

Base Station Controller



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What Does Base Station Controller Mean?

A base station controller (BSC) is a critical mobile network component that controls one or more base transceiver stations (BTS), also known as base stations or cell sites. Key BSC functions include radio network management (such as radio frequency control), BTS handover management and call setup.

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A BSC works with a mobile switching center (MSC) component that is external to the BTS, enabling it to provide full mobile telephony and fulfill capacity requirements. Base stations must communicate with the MSC and data must be managed as information overflow, impacting MSC efficiency. A BSC eliminates MSC base station activity management requirements, allowing the MSC to handle critical tasks, such as traffic balancing and database management.

Techopedia Explains Base Station Controller

Often perceived as the intelligence behind the BTS, the BSC serves as a mediator between base stations and the MSCs, while providing voice pathways for mobile phones and other compatible devices, such as a land line or the Internet.

In most instances, several connected base stations and MSCs link to one BSC, which handles network traffic measurement, authentication and handover management. For example, when a serving BTS does not receive sufficient signaling power from a mobile phone, the BSC will hand over the signal to another cell site to ensure optimal transmission power for the mobile user(s)