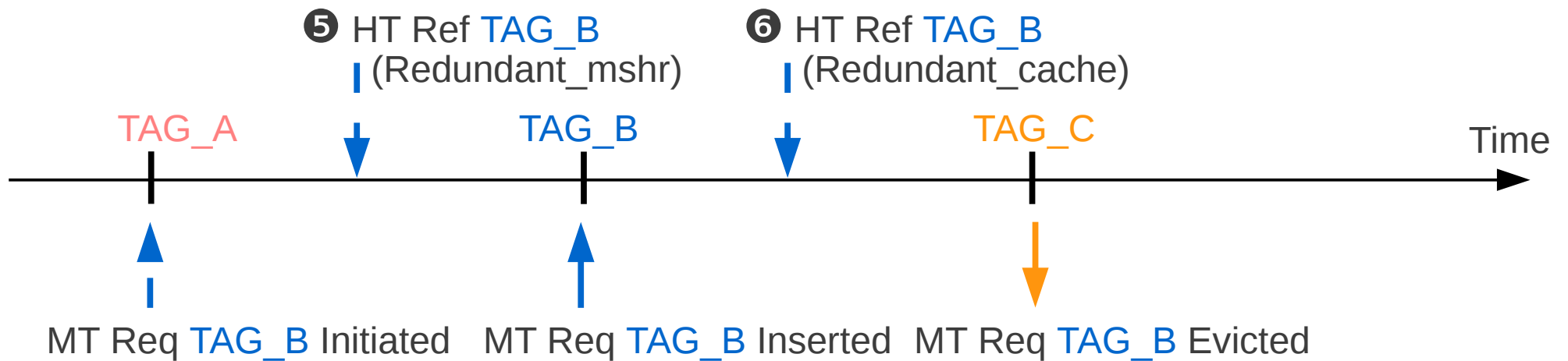


(a) ❶ Late, ❷ Timely, ❸ Bad and ❹ Ugly Helper Thread Requests



(b) ❺ Redundant_mshr and ❻ redundant_cache Helper Thread Requests