

Effect on the scale invariance of the network exerted by the constraint of the latency

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Abstract

In the IoT era, the scenes where network latency becomes a big problem, including the auto-pilot, will increase. Therefore, the effect the latency exerts on the network structure is an issue.

In situations where the latency of the entire network cannot be ignored, we suggest that the global scale invariance of the network be broken. We suggest that the nodes between the low degrees are coupled to relatively condense locally, while globally leaving scale-invariant or loosely coupled. That means there is a possibility that a structural change will occur in the real networks in the IoT era.