Claims

1. A Shared User Equipment-Side Distributed Antenna Component comprising:

a backend transceiver;

a backend channel equalizer; and

a frontend transceiver;

wherein the backend transceiver is configured to receive a first inbound signal from a base station using ultra-high frequencies;

wherein the backend transceiver is configured to output the first inbound signal at intermediate frequencies;

wherein the backend channel equalizer is configured to reduce in the first inbound signal distortions caused by using the ultra-high frequencies, using a configuration signal received from a backend channel estimator of a user equipment via the frontend transceiver to obtain a second inbound signal;

wherein the frontend transceiver is configured to output the second inbound signal using extremely-high frequencies in order to generate an outbound signal and to transmit the outbound signal to the user equipment; and

wherein the frontend transceiver is configured to receive a configuration signal from the user equipment and to forward the configuration signal to the backend channel equalizer.

2. The Shared User Equipment-Side Distributed Antenna Component according to claim 1, the Shared User Equipment-Side Distributed Antenna Component comprising:

a frontend channel estimator;

a frontend channel pre-equalizer;

12. The system according to claim 10 or 11, wherein the transceiver and/or the Shared User Equipment-Side Distributed Antenna Component use the backend control portion of the base station as a common time reference.

13. The system according to one of the claims 10-12,

wherein the user equipment extracts a time reference from the backend control portion;

wherein the user equipment transmits the time reference to the Shared User Equipment-Side Distributed Antenna Component in order to obtain a common time reference.

14. The system according to one of the claims 10-13,

wherein the Shared User Equipment-Side Distributed Antenna Component is configured for simultaneously relaying two or more communication links serving one or more receiving and transmitting stages of the transceiver of one or more user equipments.

15. A method for signal processing in a Shared User Equipment-Side Distributed Antenna Component comprising the steps:
receiving a first inbound signal from a base station with a backend transceiver using ultra-high frequencies;

outputting the first inbound signal at intermediate frequencies with the backend transceiver;

reducing in the first inbound signal distortions caused by using the ultra-high frequencies with a backend channel equalizer, using a configuration signal received from a backend channel estimator of the user equipment to obtain a second inbound signal; and

outputting the second inbound signal with a frontend transceiver using extremely-high frequencies in order to generate an outbound signal and to transmit the outbound signal to a user equipment.