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A collaborative game theory approach for determining the feasibility of a shared AS blockchain infrastructure

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The paper studies the feasibility of building a shared AS blockchain infrastructure employing a collaborative game theory approach. Game theory is used due to its versatility on analyzing situation where the outcome depends on the actions of several actors (AS) and on the estimated payoff when an actor makes a decision. The games chosen are in the category of Cooperative Game type, where multiple actors cooperate and form a coalition which they join or leave based upon their payoffs / reward. PFG is the basis of the algorithm implemented to demonstrate the feasibility of integrating a blockchain solution in an AS federation and to validate the reason for this integration. A mechanism of incentives is proposed to stimulate the cooperation of multiple AS.

Authors: Mr KOVACS, Rudolf Alex (Technical University of Cluj-Napoca, Computer Science Department); Dr IANCU, Bogdan (Technical University of Cluj-Napoca); DĂDÂRLAT, Vasile Teodor (Technical University of Cluj Napoca); BUZURA, Sorin (Technical University of Cluj-Napoca); PECULEA, Adrian (Technical University of Cluj-Napoca); CEBUC, Emil-Ioan (Agency ARNIEC/RoEduNet, Technical University of Cluj-Napoca)

Presenter: Mr KOVACS, Rudolf Alex (Technical University of Cluj-Napoca, Computer Science Department)

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