/race_stack\$ source /opt/ros/humble/setup.bash
 && source install/setup.bash
- misys@misyss-laptop:~/forza_ws/race_stack\$./activate_forza.sh

[Terminal 2, 3, 4, 5, 6]

- misys@misyss-laptop:~/forza_ws/race_stack\$ source /opt/ros/humble/setup.bash
 && source install/setup.bash
- misys@misyss-laptop:~/forza_ws/race_stack\$./activate_forza.sh





ADP폴더 내부의 include, src폴더 통째로 도커 내부의 include, src폴더와 교체하는것이 아닌 폴더 내부의 파일들만 도커에 추가 및 교체 (controller_manager_cpp.cpp는 교체)

❖ 각 터미널에 환경 설정

[Terminal 1] 새로 바꿔준 controller cpp파일 빌딩 작업

```
misys@misys-laptop:~/forza_ws/race_stack$ colcon build --packages-select controller_cpp  
misys@misys-laptop:~/forza_ws/race_stack$ source install/setup.bash
```

[Terminal 2, 3, 4, 5, 6]

- misys@misys-laptop:~/forza_ws/race_stack\$ source install/setup.bash

❖ [Terminal 1] 시뮬레이션 및 자차 측위 (particle filter + EKF) 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 launch stack_master base_system_launch.xml  
racecar_version:=OrinNano map_dir:=small_hall map_name:=small_hall_orig sim:=true
```

❖ [Terminal 2] rqt

* rqt에서 추월 가능 섹터 지정

❖ [Terminal 3] 자차 제어 (Pure pursuit / HYBRID / MPC) 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 launch stack_master head_to_head_launch.xml  
racecar_version:=OrinNano ctrl_algo:=PP
```

오른쪽 두개 문구로 바꿔서 실행가능

HYBRID

MPC

❖ [Terminal 4] 상대차 제어 (Pure pursuit) 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 launch opponent_publisher_cpp  
opponent_publisher_launch.xml speed:=0.5
```

❖ [Terminal 5] Safety monitor 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 run controller_cpp safety_monitor
```

❖ [Terminal 6] Escape monitor 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 run controller_cpp escape_planner
```