Introduction to Distributed and Embedded Multi-agent Systems

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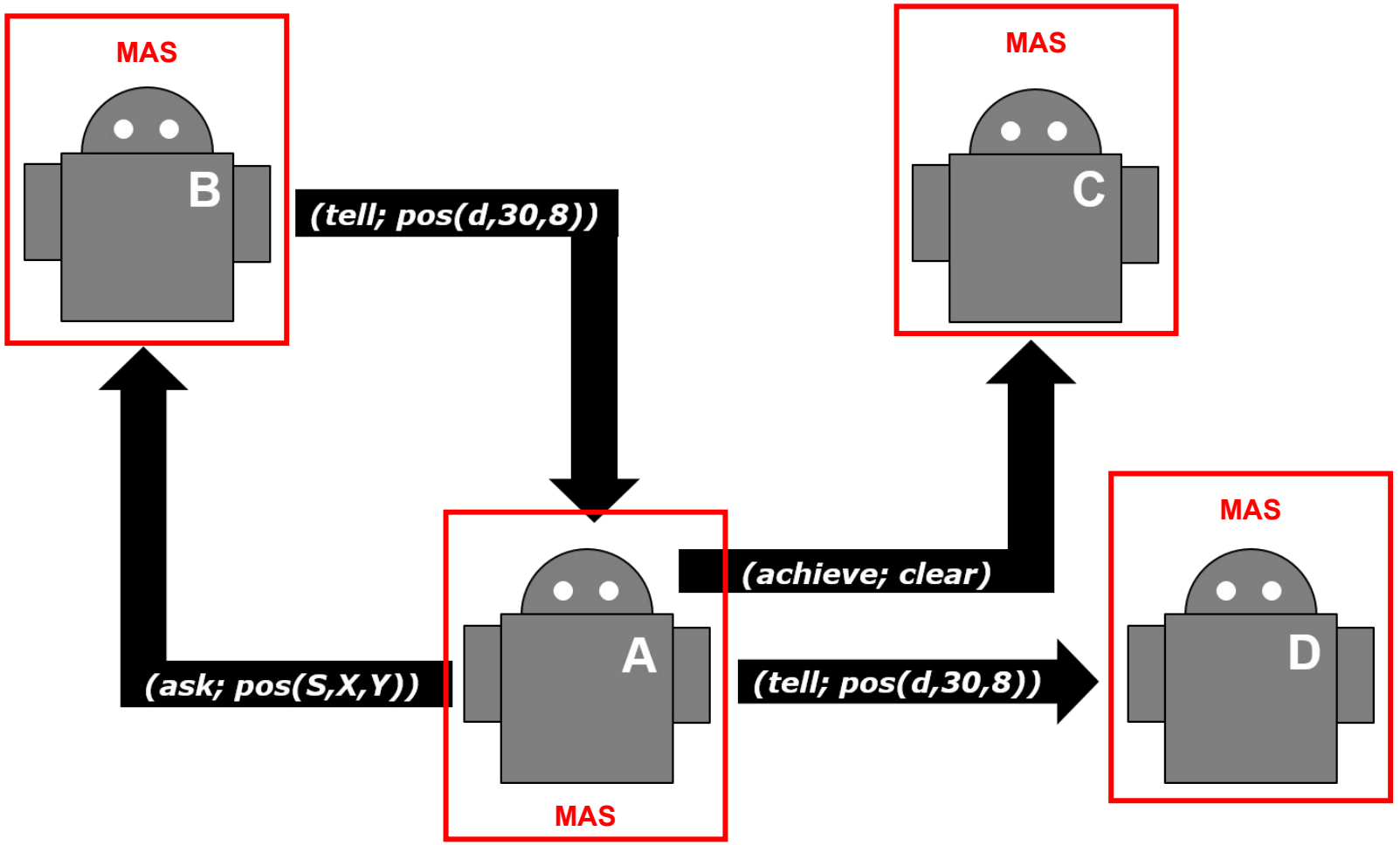
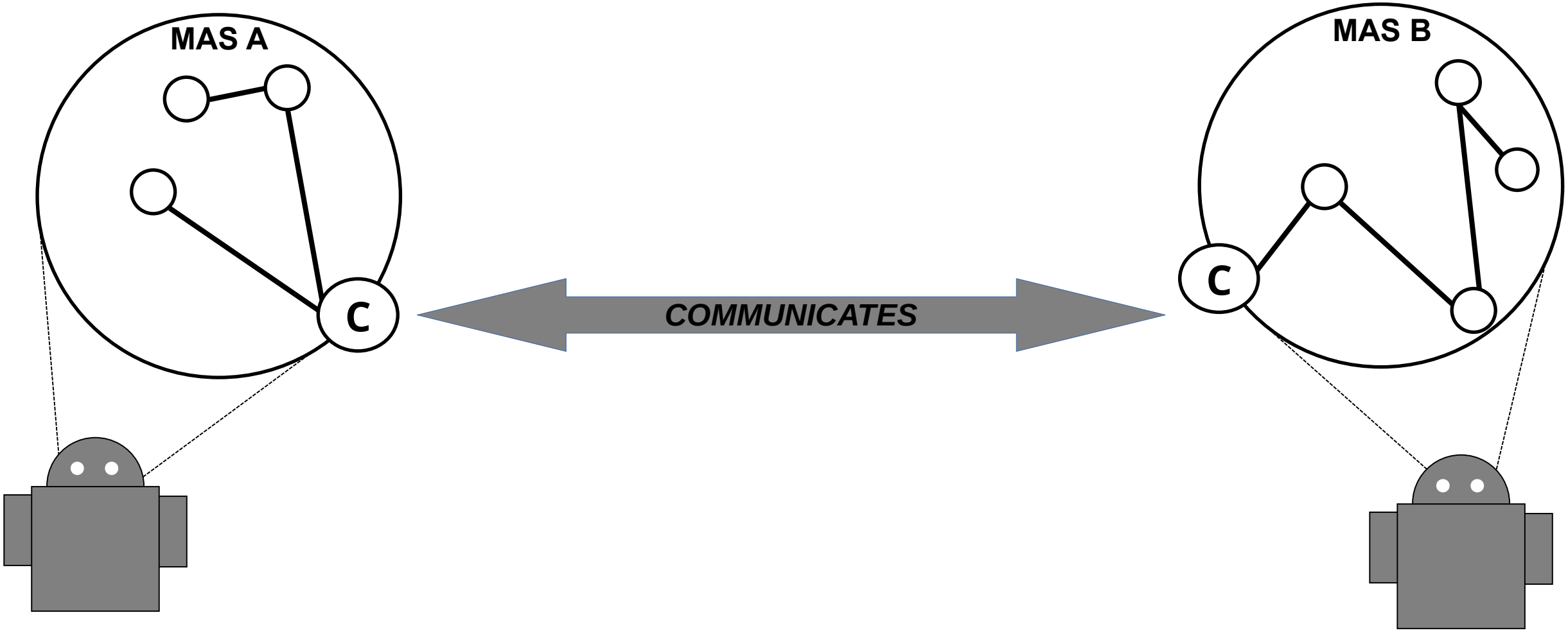
Collaborative MAS

Collaborative MultiAgent System

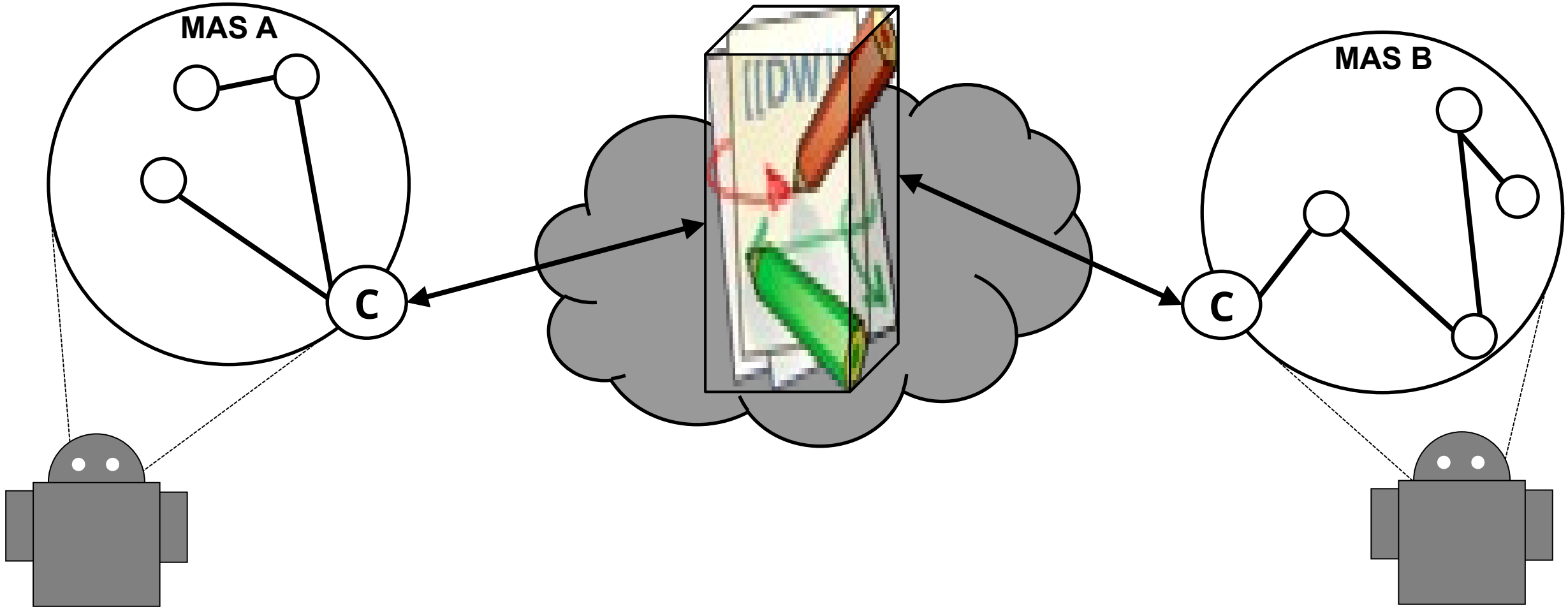


Agentes Comunicadores



Pantoja, C., Soares, H.D., Viterbo, J., Seghrouchni, A.E.F. “An Architecture for the Development of Ambient Intelligence Systems Managed by Embedded Agents”. The 30th International Conference on Software Engineering and Knowledge Engineering, Hotel Pullman, Redwood City, California, USA, July 1-3, 2018, organizado por Óscar Mortágua Pereira, KSI Research Inc. and Knowledge Systems Institute Graduate School, 2018, https://doi.org/10.18293/SEKE2018-110 .

Agentes Comunicadores: Service Communication



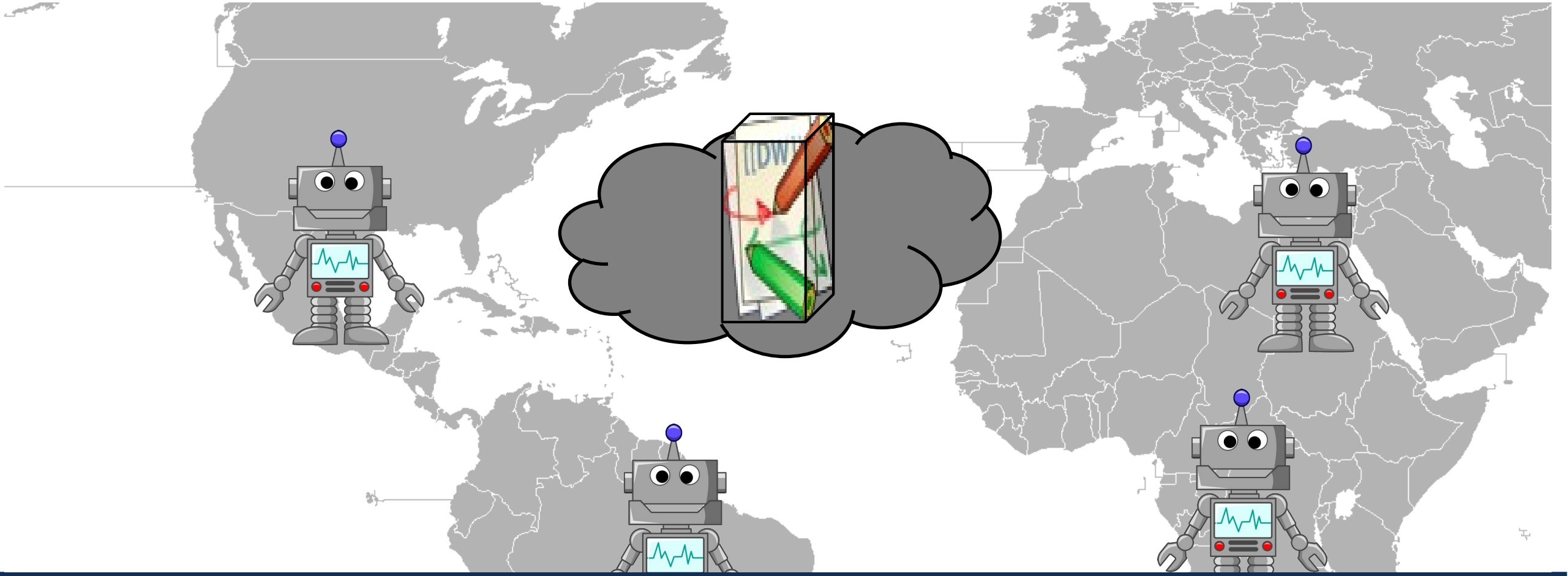
Endler, M., Baptista, G., Silva, L.D., Vasconcelos, R., Malcher, M., Pantoja, V., Pinheiro, V., Viterbo, J.: Contextnet: Context reasoning and sharing middleware for large-scale pervasive collaboration and social networking. In: Proceedings of the Workshop on Posters and Demos Track. PDT '11, Association for Computing Machinery, New York, NY, USA (2011). https://doi.org/10.1145/2088960.2088962

Agentes Comunicadores: Middleware IoT

O ContextNet é um *middleware* que visa a **aplicações colaborativas** abrangentes de pequena e grande escala, como **monitoramento on-line** ou **coordenações de atividades** de **entidades móveis** e **compartilhamento de informações**.

ContextNet Public Server

Address: skynet.chon.group - UDP Port: 5500



Agentes Comunicadores: Ações Internas

- **Communicator** Internal Actions:

.sendOut(agentUuid, force, message)

envia uma mensagem de um agente comunicador para outro comunicador de um SMA distinto.

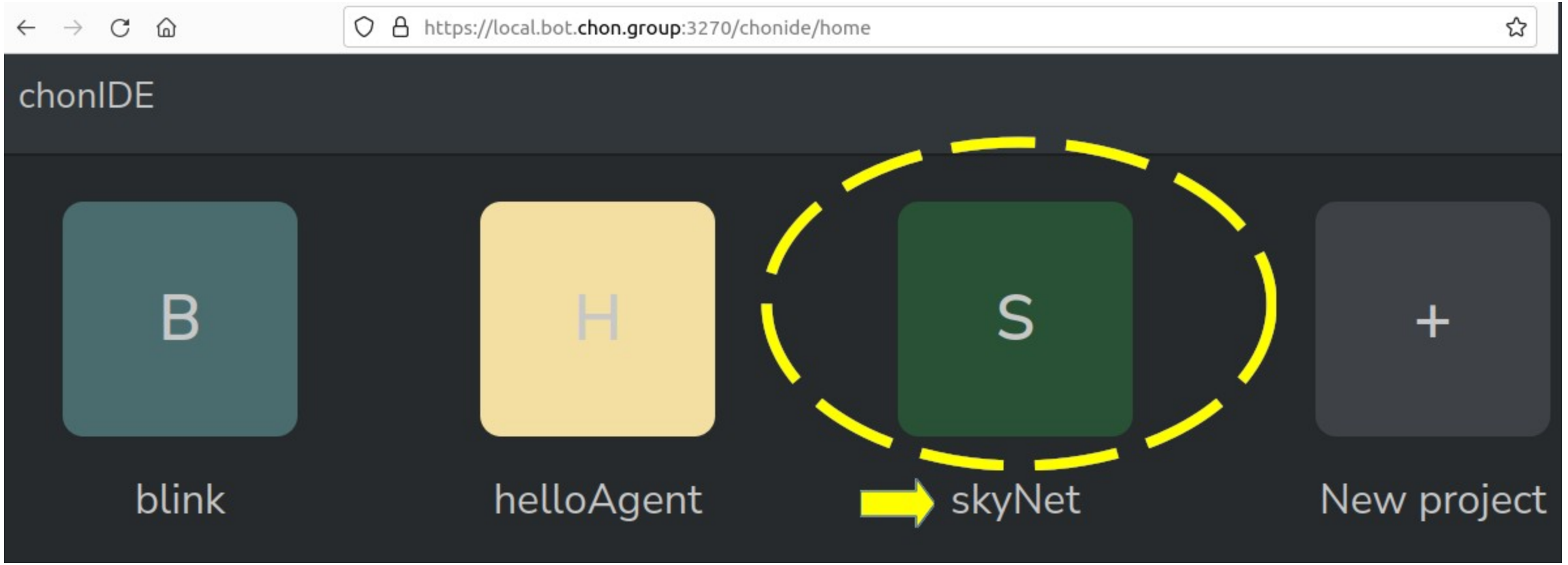
.connectCN(servidor, porta, UUID)

se conecta ao servidor IoT com um id específico para o agente.

.disconnectCN

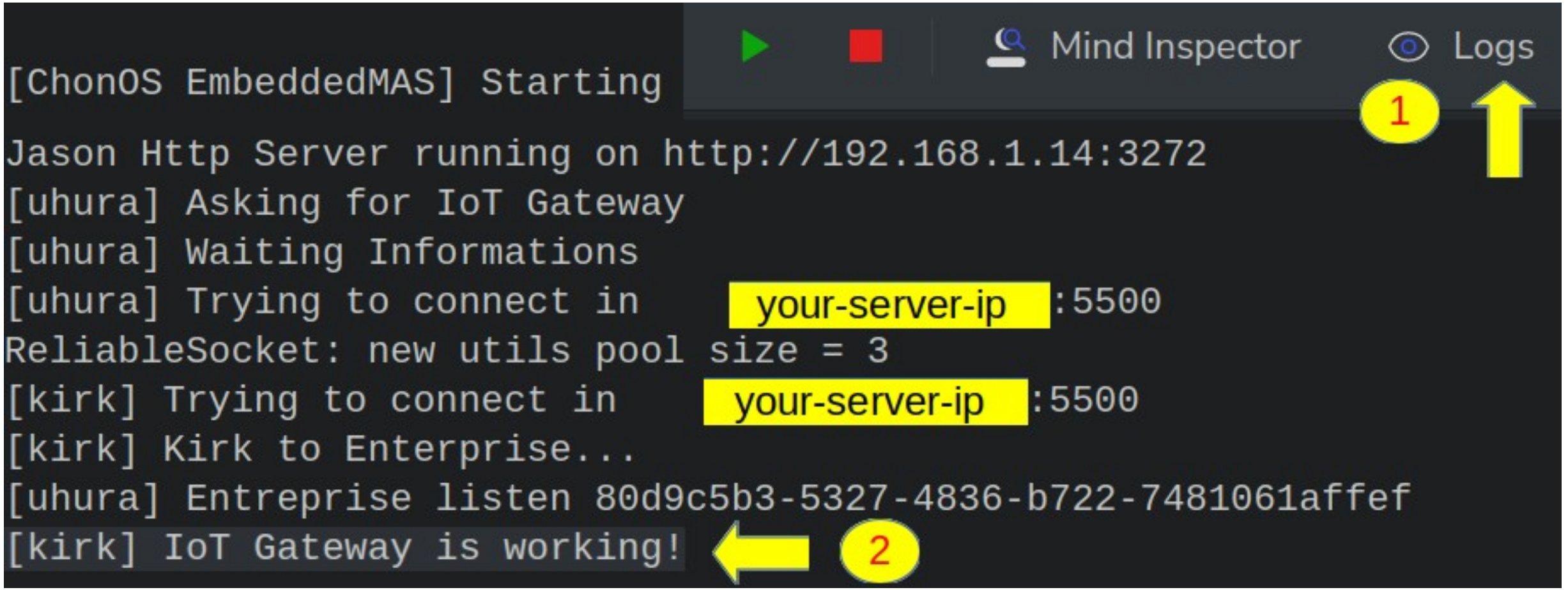
desconecta do servidor IoT atualmente conectado.

Hello SkyNet

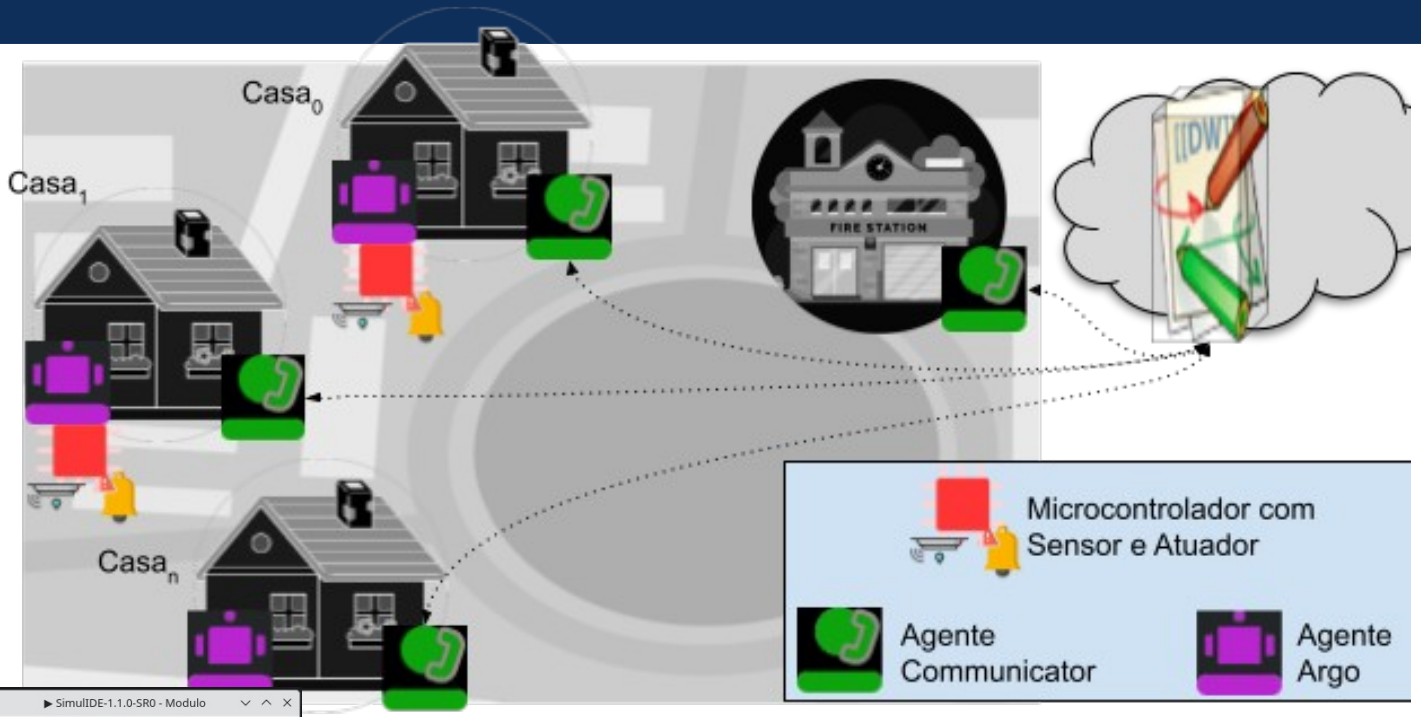


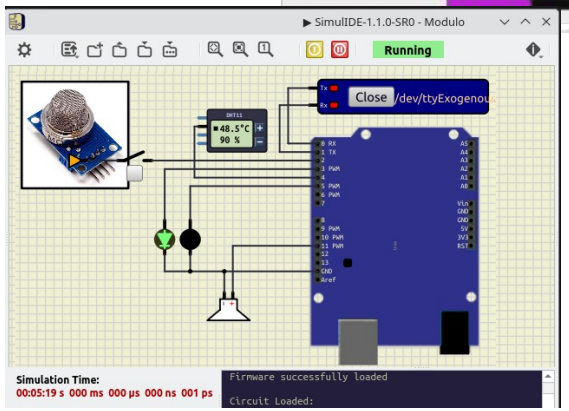
Hello SkyNet

Hello SkyNet



Exemplo: Colaboração entre SMA Embarcados





https://github.com/chon-group/distributedAndEmbeddedAI/tree/main/course/13-CollaborativeMultiAgentSystems/example

Agradecimentos

OBRIGADO!

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