

# Full CPN Model

## I. DECLARATIONS

- 1) colset SwitchPos= with position|reverse;
- 2) colset orders =with Order|Convert|Lock|Occupy|Release;
- 3) colset Command= product SwitchPos\*orders;
- 4) colset StateRes=with free|lock|occupy|convert|release;
- 5) colset ResourceSwitch = product SwitchPos\*StateRes;
- 6) colset ResourceResult = product ResourceSwitch\*orders;
- 7) colset Communication= with establish|disconnect;
- 8) colset Response = with response|unresponse;
- 9) colset Result = with success|fail;
- 10) colset Task= with register|cancel;
- 11) colset Procedure= product STRING\*Task;
- 12) colset StateCom = with online|offline;
- 13) colset TypeRes= with track|switch;
- 14) colset Approach = product TypeRes\*INT;
- 15) colset ApproachList = list Approach;
- 16) var TrainID,TrainID1,map,mes:STRING;
- 17) var sw,sw':SwitchPos;
- 18) var or:orders;
- 19) var sta:StateRes;
- 20) var resp,resp1:Response;
- 21) var resu,resu1:Result;
- 22) var task:Task;
- 23) var com:StateCom;
- 24) var n,num,num1,num2:INT;
- 25) var ty:TypeRes;
- 26) var appoa:ApproachList;

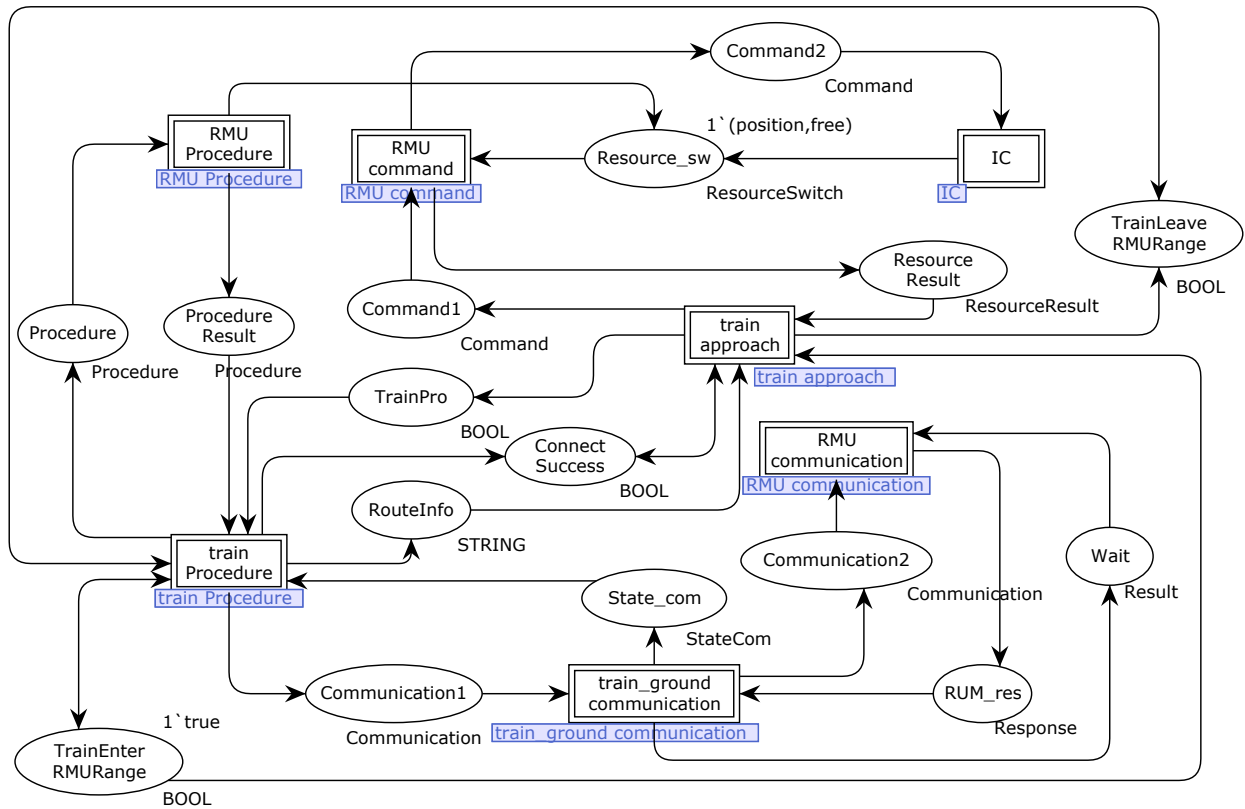


Fig. 1. Top-Level

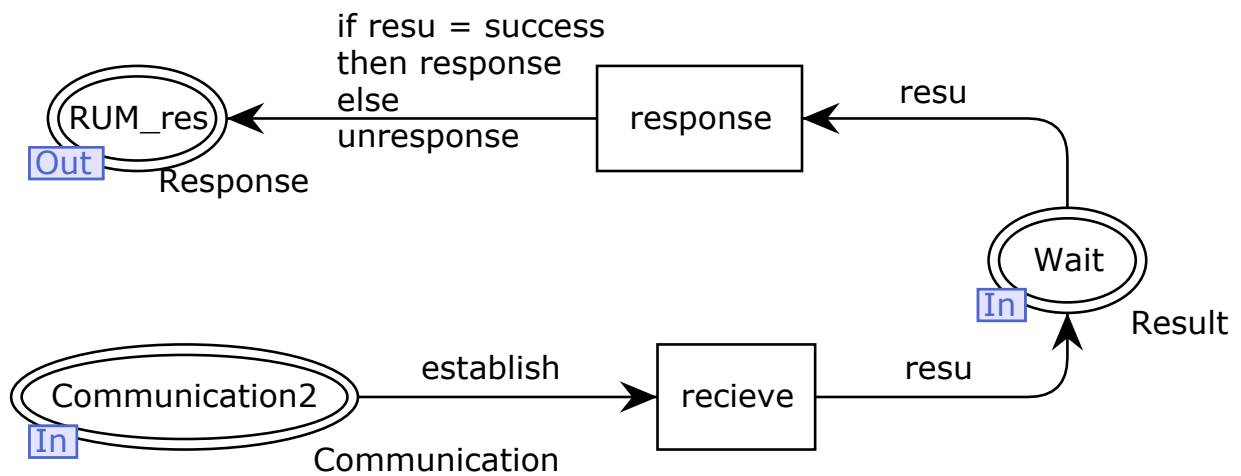


Fig. 2. RMU communication



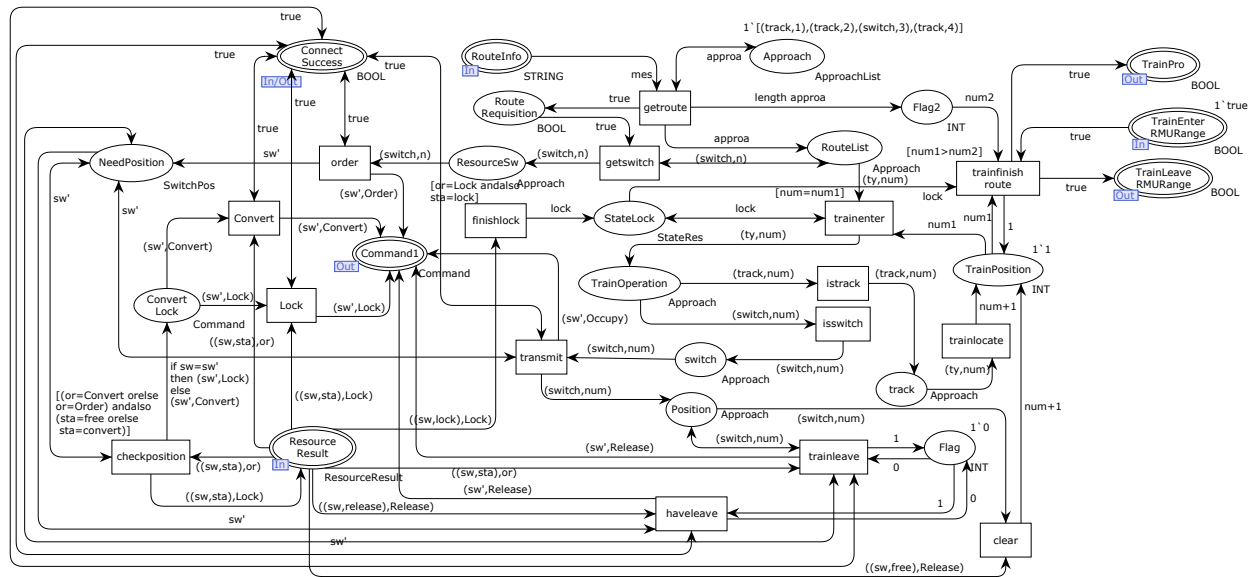


Fig. 5. train approach

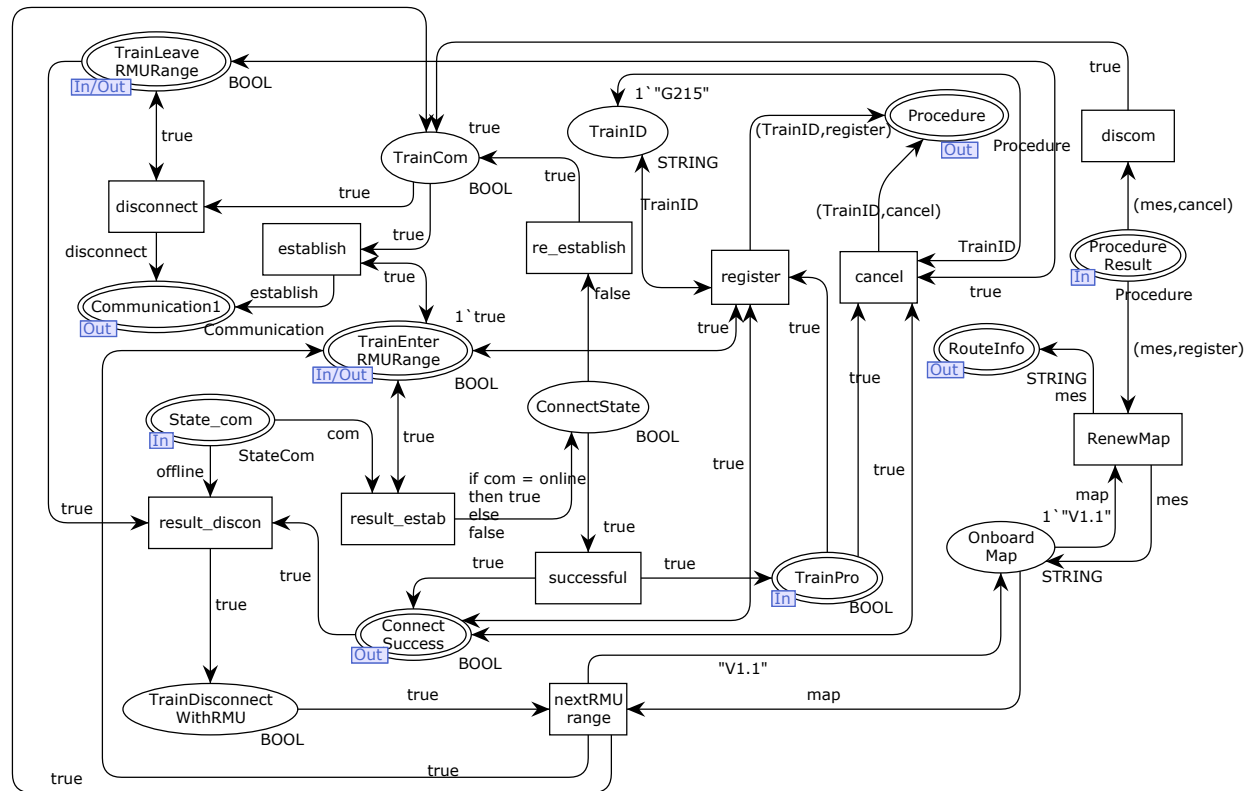


Fig. 6. train Procedure

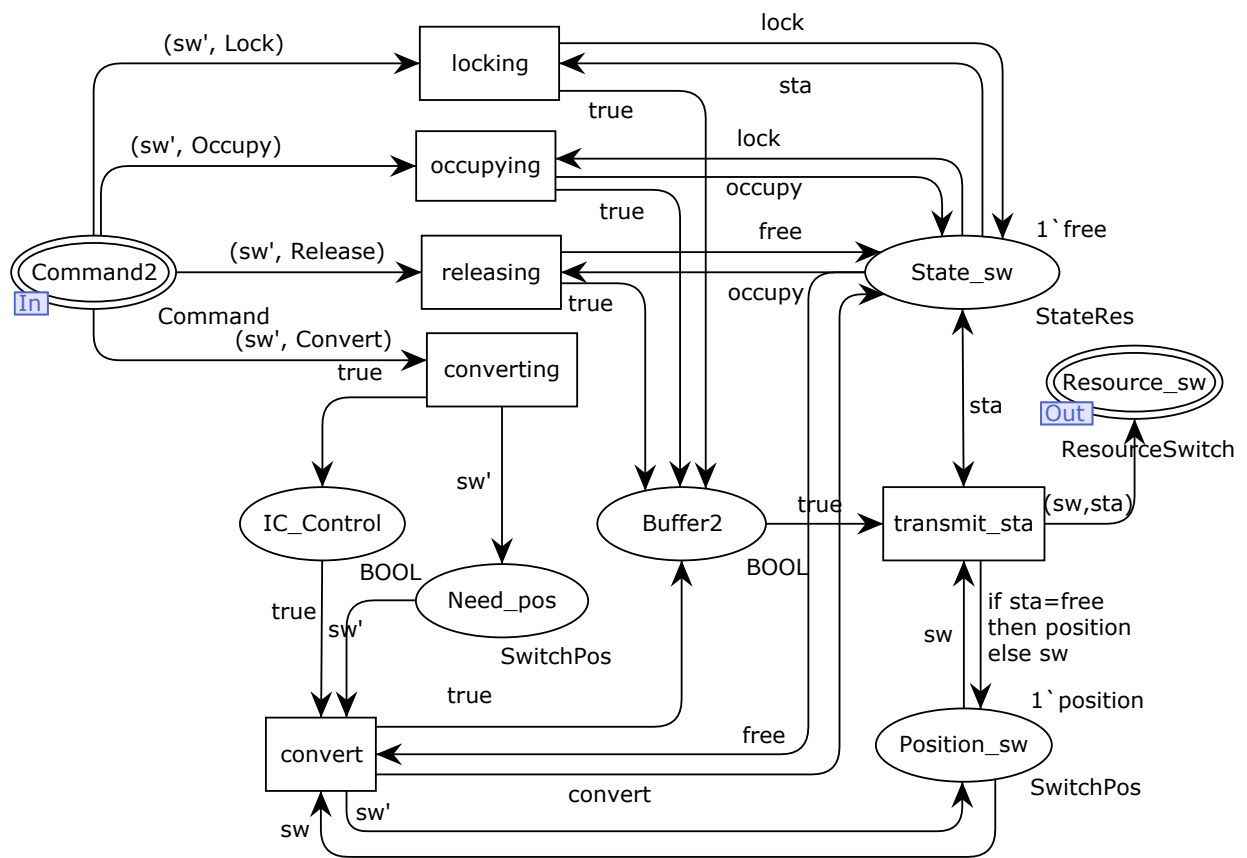


Fig. 7. IC

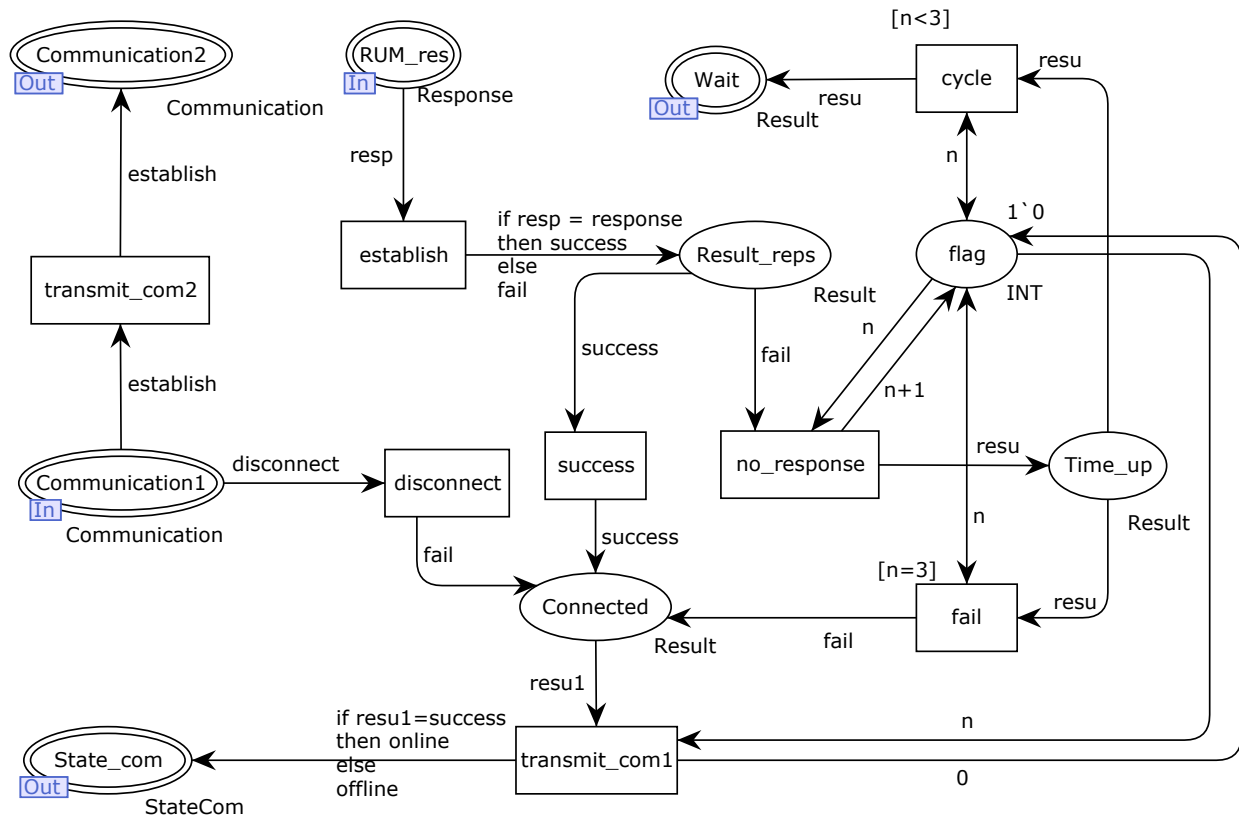


Fig. 8. train\_ground communication