Is it good to use synchronous motors in 5g base stations

Why is synchronization important in 5G?
In 5G,synchronization plays an even more significant role by enabling the high capacity and low latencythat users expect. For instance,while a 3 Gb movie might take about 30 minutes to download on a 4G network,the same movie can be downloaded in just 35 seconds on a 5G network. Figure 1.

Do 5G networks need time synchronization?
Many of the commercial 5G networks going live around the world today use TDD. TDD radio frames inherently require time and phase alignment between radio base stations, to prevent interferences and related loss of traffic. Time synchronization is also required in FDD networks when different radio coordination features are used.

Why is 5G synchronization so difficult?
And there are other advanced technologiesthat come with 5G,like dynamic spectrum sharing (DSS),carrier aggregation and massive MIMO--all requiring good timing to operate correctly. These technologies give rise to complexities in network synchronization not seen in earlier generation networks.

Should the tightest synchronization requirement be a general 5G requirement?
While the level of the required synchronization accuracy depends on several factors,it would be a mistaketo apply the tightest synchronization requirement as a general 5G requirement,as doing so would make the cost for 5G and the future evolution of the mobile technologies unsustainable.

Ran-Based Synchronization SolutionsTransport-Based Synchronization SolutionsCombining Techniques For Best ResultsSeveral aspects need to be considered when selecting the most appropriate synchronization solution(s), including installation and operation costs, synchronization accuracy, robustness and availability targets. The optimal solution for a specific network may depend on existing synchronization feature support of the network and network elements, tran...See more on ericsson sensor360 Analysis of 5G synchronous networking architecture and key ...As urbanization continues to advance and the proportion of indoor base stations increases, there will be a large number of 5G base station deployment scenarios where satellite signals cannot ...

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In this post we will identify the critical challenges in macro base station synchronisation and what needs to be considered when selecting ...

Packet-based synchronization options ..... Synchronization challenges...

In this post we will identify the critical challenges in macro base station synchronisation and what needs to be considered when selecting synchronisation solutions.

In comparison to synchronous Ethernet and network clock protocols, 1588v2 offers sub-microsecond time synchronisation that fulfils the precision and accuracy re

In today"s 5G era, the energy efficiency (EE) of cellular base stations is crucial for sustainable communication. Recognizing this, Mobile Network Operators are actively prioritizing EE for ...

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5G timing and 5G synchronization are critical in 5G networks. Learn how nanosecond timing between the various elements in the radio access network will shape the ...

This Ericsson Technology Review article explains 5G synchronization requirements and the solutions that enable an efficient and cost-effective implementation.

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