

Symbols	Explanations
k	key
v	value
ut	update time
K	item tuple $\langle k, v, ut \rangle$
u	update message
DT_c	dependency time at client c
P	equivalence class containing server-key pairs defined in Section ??
$gst_c(P)$	global stable time stored at client c for any server-key pair $(i, k) \in P$
$LST_i(k)$	local stable time of key k at server i
$GST_i(c, k)$	global stable time of key k at server i for client c
S_c	set of servers client c can access
N_i^s	set of neighbors of server i in the share graph
HB_i	heartbeat message from server i
$Clock_i$	physical clock at server i
O_i	set of servers that server i needs to send heartbeat to
ts_i	local time updated by physical clock at server i