# Player-Centric Byzantine Agreement

**Vassilis Zikas**

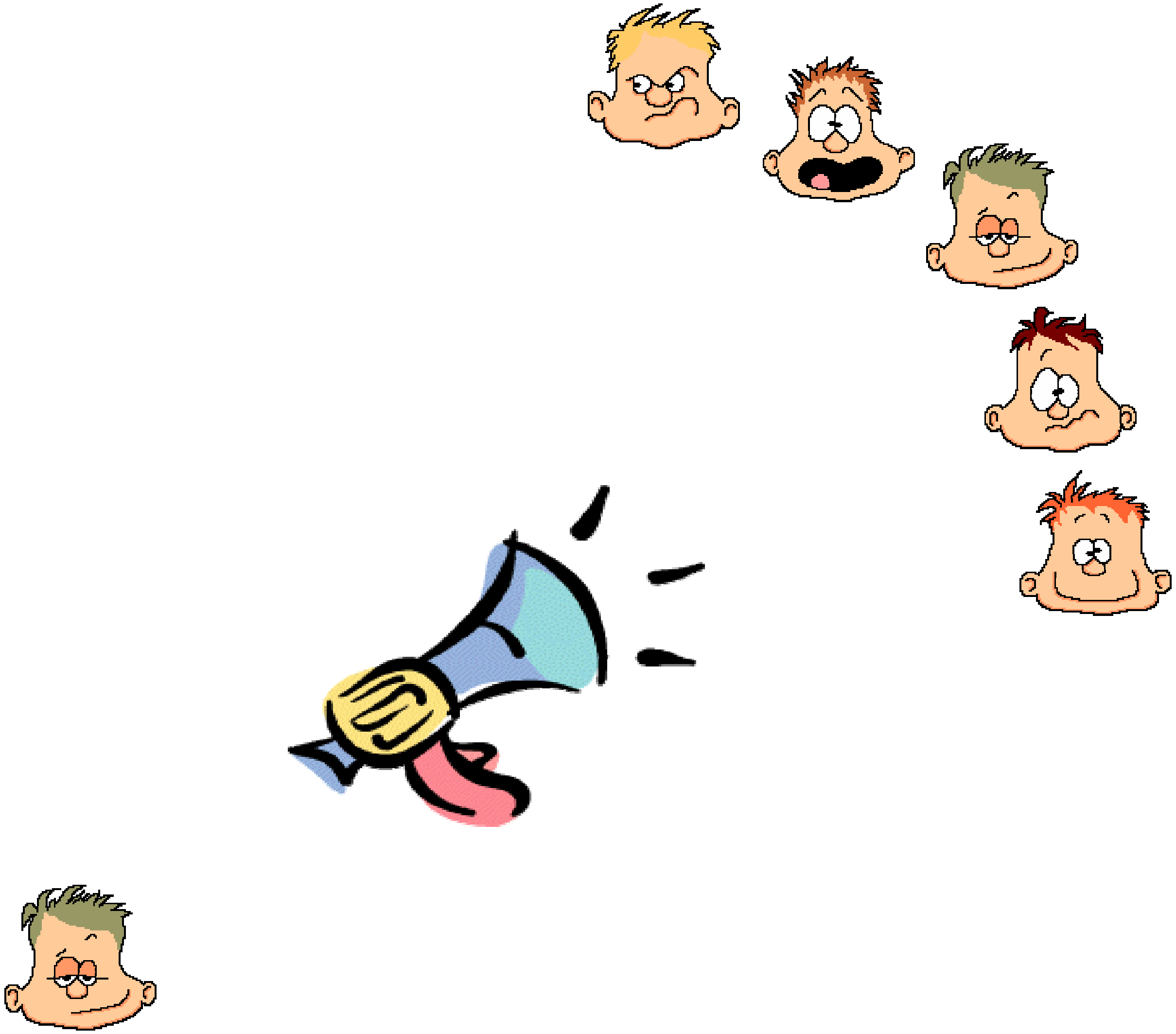
joint work with Martin Hirt

ETH Zurich

Rump Session

EUROCRYPT 2010

# BA Variant 1: Broadcast



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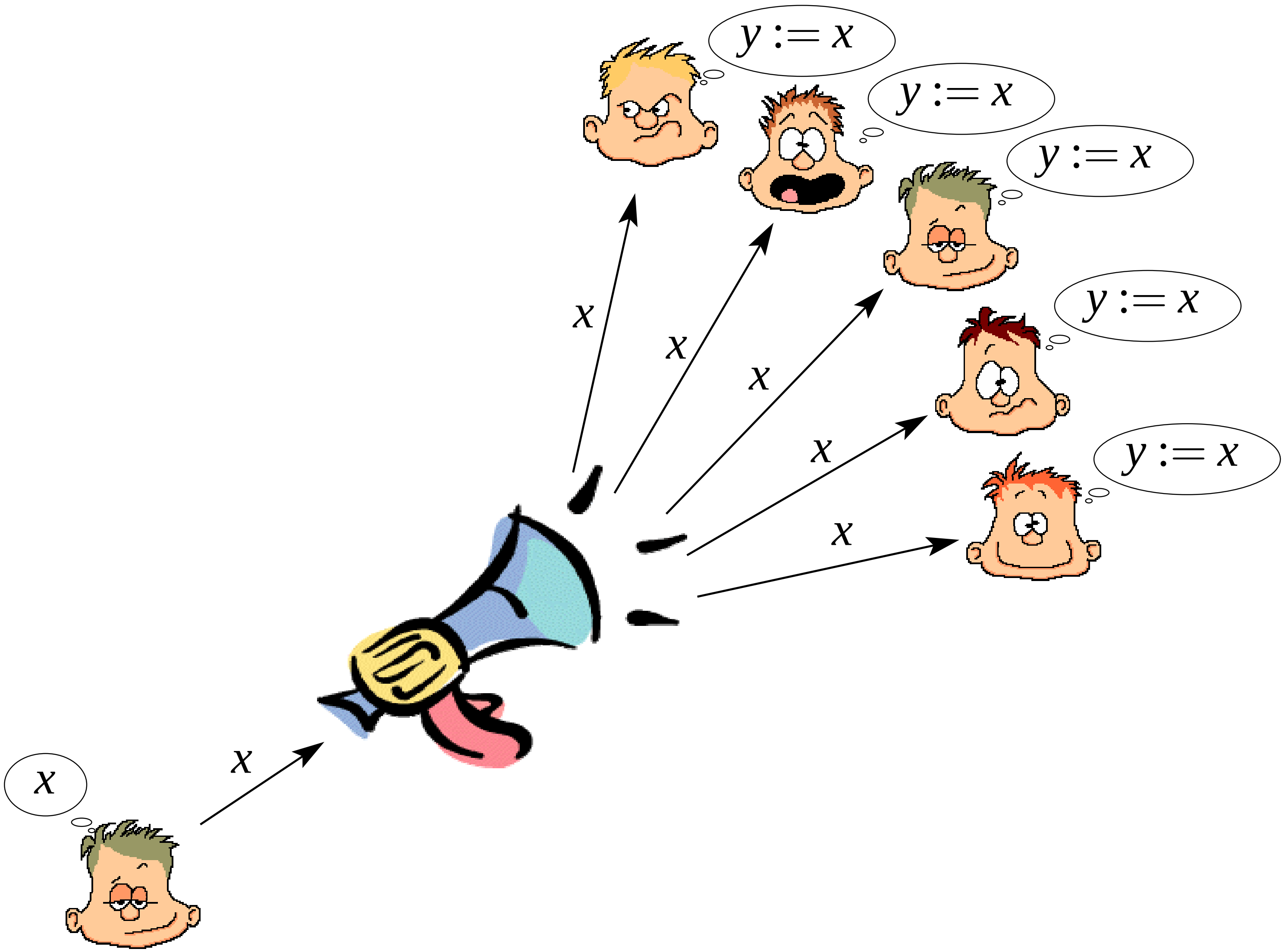

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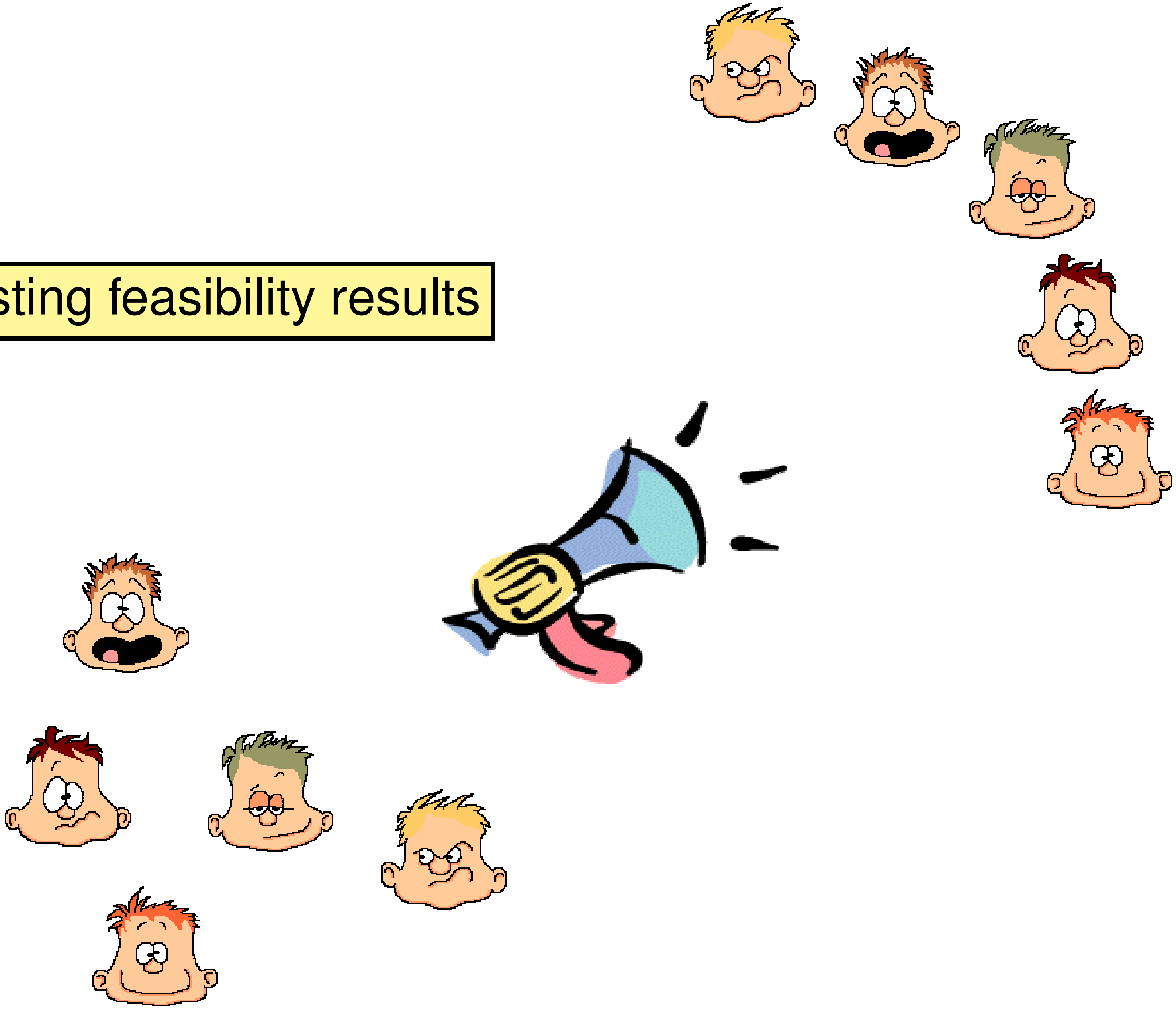

Existing feasibility results

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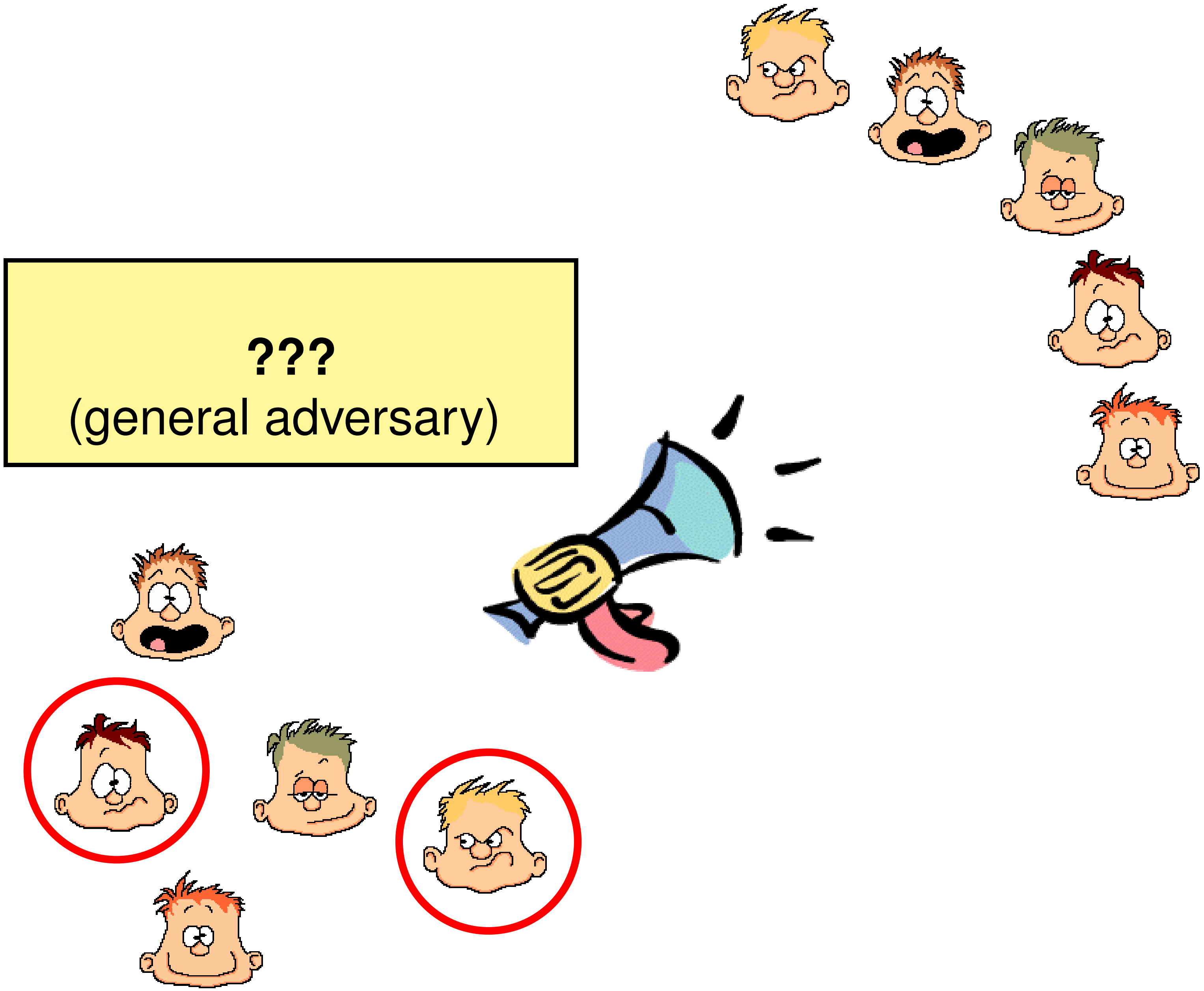
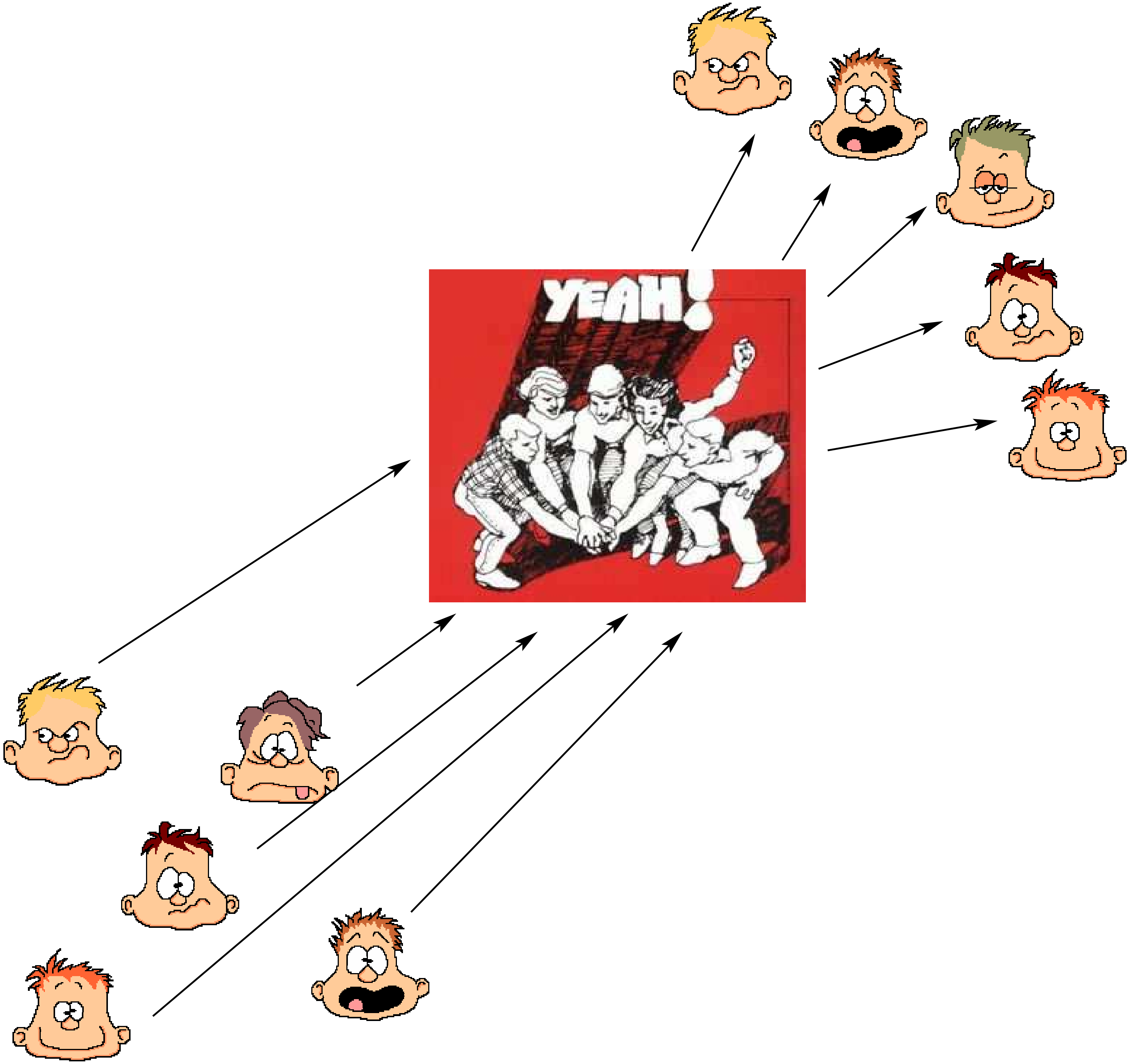


**???**

(general adversary)

# BA Variant 2: Consensus



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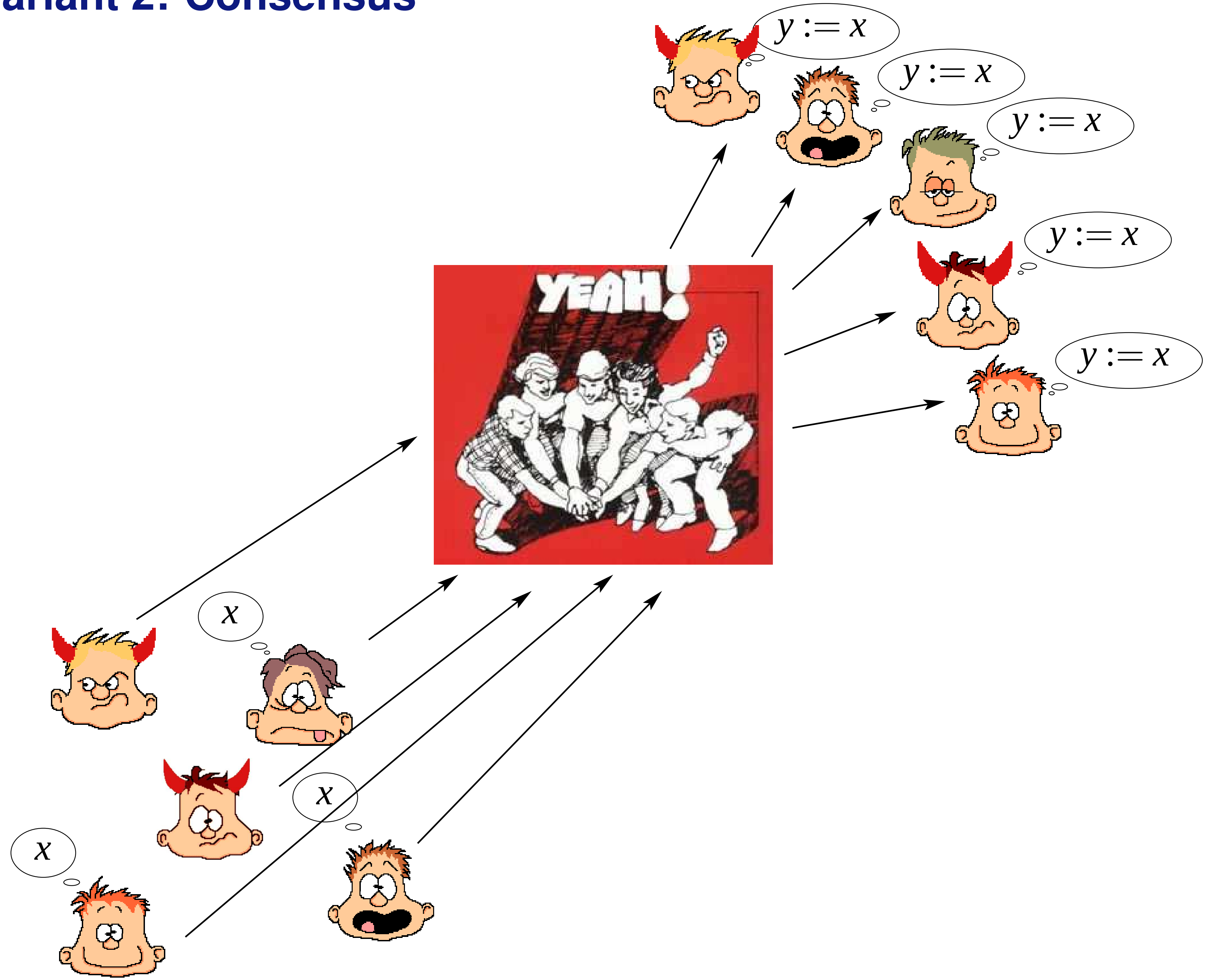

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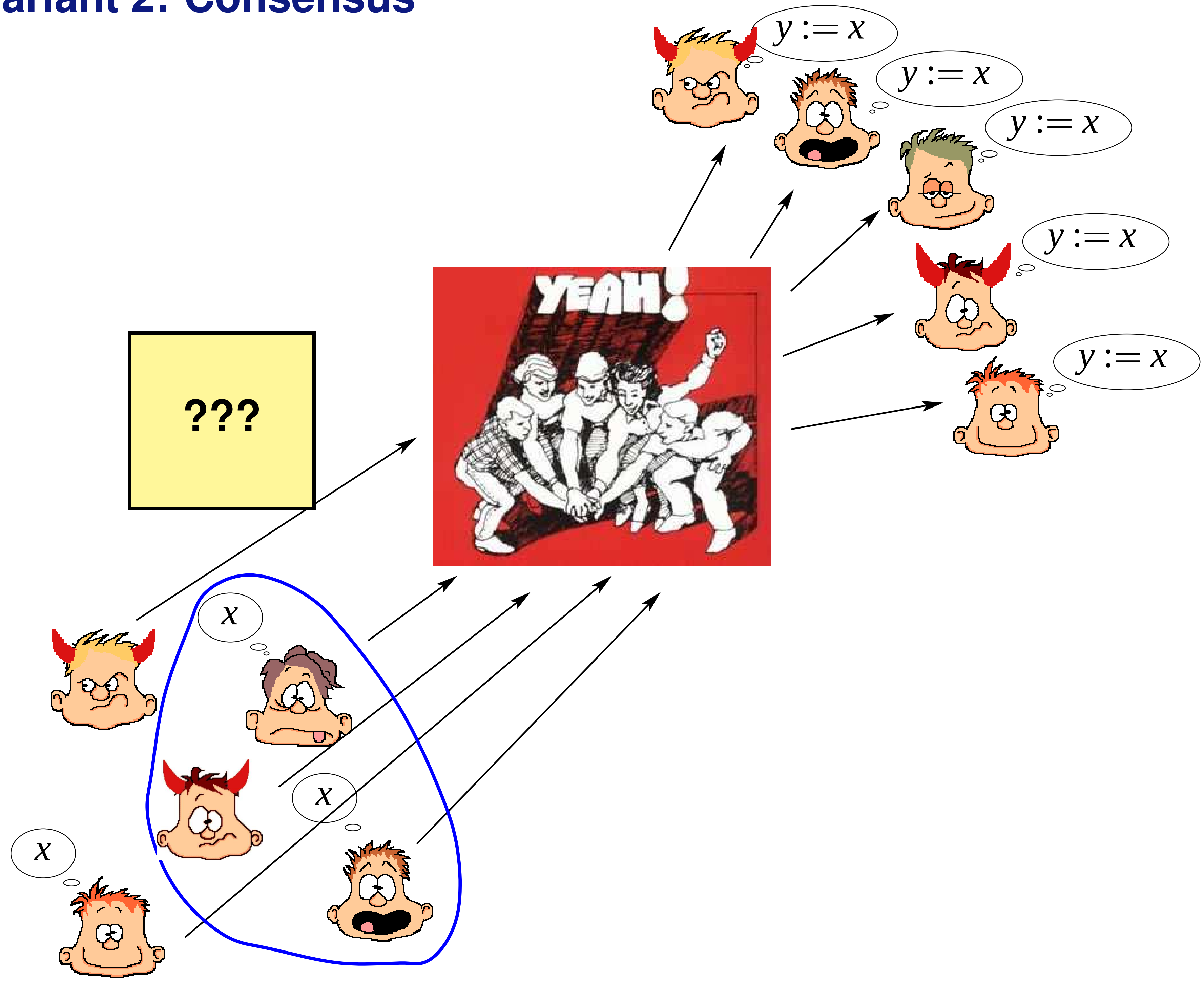

# Player-Centric Byzantine Agreement (BA)

**PCBA**$= \{P$**-BA**$\}_{P \subseteq \mathcal{P}}$

$P$-BA:

- (consistency) $\forall p \in \mathcal{P}$ output $y$.
- ($P$-validity) $\forall$ non-actively corrupted $p \in P$ has input $x \Rightarrow y = x$.

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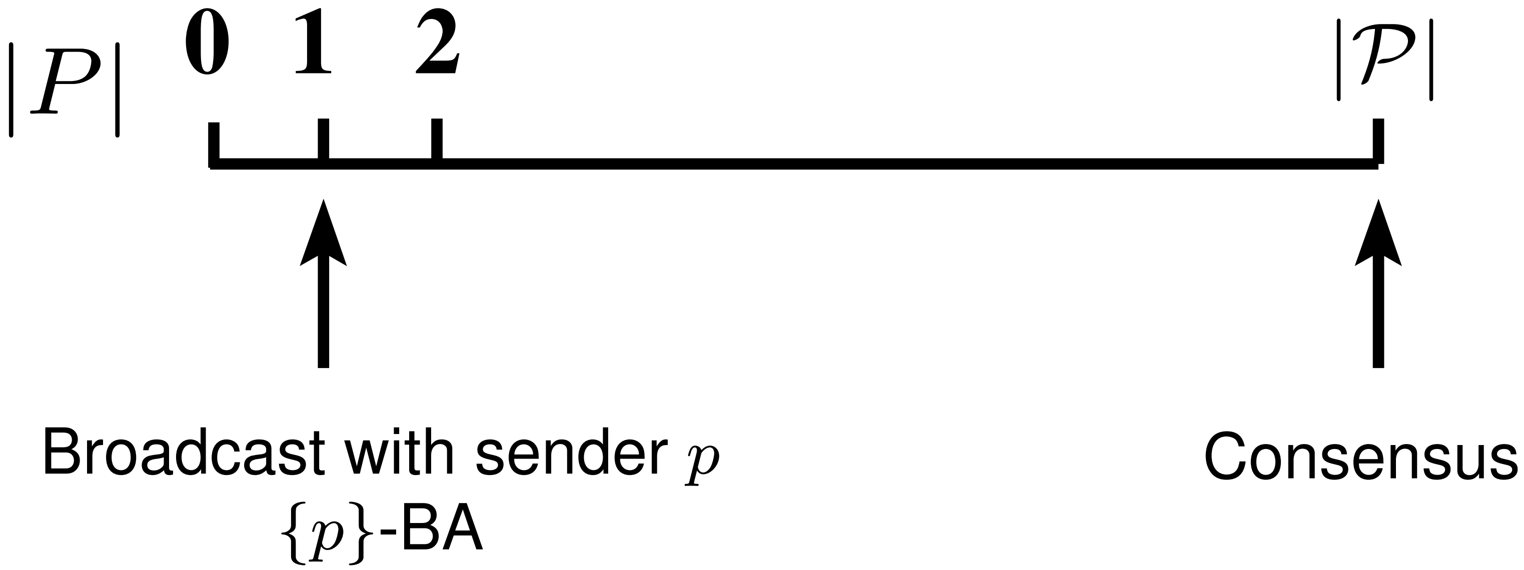

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Feasibility results for **general adversary**

- Active/Passive
  - **Perfect Security**
  - **Computational Security**

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|---|---|---|---|
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**Leads to . . .**

- Player-Centric MPC (**Who** can give input?)

Play

| | | | |
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