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June 1, 2018
1 Social Computational Trust Model (STM)
   - The impact of competence and benevolence in a computational model of Trust
   - Towards Trustworthy Information Sharing by Creating Cyber Security Alliances

2 Ongoing Work
The impact of competence and benevolence in a computational model of Trust

Trustworthiness Function

- $Competence_{(x,y)} \in [0,1]$
- $Benevolence_{(x,y)} \in [0,1]$
- $Integrity_{(x,y)} \in [0,1]$
- $T(x; y) \in [0,1] : Ben(x, y) \times Com(x, y) \times Int(x, y)$
Hypothesis: Close and long-term relationships have a direct impact on the competence and benevolence of partners.

Context =
- $d_1 =$ trustor
- $d_2 =$ trustee
- $d_3 =$ time
- $d_4 =$ location
- $d_5 =$ task
- $d_6 =$ complexity
- $d_7 =$ deadline
- $d_8 =$ Outcome

[Deljoo et al., Trust Management, 2018]
STM to create and manage trust among the members,
SPG Framework as a federated governance model, creating common policies, standards for alliances members, and
Common benefits to provide a strong incentive to partners to join an alliance.

[Deljoo et al., Trustcom, 2018]
Ongoing Work

Trust, Norms and Sanctions

- Integrity-based component that analyzes all past evidence on the agent under evaluation and estimates his overall integrity.
- Updating the trust value based on the applied sanction to the non-compliance member.

SARNET Team Collaboration

- Deciding with whom to cooperate based on the current trust levels.
- Updating the trust levels based on the cooperation experience.
Outcome

Ameneh Deljoo, Tom van Engers, Ralph Koning, Leon Gommans, and Cees de Laat,
“Towards Trustworthy Information Sharing by Creating Cyber Security Alliances”

Ameneh Deljoo, Tom van Engers, Leon Gommans and Cees de Laat,
“The impact of competence and benevolence in a computational model of Trust”
*The 12th IFIP International Conference on Trust Management 2018, 9-13 July Toronto Canada.*
The End