



Using DeCoT+ to Collect Data Under Interference

Category I: Data Collection for Condition Monitoring

Xiaoyuan Ma^{1,3}, Peilin Zhang⁴, Ye Liu⁵, Xin Li², Weisheng Tang^{1,3}, Pei Tian^{1,3},
Jianming Wei¹, Lei Shu⁵, Oliver Theel⁴

1. Shanghai Advanced Research Institute, Chinese Academy of Sciences, China

2. ShanghaiTech University, School of Information Science & Technology, China

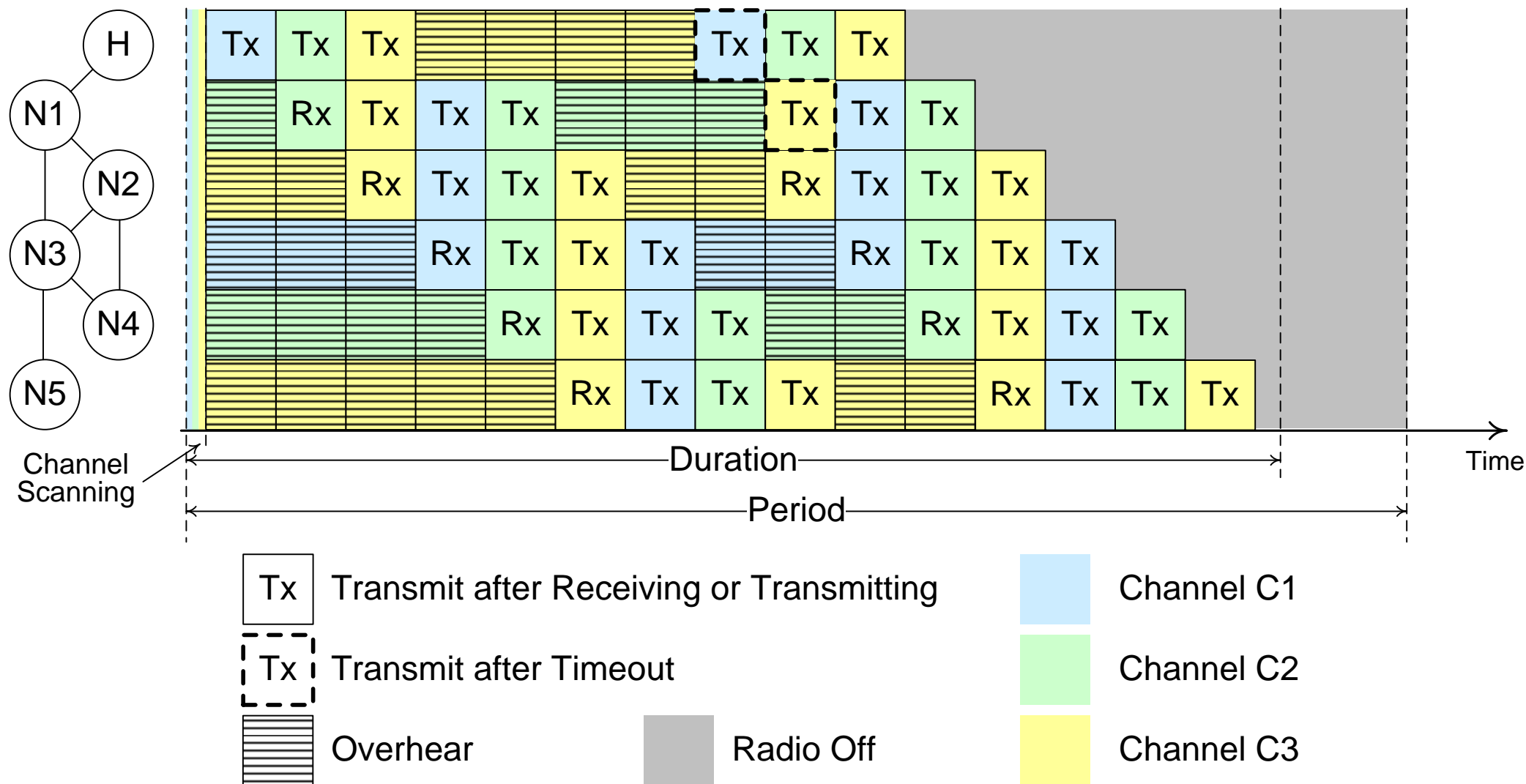
3. University of Chinese Academy of Sciences, China

4. Carl von Ossietzky University of Oldenburg, Germany

5. Nanjing Agricultural University, China

DeCoT+: Based on DeCoT [1]

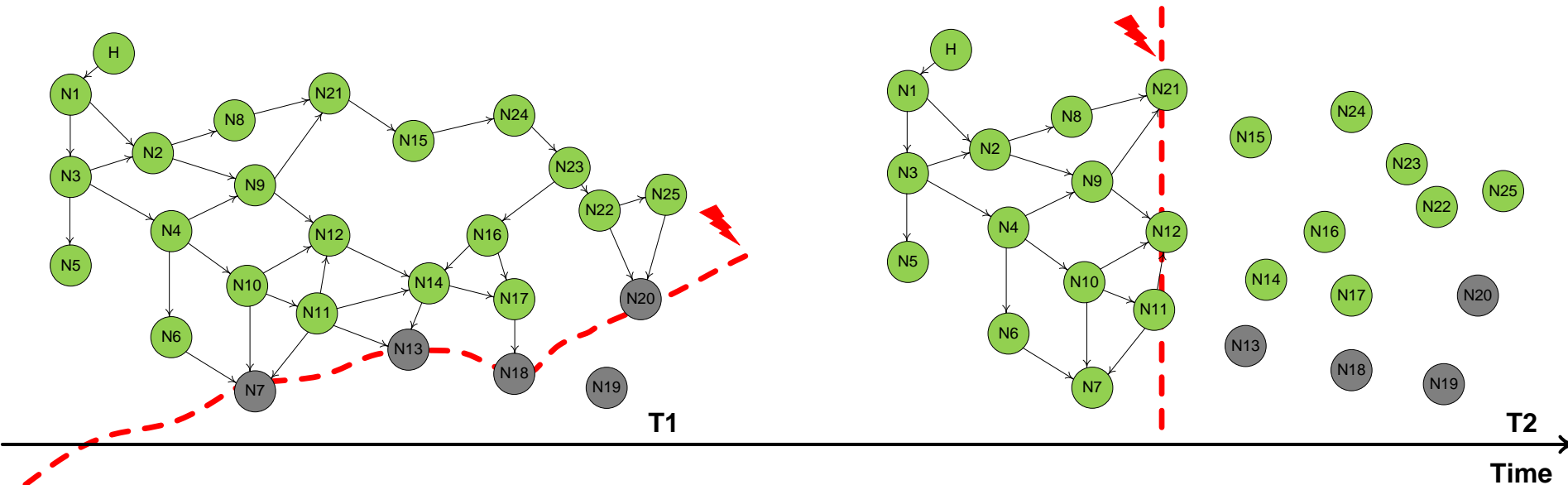
Channel Hopping Mechanism: Scan-and-Lock



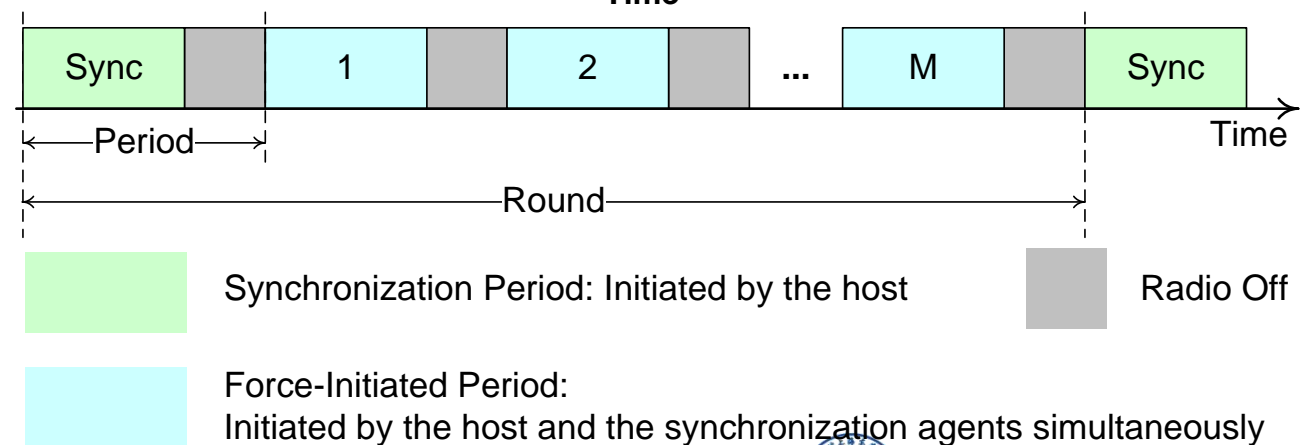
DeCoT+: Based on DeCoT [1]

Decentralized Mechanism: Force-Initiated Mechanism

Interference unexpectedly partitions a CT-based network: Gray nodes would never synchronize with the host.



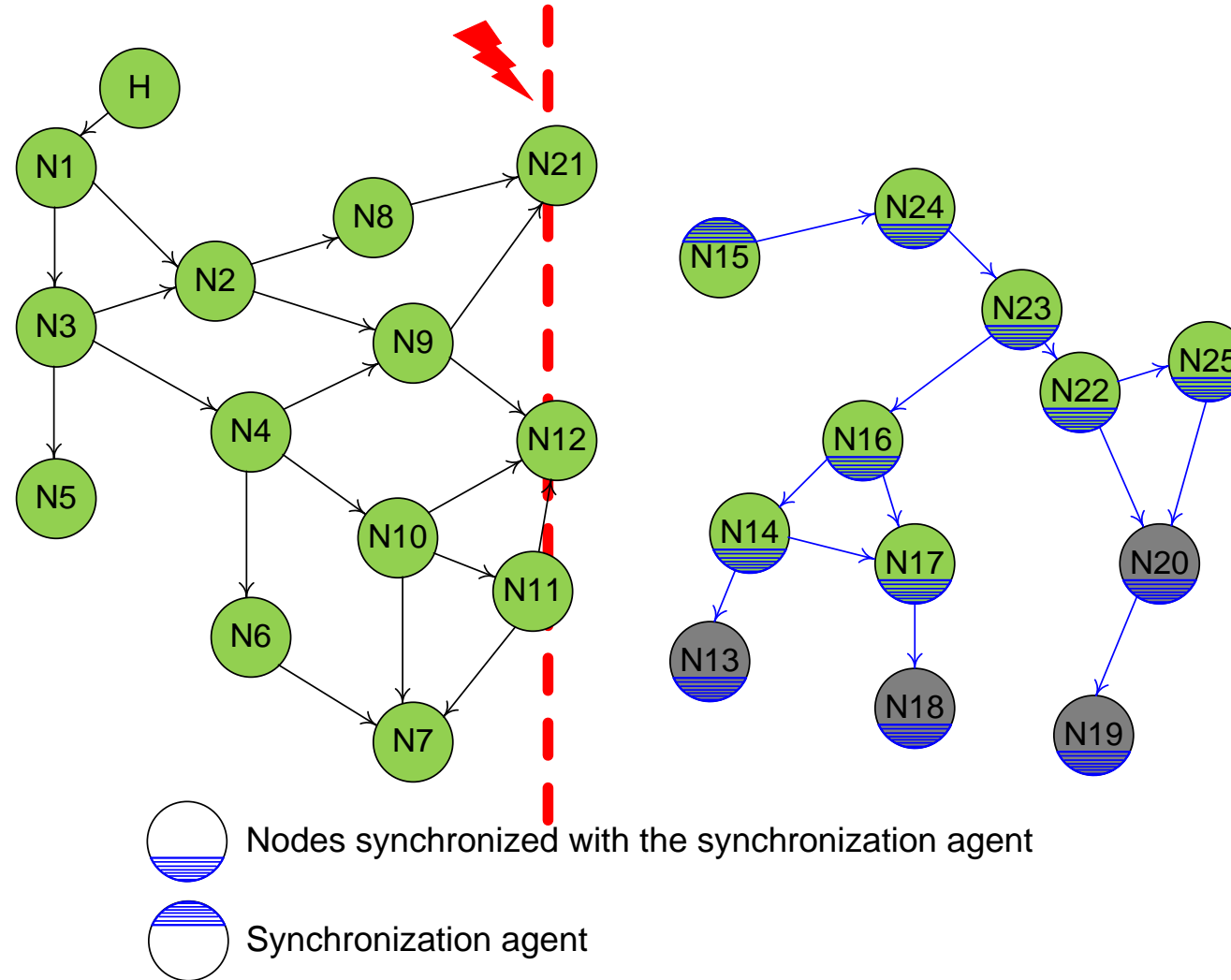
Force-Initiated mechanism is introduced to decentralize a CT-based network.



DeCoT+: Based on DeCoT [1]

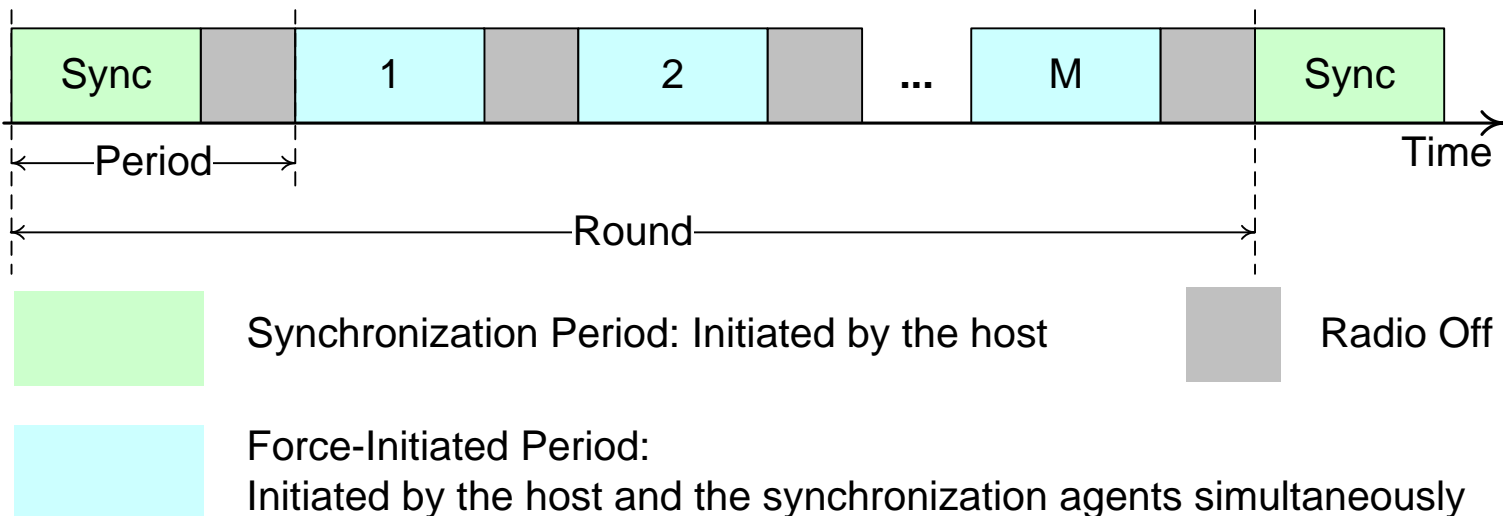
Decentralized Mechanism: Force-Initiated Mechanism

Nodes in the partitioned network get synchronized with an agent. In the competition, all the source nodes work as agents.

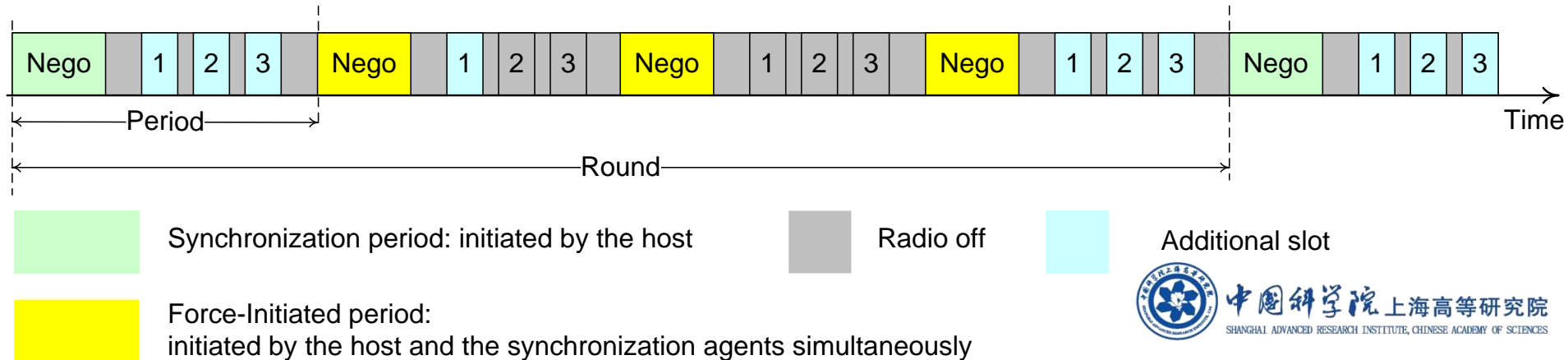


DeCoT+: Nego-and-Action Framework

Force-Initiated mechanism in DeCoT

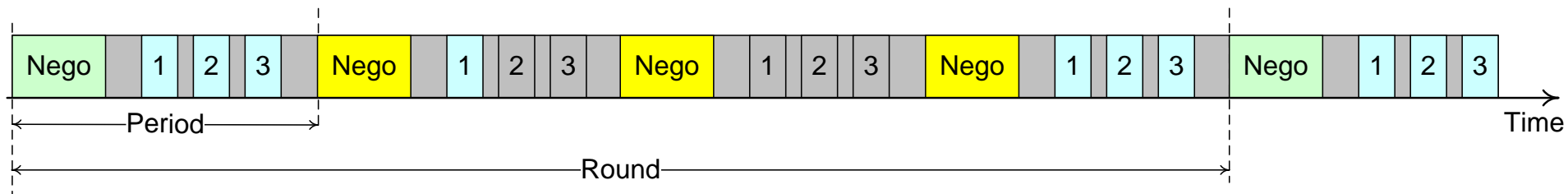
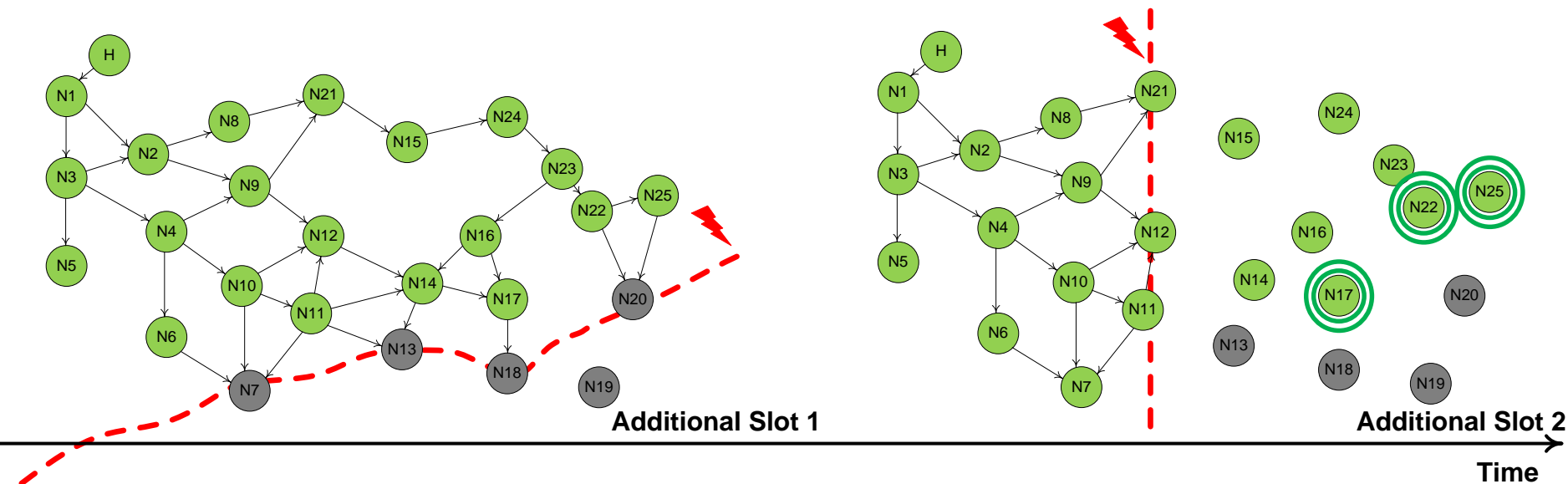


Nego-and-Action framework in DeCoT+ is designed for long payloads



DeCoT+: Data Freezing Mechanism

An example, we assume that N3 has a packet to N20. The interference varies as the red dashed line.

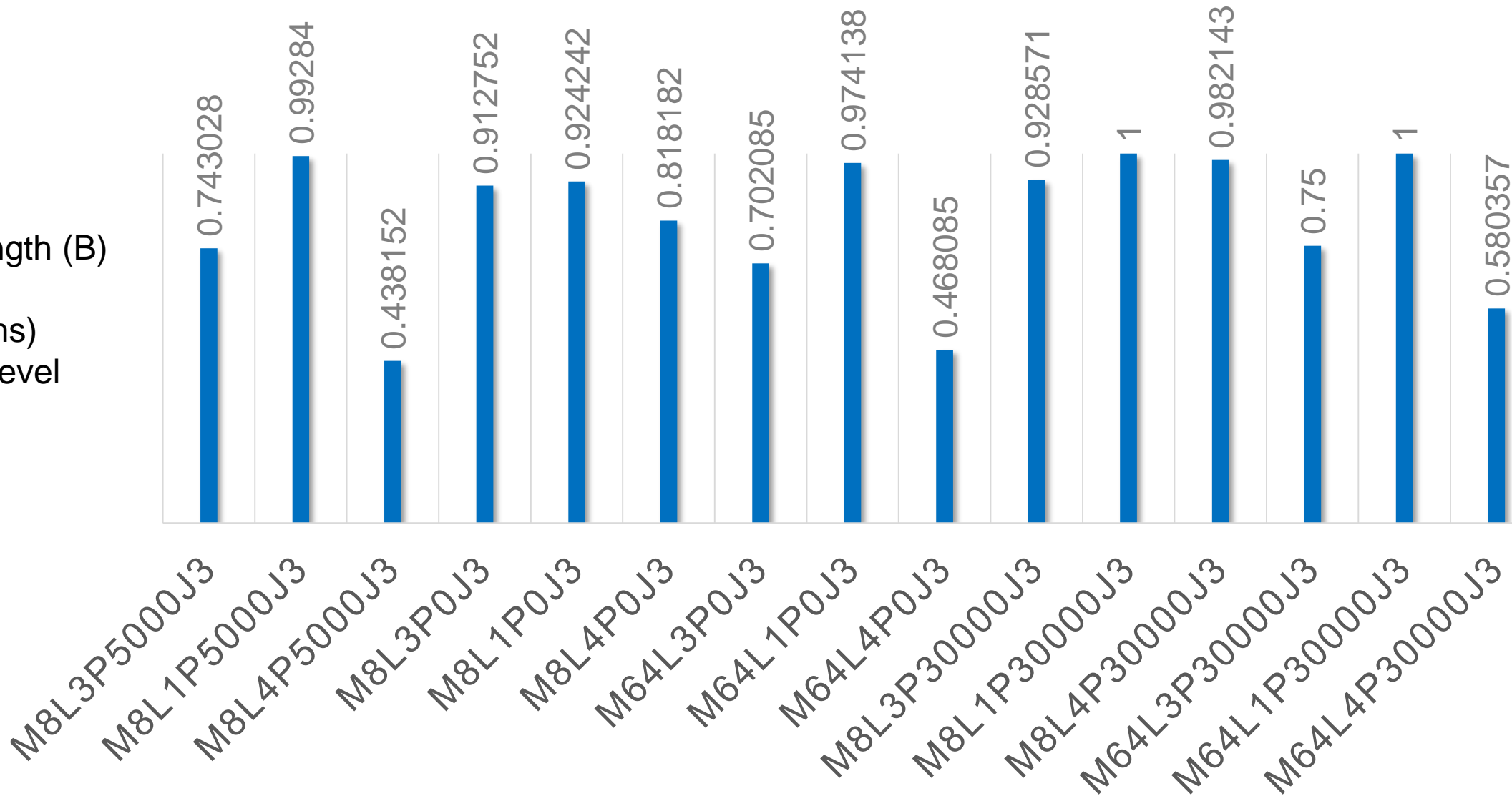


- Synchronization period: initiated by the host
- Radio off
- Additional slot
- Force-Initiated period: initiated by the host and the synchronization agents simultaneously

Preliminary Evaluation

Reliability (under interference level 3)

Legend
M: message length (B)
L: layout
P: periodicity (ms)
J: interference level



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- Carlo Alberto Boano and Markus Schuß, Graz University of Technology, Austria
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Q & A

Thank you!

Xiaoyuan Ma, maxy@sari.ac.cn
Peilin Zhang, peilin.zhang@informatik.uni-oldenburg.de
Ye Liu, yeliu@njau.edu.cn