

Consider 2 attacker group and one Defender and 2 vulnerabilities.

one attacker group is S and other N-S

		Def		
(S)	$\{v_1\}$	v_1	v_2	$\{v_1, v_2\}$
	$\{v_1\}$			
	$\{v_2\}$			
	$\{v_1, v_2\}$			

		Def		
(N-S)	$\{v_2\}$	$\{v_1\}$	$\{v_2\}$	$\{v_1, v_2\}$
	$\{v_2\}$			
	$\{v_1\}$			
	$\{v_1, v_2\}$			

		Def		
(S)	$\{v_1\}$	$\{v_2\}$	$\{v_1, v_2\}$	
	$\{v_1\}$			
	$\{v_2\}$			
	$\{v_1, v_2\}$			

These above all are cases in all of these will have 3 tuple value.

C_A^v = Cost of attacking a vulnerability v by attacker A .

C_{Def}^v = Cost of defending a vulnerability v by Defender Def .

P_A^v = Profit of attacker A after attack on vulnerability v .

I_A^v = Impact of exploitation of vulnerability v on Defender by attacker A .

P_{Def}^v = Profit of Defender D after patching vulnerability v .

Now consider Attacker S is using some strategy A_S and Attacker $N-S$ using a strategy A_{N-S} and

Defender is using a strategy D. A solution
substantially less costly than the