The systems of set about a reception are on the basis of MIMO of antennas

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Abstract - **For the off-wire dustings of connection the negative consequences of stoppings beating of signal, waves caused multiband distributions are considered. The features of set about a reception, realized by the use of a few aerials on a receiving side are considered. Comparison of different methods of combining of initial signals of separate aerials is conducted and recommendations are given from their application.**

Keywords – **MIMO, OFDMA.**

Increase of demand for services of a cellular tele-phony and means of wireless access to telecommunication networks leads to necessity continuously to increase capacity of existing systems. As we remember, the capacity of cellular system expressed in density of the traffic, falling to area unit, depends on many factors. Those are:

- width of the frequency range, allocated to system;
- width of the spectral channel demanded for one bearing;
- a used method multistation / plural access;
- a modulation kind;
- methods of reception and processing of an information signal;
- admissible size of the relation a signal/noise;
- type of aerials of base stations, in particular quantities of antenna sectors.

The major factor thanks to which there is a possibility in the near future essentially to increase capacity of systems of a mobile communication, systems of antennas are. For achievement of high speeds of data trans-mission in modern stationary and mobile communication systems use the multiantenna technics - MEA, Alamouti STC (STBC), SDMA, MISO, MIMO.

The multiantenna system can be considered as a communication system with several spatial channels. All channels work in the same strip of frequencies at a time and are divided only at the expense of spatial diversed radiating and reception antennas. Possibility of the organisation of many spatial channels explains high spectral efficiency of multiantenna systems by working out of high-speed communication systems.

The easiest way of improvement of throughput of a complex network is equipment of a point of access by set of antennas, each of which serves a separate final point.

This method is called SDMA, it has the positive side: only it is necessary for access point to be equipped with plural antennas. In this connection the expenses connected with increase of throughput, it is mentioned only one point of a network - an access point.

Method SDMA is effective and economical way of increase in throughput by increase in quantity of the devices simultaneously informed with a point of access. The method realises a pure prize in the throughput, linearly dependent on quantity of the antennas located on a point of reception. The increase in quantity of antennas twice will lead to a doubling of the general throughput.

The technology of existential coding Alamouti named also space-time block coding STBC is the most simple technics using diversed of transferring antennas. Its application does not assume knowledge of characteristics of a radio channel by transfer and does not demand difficult algorithms of processing of signals at reception. A lack of technology STBC of that. That it provides not so high speed of an information transfer, as other ways of spatial coding.

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