

Power consumption of communication base stations in the Democratic Republic of Congo

How do base stations affect mobile cellular network power consumption?

Base stations represent the main contributor to the energy consumption of a mobile cellular network. Since traffic load in mobile networks significantly varies during a working or weekend day, it is important to quantify the influence of these variations on the base station power consumption.

Is there a direct relationship between base station traffic load and power consumption?

The real data in terms of the power consumption and traffic load have been obtained from continuous measurements performed on a fully operated base station site. Measurements show the existence of a direct relationship between base station traffic load and power consumption.

Who was not informed about RTNC interference in Congo?

Radio-Télévision Nationale Congolaise (RTNC), the state-run national broadcaster, was interfering in Congo. The then Telecommunications Minister Thomas Luhaka was not informed of such interference by the government.

How much energy does the ICT sector consume?

1. Introduction According to , approximately 3% or 600 TWh of the worldwide electrical energy is consumed by the information and communication technology (ICT) sector. It is estimated that energy consumption for ICT will grow to 1,700 TWh by 2030.

What percentage of AC power consumption is caused by telecommunication equipment?

Figure 17 shows the percentage of the active power consumption in the site's total AC power consumption, for each of the analyzed equipments. According to Figure 17, a major fraction (52% cumulatively) of the total site consumption is caused by the analyzed telecommunication equipment, namely the GSM 900 sector 1 and 2, GSM 1800 and UMTS BSs.

What radio station is popular in Kinshasa?

Radio France Internationale (RFI), which is widely available on FM, is the most popular news station in Kinshasa. The BBC broadcasts on FM in Kinshasa (92.7), Lubumbashi (92.0), Kisangani (92.0), Goma (93.3) and Bukavu (102.2).

This chapter aims at providing a survey on the Base Stations functions and architectures, their energy consumption at component level, their possible improvements and the major problems ...

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