

# Pipeline (4A)

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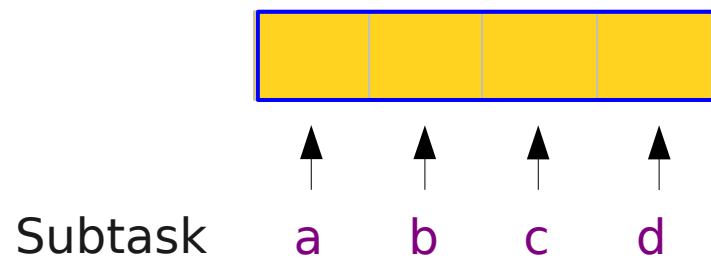
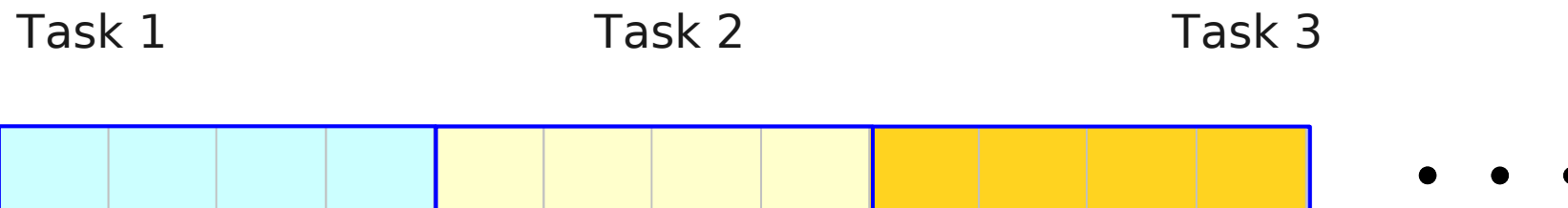
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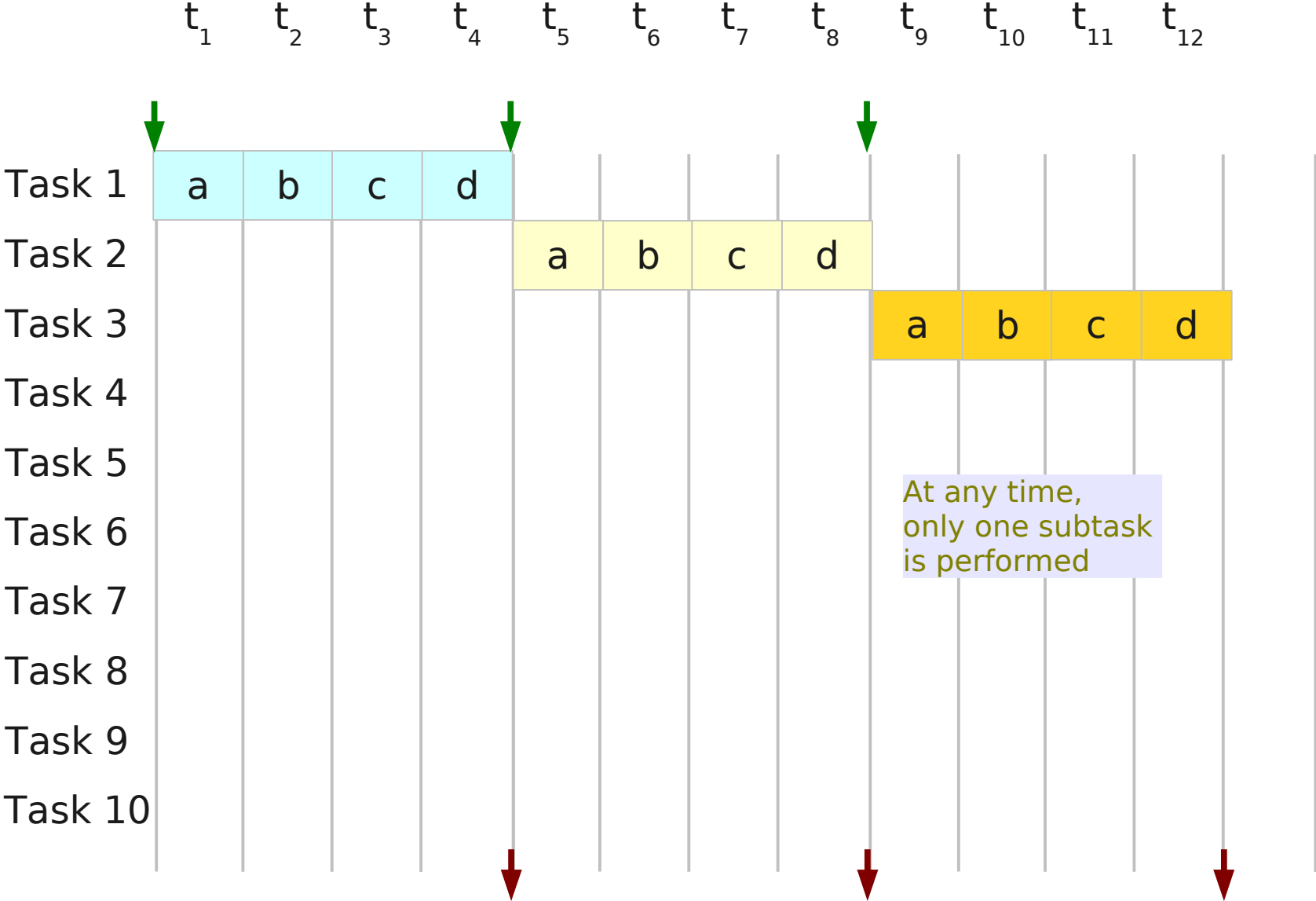
Please send corrections (or suggestions) to [youngwlim@hotmail.com](mailto:youngwlim@hotmail.com).

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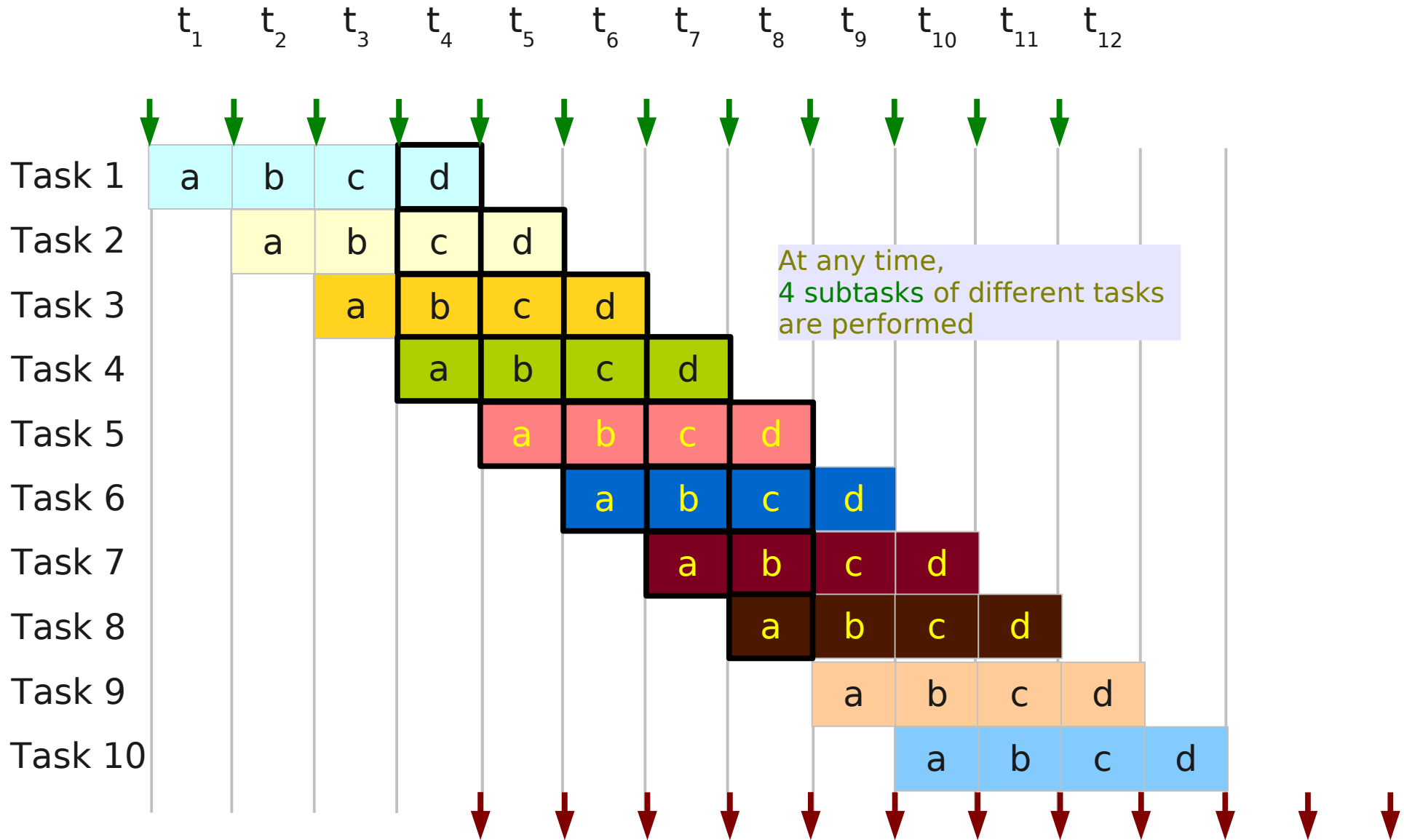
# Tasks and Subtasks



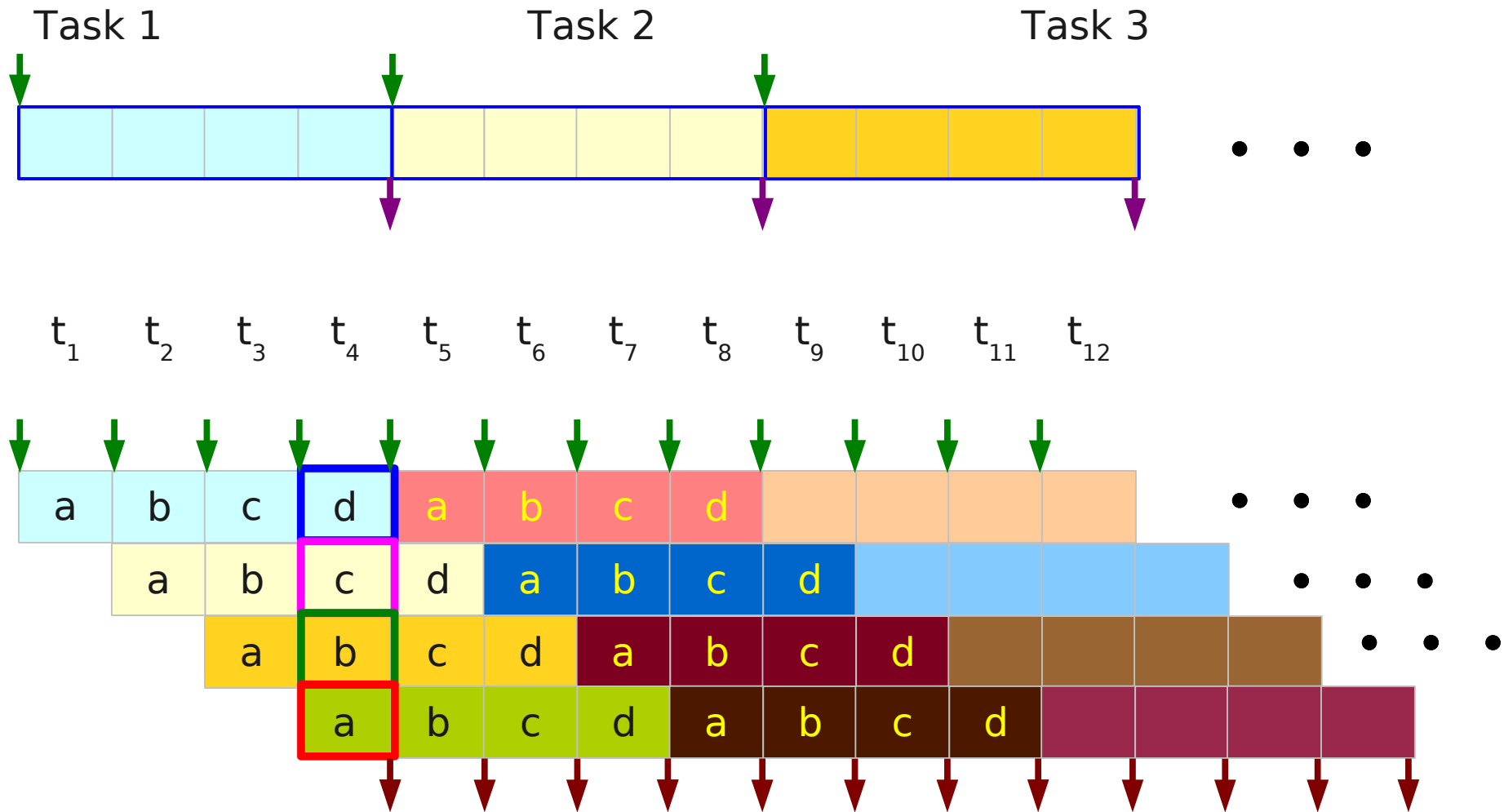
# Task vs Time View (1)



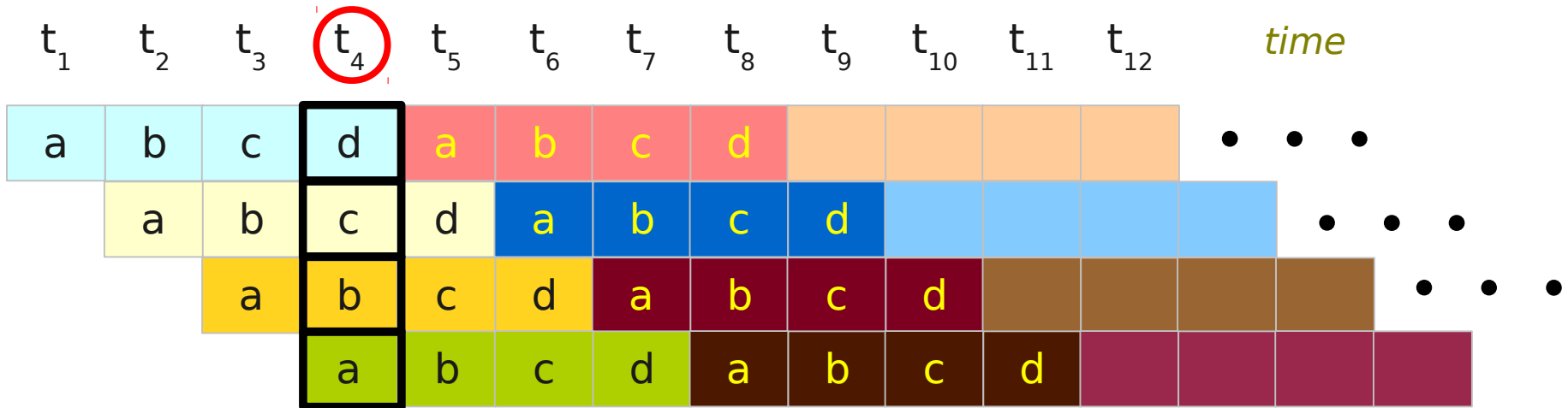
# Task vs Time View (2)



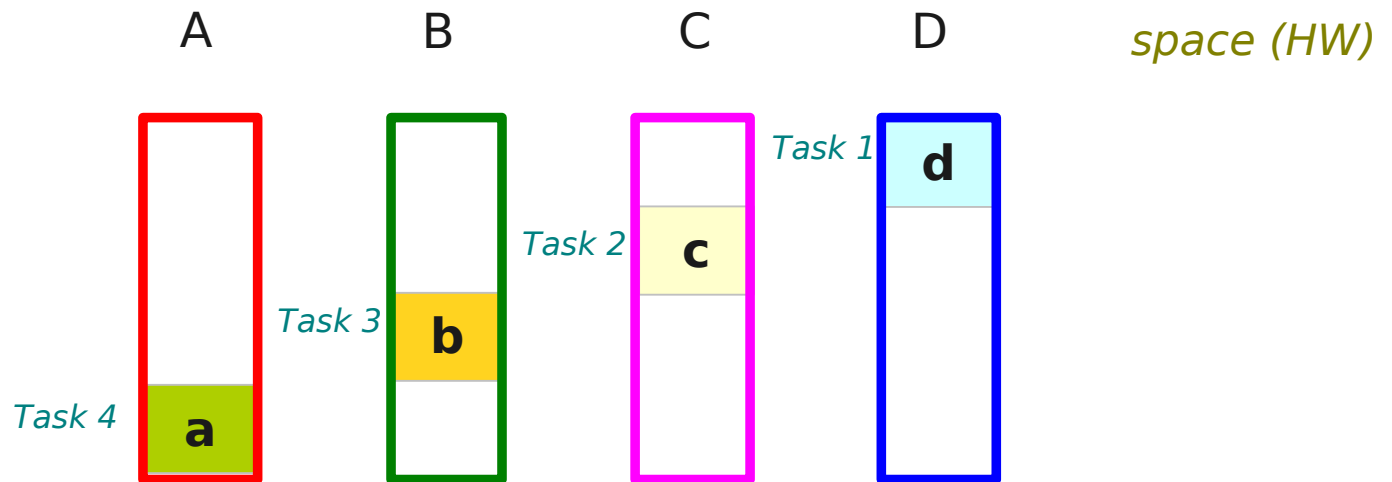
# Compact Task vs Time View



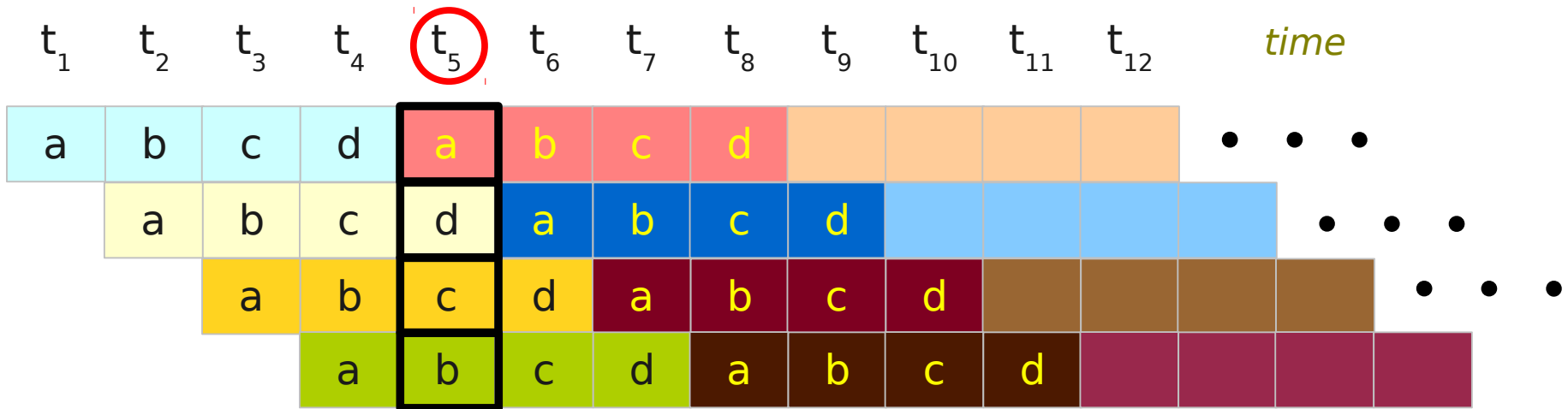
# The Subtask Snapshot At time $t_4$



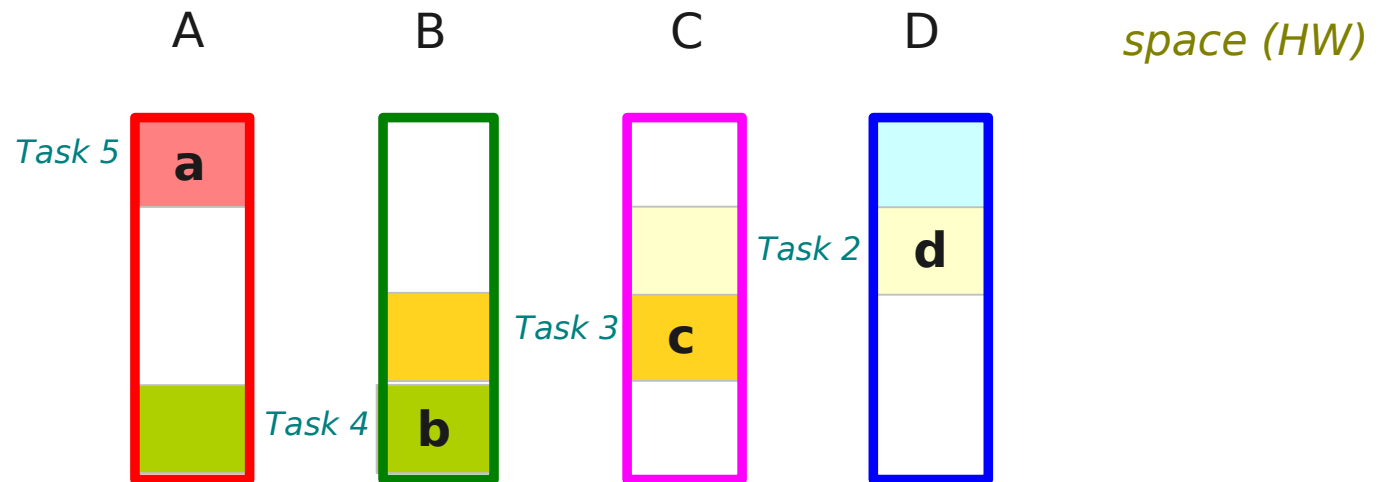
The subtask snapshot at time  $t_4$



# The Subtask Snapshot At time $t_5$

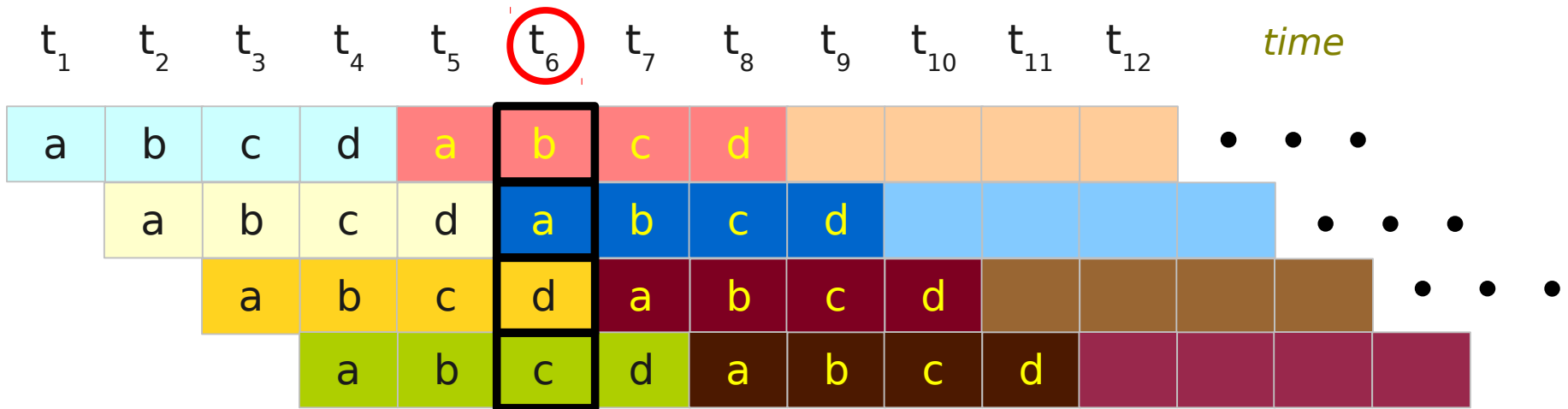


The subtask snapshot at time  $t_5$

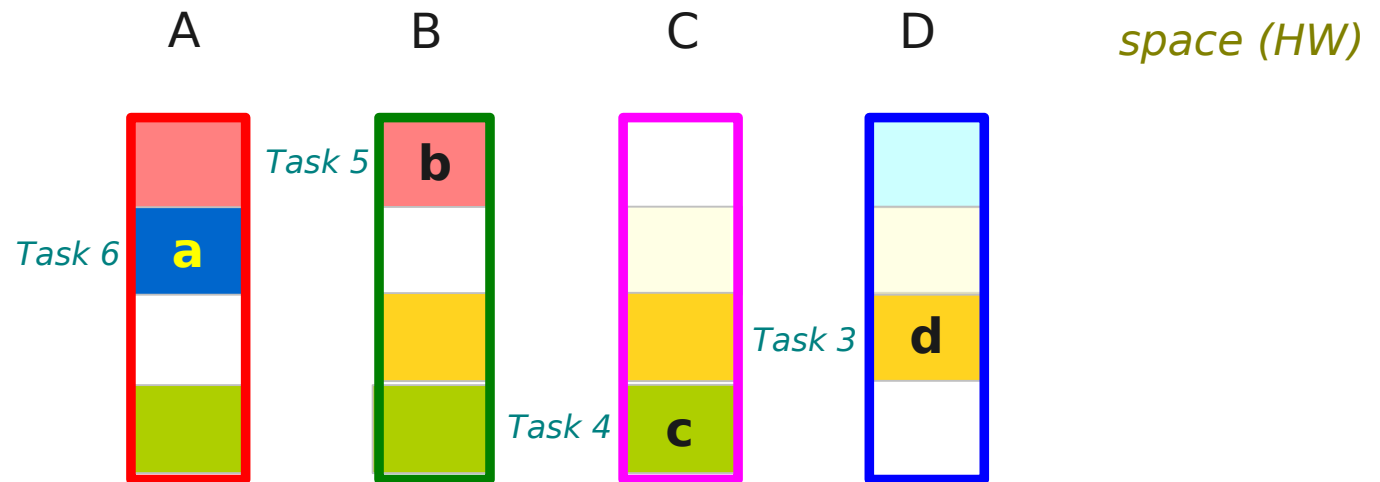




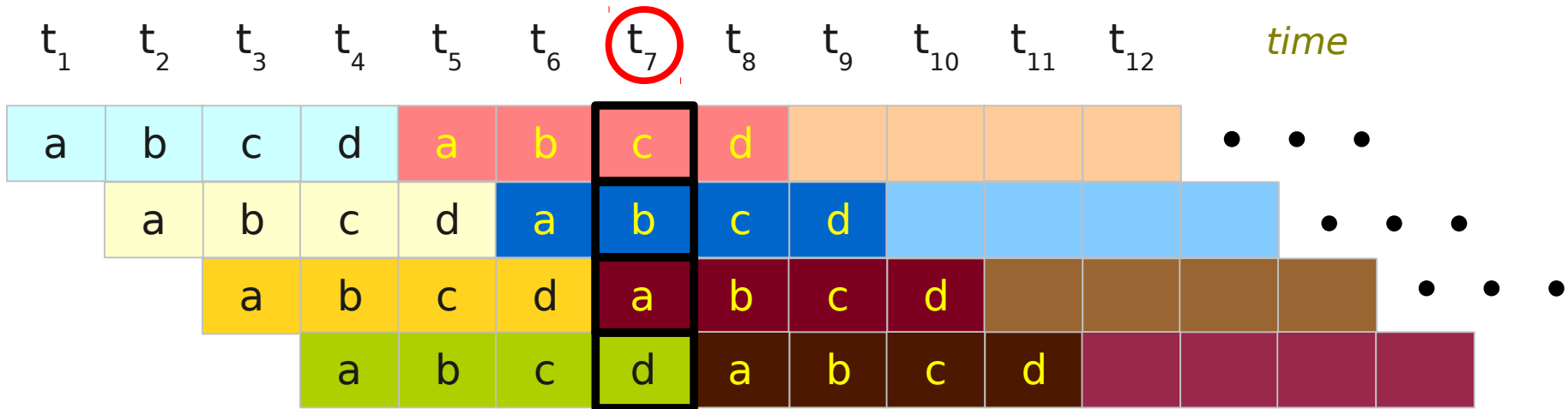
# The Subtask Snapshot At time $t_6$



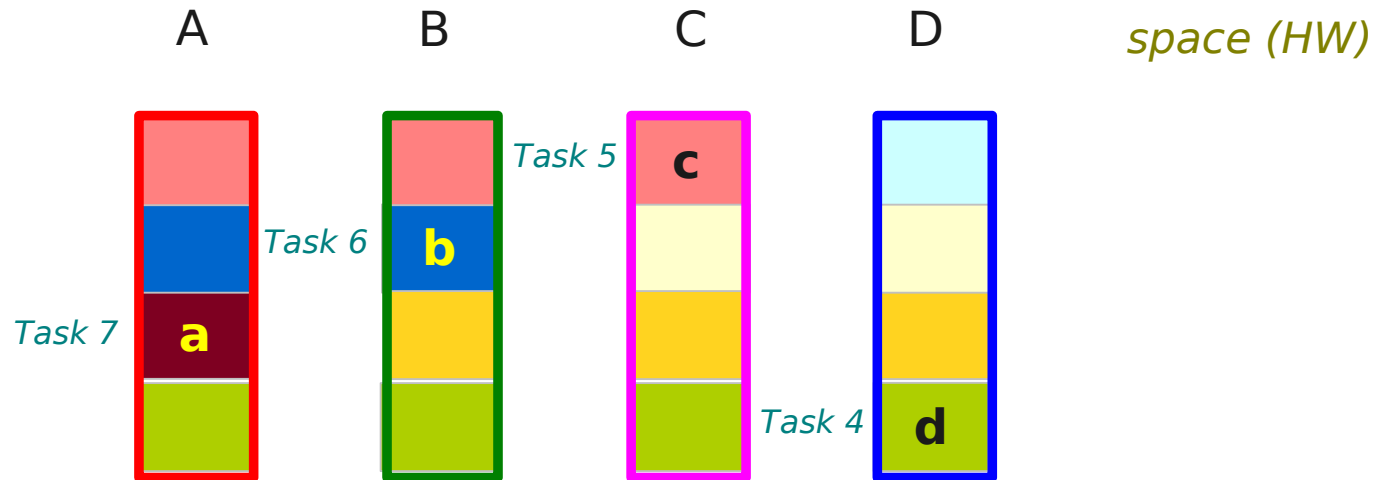
The subtask snapshot at time  $t_6$



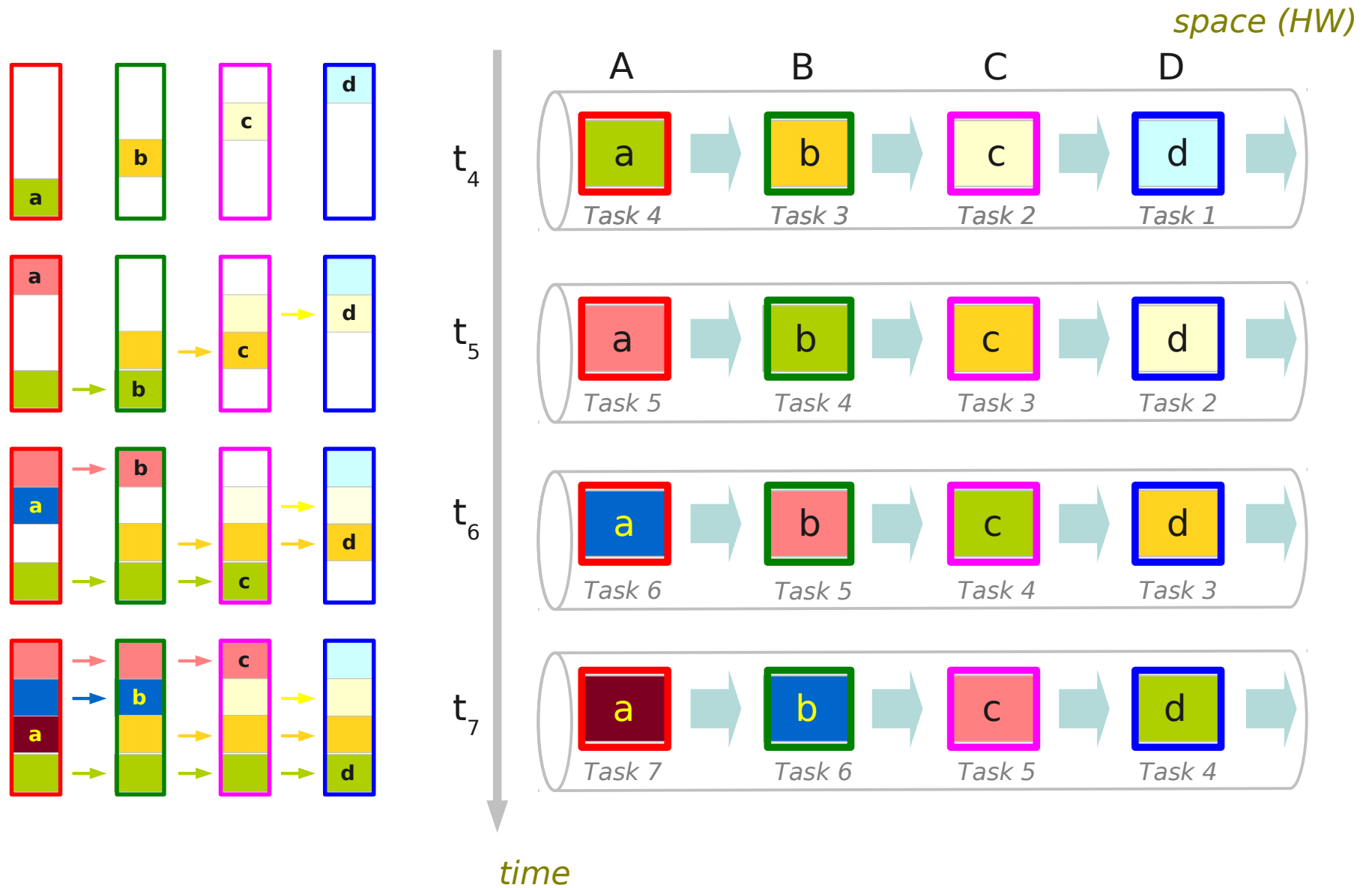
# The Subtask Snapshot At time $t_7$



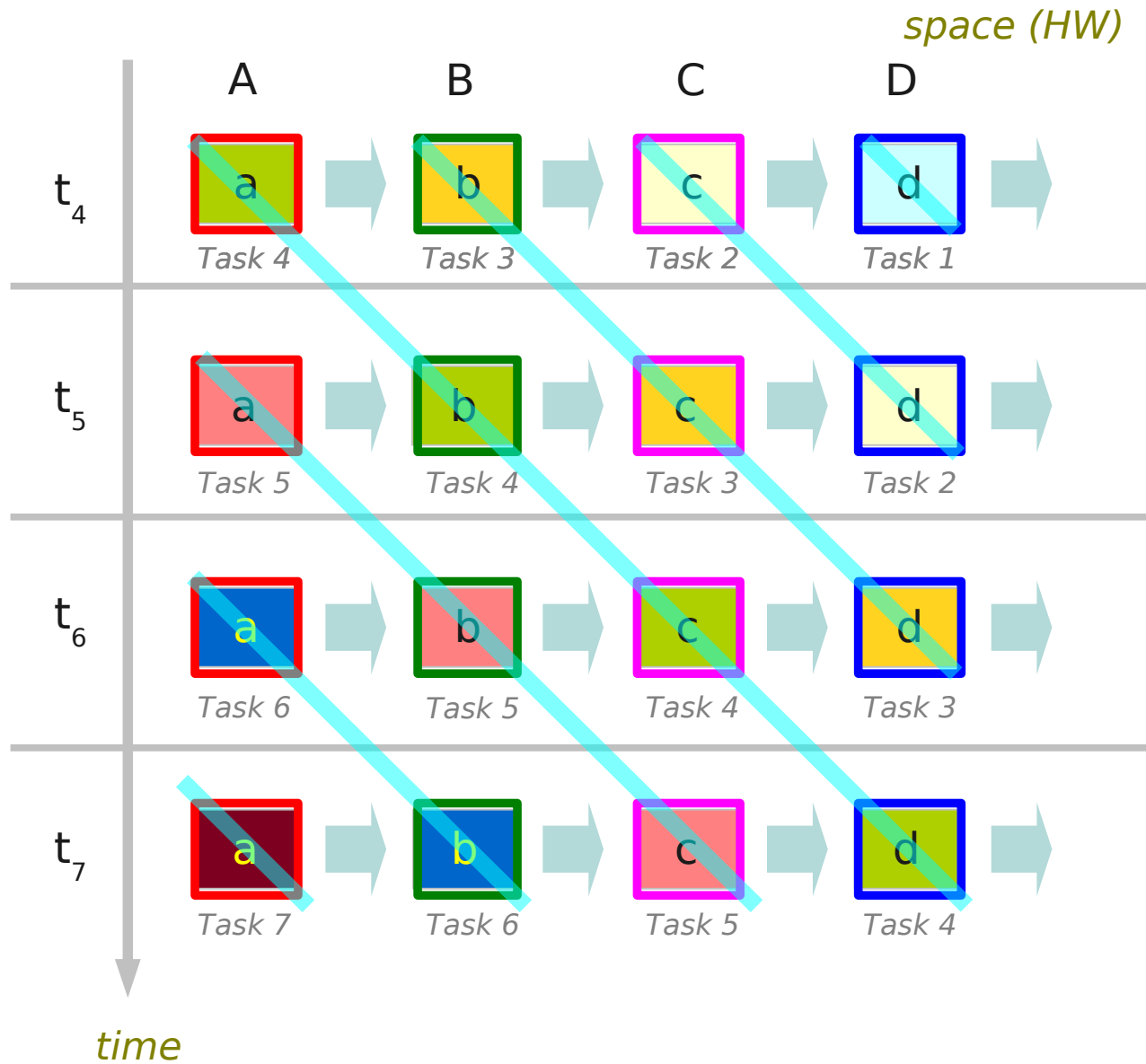
The subtask snapshot at time  $t_7$



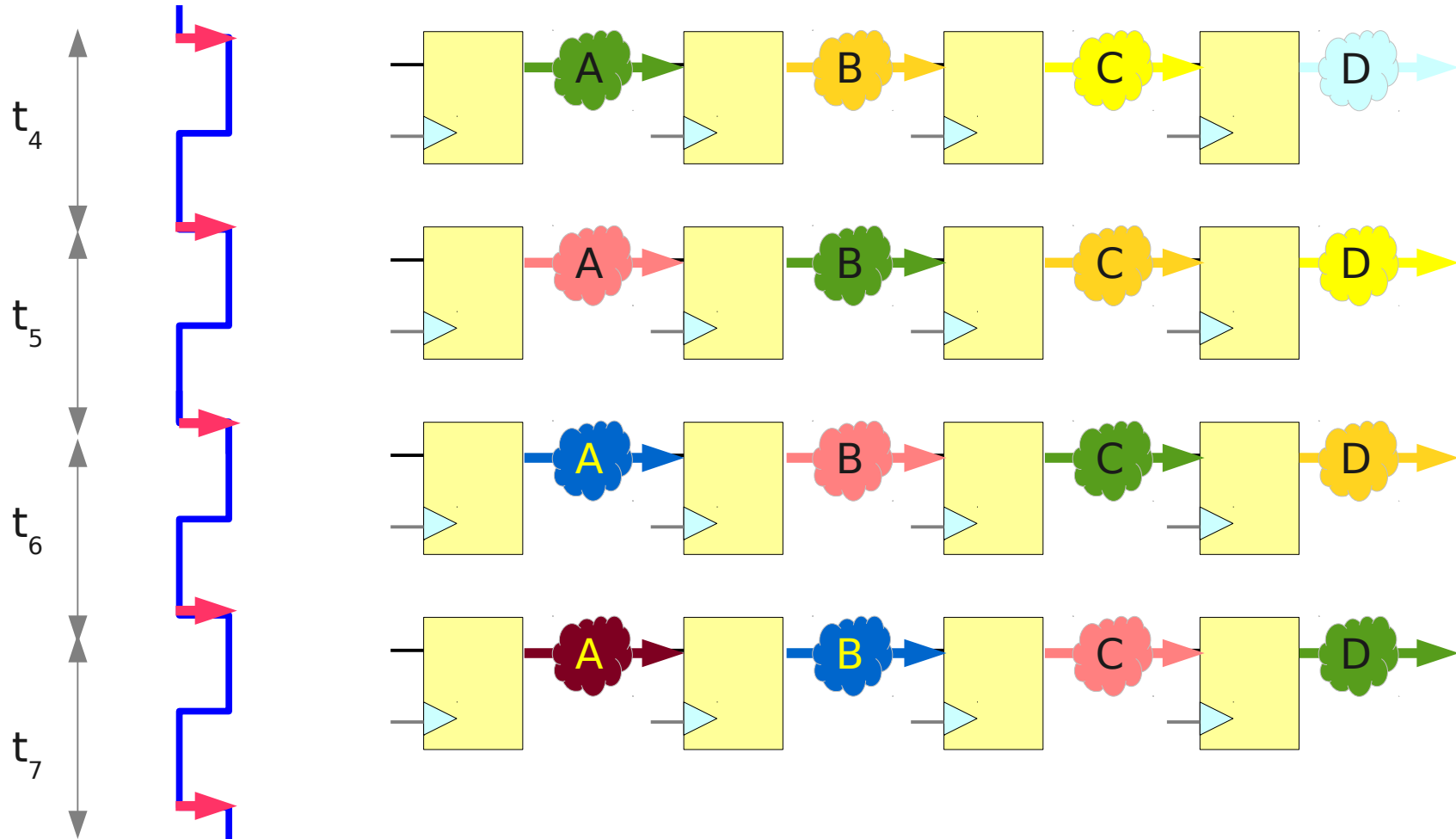
# Time vs Subtask View (1)



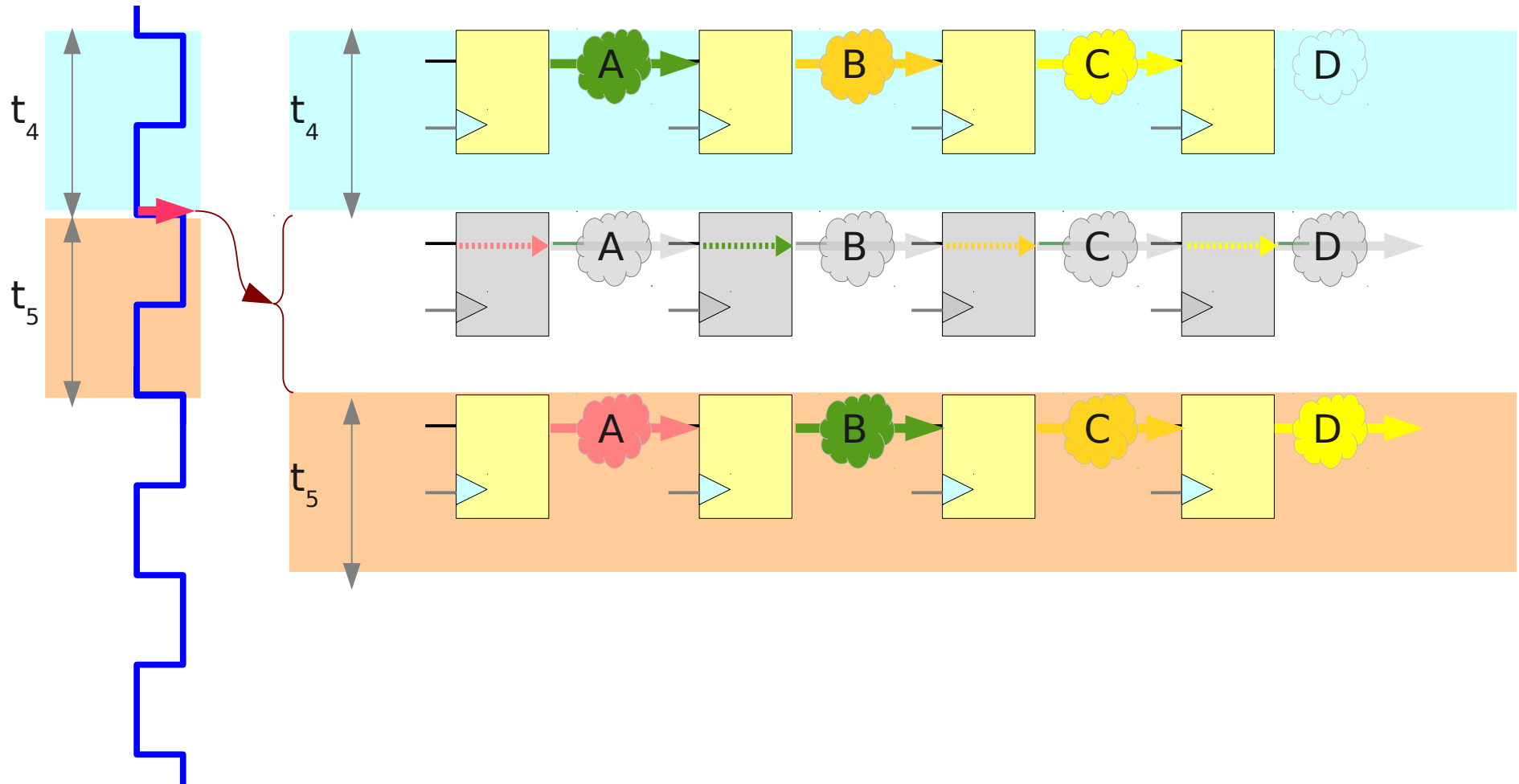
# Time vs Subtask View (2)



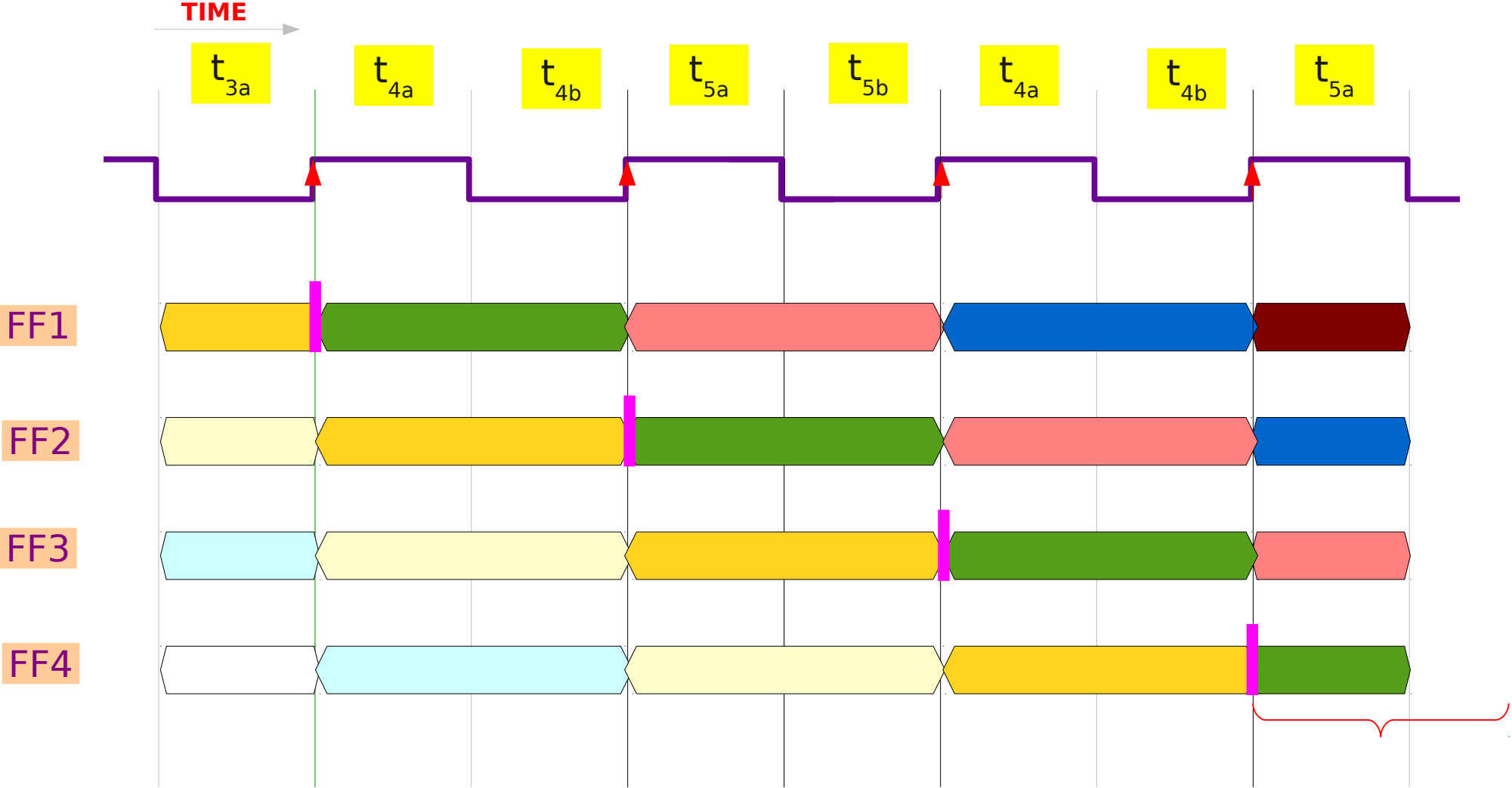
# FlipFlop Based Pipeline (1)



# FlipFlop Based Pipeline (2)

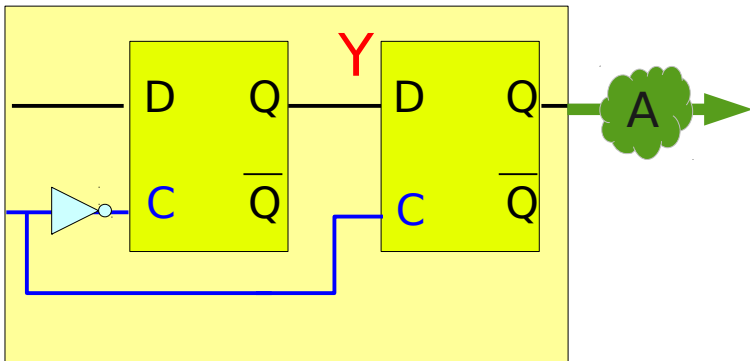
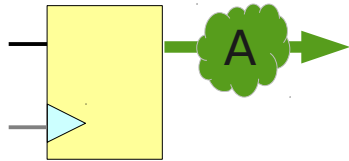


# The FlipFlop Timing

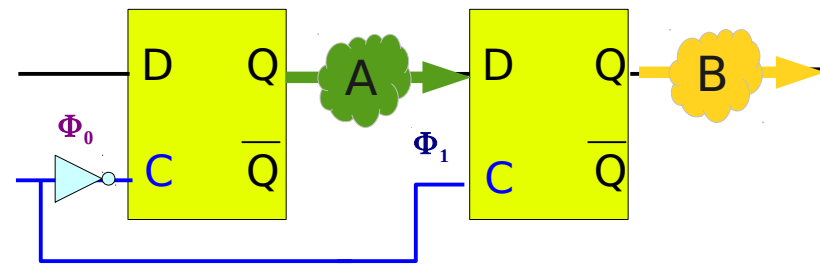
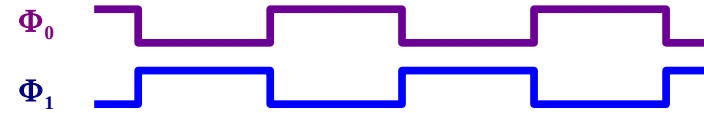
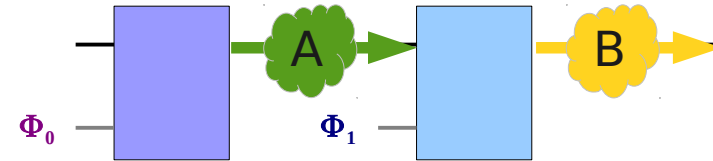


# FlipFlops and Latches

## D Type Master-Slave Flipflop

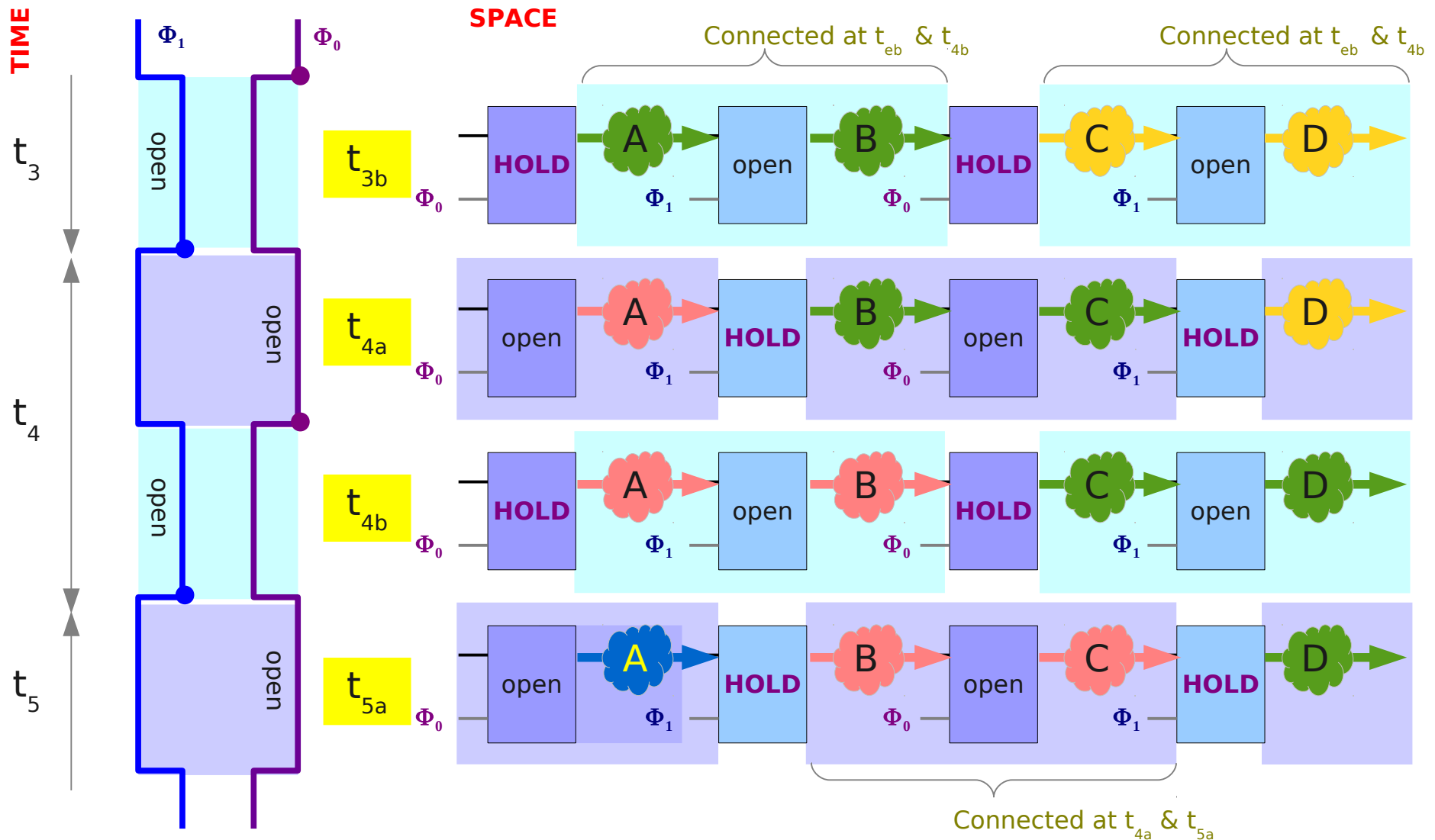


## D Type Latches in series

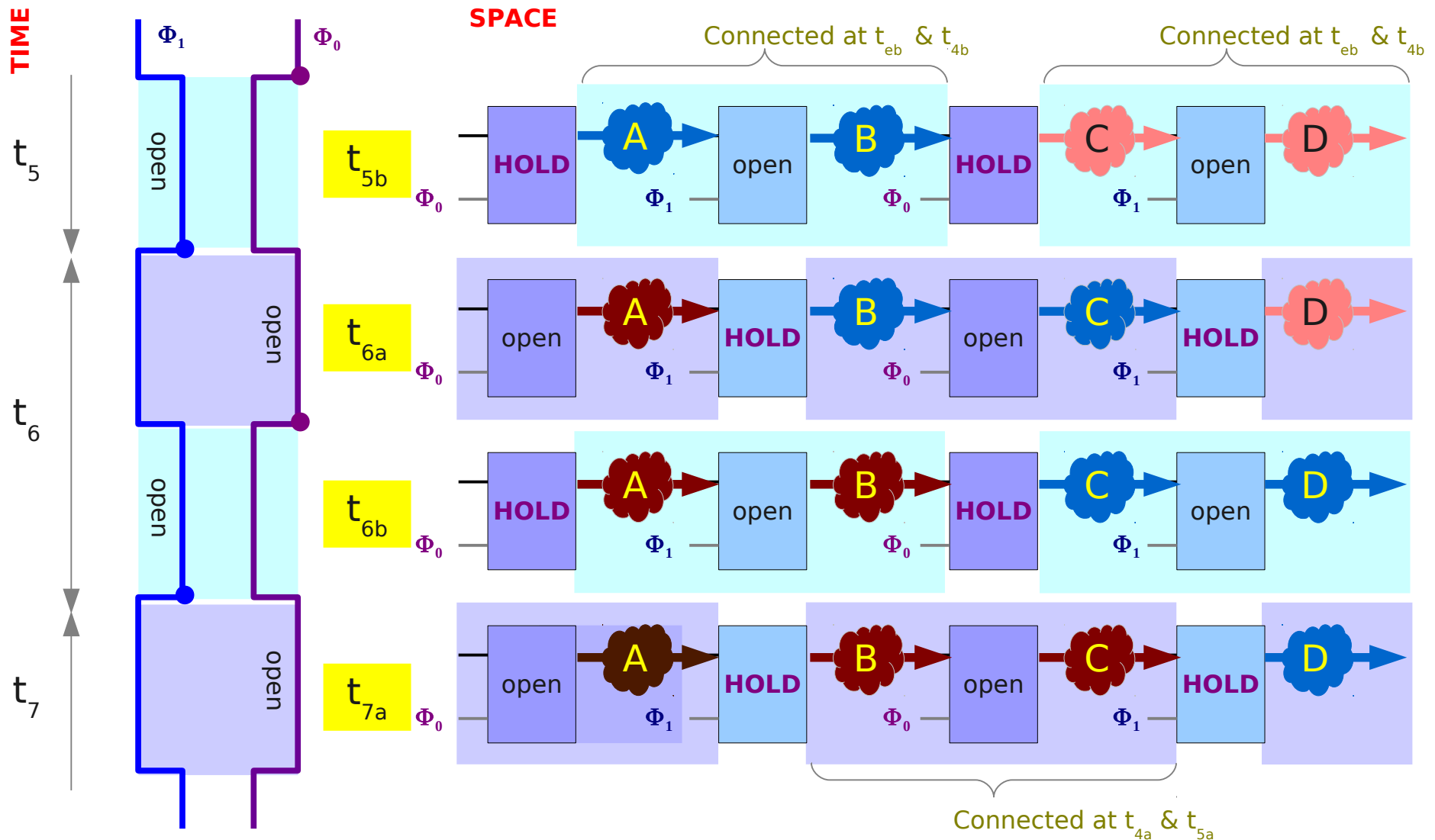




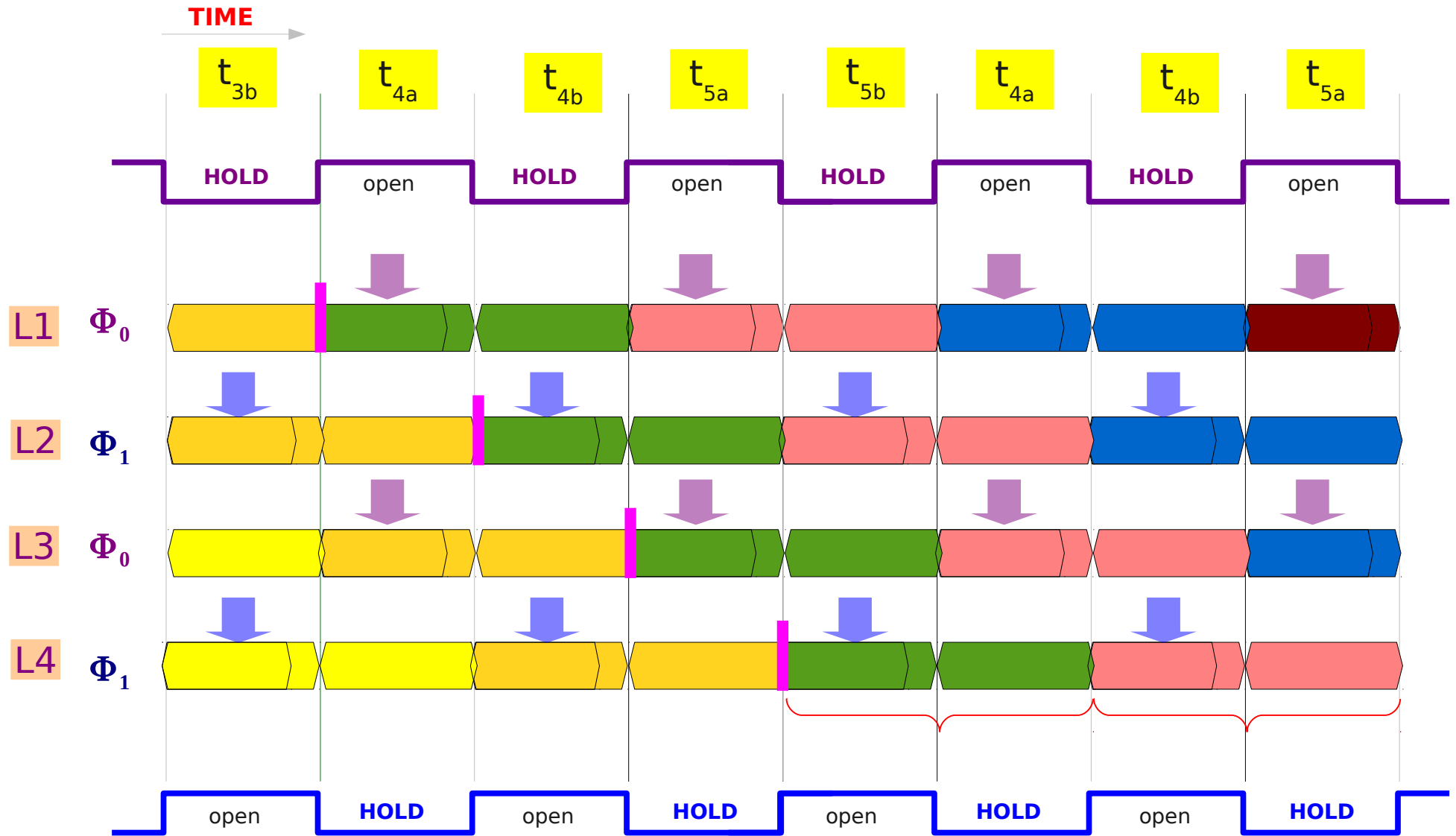
# Latch Based Pipeline (1)



# Latch Based Pipeline (2)



# The Latch Timing



## References

[1] <http://en.wikipedia.org/>