

Byzantine Generals: OM(2) with Traitor Commander

$N = 7$ generals, $t = 2$ traitors. Commander G_0 is a traitor.

- Commander: $G_0(\mathcal{T})$
- Lieutenants: $G_1(\mathcal{T}), G_2(\mathcal{L}), G_3(\mathcal{L}), G_4(\mathcal{L}), G_5(\mathcal{L}), G_6(\mathcal{L})$

Traitor Strategies:

- $G_0(\mathcal{T})$: Sends A to G_2, G_4, G_6 . Sends R to G_1, G_3, G_5 .
- $G_1(\mathcal{T})$: (Received R from G_0) When sending/relaying: sends A to G_2, G_4, G_6 ; sends R to G_3, G_5 .

Round 1: Commander G_0 (Traitor) Sends Commands

G_0 sends its chosen messages to the lieutenants.

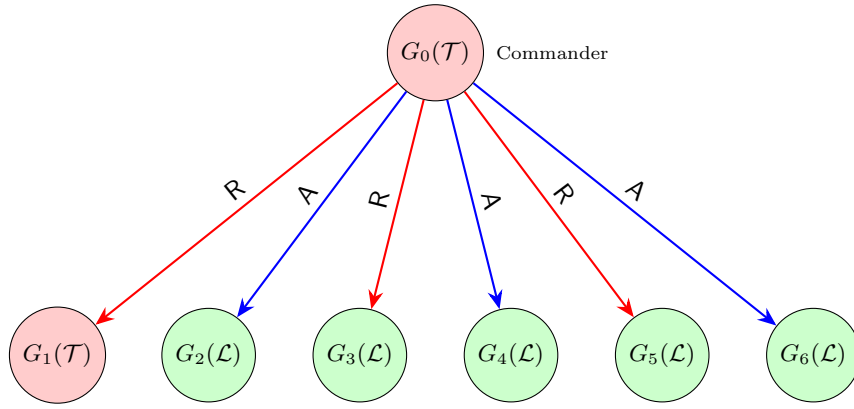


Figure 1: Round 1: Traitor Commander G_0 sends messages.

$G_1(\mathcal{T})$	$G_2(\mathcal{L})$	$G_3(\mathcal{L})$	$G_4(\mathcal{L})$	$G_5(\mathcal{L})$	$G_6(\mathcal{L})$
R					
	A				
		R			
			A		
				R	
					A

The grid above shows the initial values v_i that each lieutenant G_i (represented by row and column headers) receives from Commander G_0 and stores. This value is placed on the diagonal cell (G_i, G_i) . Off-diagonal cells are empty, to be filled by messages exchanged between lieutenants in later algorithm phases (e.g., OM(m-1) rounds).