

Vickrey-Clarke-Groves Auction (1/3)

- Cooperative Scenario
 - A team of agents for a task
- Cooperative v. s. Competitive
 - Utility v. s. Money
 - Truthful v. s. Lying
- Example
 - A number of victims (v_1, v_2, v_3, v_4)
 - A team of ambulances (a_1, a_2, a_3)
 - Tasks: assignments (each “a” a different “v”)

Vickrey-Clarke-Groves Auction(2/3)

	V1	v2	v3	v4
a1	11	10	10	2
a2	10	9	8	3
a3	3	8	7	1

	V1	v2	v3	v4
a1	11	10	10	2
a2	10	9	8	3
a3	3	8	7	1

	V1	v2	v3	v4
a1	11	10	10	2
a2	10	9	8	3
a3	3	8	7	1

a1 takes v1 cause
a problem for a2
and a3

Vickrey-Clarke-Groves Auction(3/3)

- What is the problem?
 - Harm
 - a2: 10-9
 - a3: 8-7
- Computing the costs
 - $11 - (10 - 9) - (8 - 7)$
 - $10 - (10 - 10) - (8 - 8)$

	V1	v2	v3	v4
a1	11	10	10	2
a2	10	9	8	3
a3	3	8	7	1