

IN THE HIGH COURT OF JUSTICE  
BUSINESS AND PROPERTY COURTS OF  
ENGLAND AND WALES  
INTELLECTUAL PROPERTY LIST (ChD)  
PATENTS COURT

Claim No. HP-2017-000048

B E T W E E N:

**CONVERSANT WIRELESS LICENSING S.à r.l**  
(a company incorporated under the laws of Luxembourg)

**Claimant**

- and -

**HUAWEI TECHNOLOGIES CO., Ltd.**  
(a company incorporated under the laws of the People's Republic of China)

**HUAWEI TECHNOLOGIES (UK) CO., LIMITED**

**ZTE CORPORATION**  
(a company incorporated under the laws of the People's Republic of China)

**ZTE (UK) LIMITED**

**Defendants**

---

**ANNEX 1**  
**TO THE STATEMENT OF GROUNDS**  
**FOR AMENDMENT OF EP (UK) 1,878,177**

---

## Claims

### 1. A method comprising:

signalling first control information on a shared control channel from a radio access network to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: ~~at least one of: a modulation and coding scheme used on a data channel, and~~

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information;

transmitting a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation; characterized by

for at least one subsequent transmission on the shared data channel in the fixed allocation, signalling control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet; and

indicating to the mobile station whether the transmission parameter values of the control information signalled for said at least one subsequent transmission should be stored by the mobile station.

### 57. A method comprising:

receiving first control information on a shared control channel from a radio access network at a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: ~~at least one of: a modulation and coding scheme used on a data channel and~~

a modulation scheme;

radio resources used on the shared data channel in the form of one or more channelisation codes;

transport block size; and

HARQ-related information;

receiving a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation; ~~characterized by~~

for at least one subsequent reception on the shared data channel in the fixed allocation, receiving control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet; and

receiving an indication from the radio access network whether the transmission parameter values of the control information received for said at least one subsequent reception should be stored by the mobile station.

**913.** A network element (Node B, 10) configured to:

signal first control information on a shared control channel from the network element (Node B, 10) to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: at least one of: a modulation and coding scheme used on a data channel, and

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information.

transmit a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

~~characterized by being configured to:~~

for at least one subsequent transmission on the shared data channel in the fixed allocation, signal control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet; and

indicate to the mobile station whether the transmission parameter values of the control information signalled for said at least one subsequent transmission should be stored by the mobile station.

**1318.** A mobile station (UE1, 10) configured to:

receive first control information on a shared control channel from a radio access network at the mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: at least one of: a modulation and coding scheme used on a data channel; and

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information.

receive a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation; characterized by being configured to

for at least one subsequent reception on the shared data channel in the fixed allocation, receive control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet; and

receive an indication from the radio access network whether the transmission parameter values of the control information received for said at least one subsequent reception should be stored by the mobile station.

424. A method comprising:

signalling first control information on a shared control channel from a radio access network to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: at least one of a modulation and coding scheme used on a data channel, and

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information.

transmitting a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation; characterized by



for at least one subsequent transmission on the shared data channel in the fixed allocation, signalling control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet;

~~2. The method of claim 1, further comprising:~~

signalling second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the radio access network to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and

signalling, at the radio resource control layer, a HARQ process ID used for the fixed allocation.

~~528. A method comprising:~~

receiving first control information on a shared control channel from a radio access network at a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: at least one of: a modulation and coding scheme used on a data channel, and

a modulation scheme;

radio resources used on the shared data channel in the form of one or more channelisation codes;

transport block size; and

HARQ-related information.

receiving a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation; characterized by

for at least one subsequent reception on the shared data channel in the fixed allocation, receiving control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet;

~~6. The method of claim 5, further comprising:~~

receiving second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the radio access network to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and

receiving, at the radio resource control layer, a HARQ process ID used for the fixed allocation.

932. A network element (Node B, 10) configured to:

signal first control information on a shared control channel from the network element (Node B, 10) to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: at least one of: a modulation and coding scheme used on a data channel, and

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information.

transmit a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

— characterized by being configured to:

for at least one subsequent transmission on the shared data channel in the fixed allocation, signal control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet;

10. — The network element (Node B, 10) of Claim 9, further configured to:

signal second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the network element (Node B, 10) to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and  
signal, at the radio resource control layer, a HARQ process ID used for the fixed allocation.

1335. A mobile station (UE1, 10) configured to:

receive first control information on a shared control channel from a radio access network at the mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising: at least one of: a modulation and coding scheme used on a data channel, and

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information,

receive a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation; characterized by being configured to for at least one subsequent reception on the shared data channel in the fixed allocation, receive control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet;

~~14. — The mobile station (UE1, 10) of Claim 13, further configured to:~~

receive second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the radio access network to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and  
receive, at the radio resource control layer, a HARQ process ID used for the fixed allocation.

**IN THE HIGH COURT OF JUSTICE  
BUSINESS AND PROPERTY COURTS OF  
ENGLAND AND WALES  
INTELLECTUAL PROPERTY LIST (ChD)  
PATENTS COURT**

**Claim No. HP-2017-000048**

**B E T W E E N:**

**CONVERSANT WIRELESS LICENSING S.à r.l  
(a company incorporated under the laws of Luxembourg)**

**Claimant**

**- and -**

**HUAWEI TECHNOLOGIES CO., Ltd.  
(a company incorporated under the laws of the People's Republic of China)**

**HUAWEI TECHNOLOGIES (UK) CO., LIMITED**

**ZTE CORPORATION  
(a company incorporated under the laws of the People's Republic of China)**

**ZTE (UK) LIMITED**

**Defendants**

---

**ANNEX 2  
TO THE STATEMENT OF GROUNDS  
FOR AMENDMENT OF EP (UK) 1,878,177**

---



**Support for conditional claim set Annex 1**

<b>Claim (granted)</b>	<b>Claim (amended)</b>	<b>PCT</b>
1,5,9,13	1, 7, 13,18	Page 2 lines 3-13 Page 7 lines 9-15 Page 7 lines 20,21 Page 8 lines 19-21 Page 12 lines 6-12 Page 17 lines 11-18
1+2, 5+6, 9+10, 13+14	24, 28, 32, 35	Page 2 lines 3-13 Page 7 lines 9-15 Page 7 lines 20, 21 Page 8 lines 19-20 Page 11 lines 17-18 Page 12 lines 6-12 Page 10 lines 26-27 (granted claim 4)

IN THE HIGH COURT OF JUSTICE  
BUSINESS AND PROPERTY COURTS OF  
ENGLAND AND WALES  
INTELLECTUAL PROPERTY LIST (ChD)  
PATENTS COURT

Claim No. HP-2017-000048

B E T W E E N:

**CONVERSANT WIRELESS LICENSING S.à r.l**  
(a company incorporated under the laws of Luxembourg)

**Claimant**

- and -

**HUAWEI TECHNOLOGIES CO., Ltd.**  
(a company incorporated under the laws of the People's Republic of China)

**HUAWEI TECHNOLOGIES (UK) CO., LIMITED**

**ZTE CORPORATION**  
(a company incorporated under the laws of the People's Republic of China)

**ZTE (UK) LIMITED**

**Defendants**

---

**ANNEX 3**  
**TO THE STATEMENT OF GROUNDS**  
**FOR AMENDMENT OF EP (UK) 1,878,177**

---

## Claims

1. A method comprising:

signalling first control information on a shared control channel from a radio access network to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information,

transmitting a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent transmission on the shared data channel in the fixed allocation, signalling control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet; and

indicating to the mobile station whether the transmission parameter values of the control information signalled for said at least one subsequent transmission should be stored by the mobile station.

7. A method comprising:

receiving first control information on a shared control channel from a radio access network at a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:

a modulation scheme;

radio resources used on the shared data channel in the form of one or more channelisation codes;

transport block size; and

HARQ-related information,

receiving a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent reception on the shared data channel in the fixed allocation, receiving control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet; and

receiving an indication from the radio access network whether the transmission parameter values of the control information received for said at least one subsequent reception should be stored by the mobile station.

13. A network element (Node B, 10) configured to:

signal first control information on a shared control channel from the network element (Node B, 10) to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information,

transmit a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent transmission on the shared data channel in the fixed allocation, signal control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet; and

indicate to the mobile station whether the transmission parameter values of the control information signalled for said at least one subsequent transmission should be stored by the mobile station.

18. A mobile station (UE1, 10) configured to:

receive first control information on a shared control channel from a radio access network at the mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:



- a modulation scheme;
- radio resources used on the shared data channel, in the form of one or more channelisation codes;
- transport block size; and
- HARQ-related information,

receive a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent reception on the shared data channel in the fixed allocation, receive control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet; and

receive an indication from the radio access network whether the transmission parameter values of the control information received for said at least one subsequent reception should be stored by the mobile station.

24. A method comprising:

signalling first control information on a shared control channel from a radio access network to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:

- a modulation scheme;
- radio resources used on the shared data channel, in the form of one or more channelisation codes;
- transport block size; and
- HARQ-related information,

transmitting a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent transmission on the shared data channel in the fixed allocation, signalling control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet;

signalling second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the radio access network to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and

signalling, at the radio resource control layer, a HARQ process ID used for the fixed allocation.

28. A method comprising:

receiving first control information on a shared control channel from a radio access network at a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:

a modulation scheme;

radio resources used on the shared data channel in the form of one or more channelisation codes;

transport block size; and

HARQ-related information,

receiving a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent reception on the shared data channel in the fixed allocation, receiving control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet;

receiving second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the radio access network to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and

receiving, at the radio resource control layer, a HARQ process ID used for the fixed allocation.

32. A network element (Node B, 10) configured to:

signal first control information on a shared control channel from the network element (Node B, 10) to a mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information,

transmit a first data packet to the mobile station (UE1, 10) on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent transmission on the shared data channel in the fixed allocation, signal control information to the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent transmission differ from one or more corresponding values used for transmitting the first data packet;

signal second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the network element (Node B, 10) to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and

signal, at the radio resource control layer, a HARQ process ID used for the fixed allocation.

35. A mobile station (UE1, 10) configured to:

receive first control information on a shared control channel from a radio access network at the mobile station (UE1, 10) for use in processing data packets transmitted on an associated shared data channel carrying both fixed allocation data packets, for which a fixed allocation is configured, and normal data packets without fixed allocation, and wherein the first control information comprises transmission parameters, the transmission parameters comprising:

a modulation scheme;

radio resources used on the shared data channel, in the form of one or more channelisation codes;

transport block size; and

HARQ-related information,

receive a first data packet on the shared data channel using the transmission parameters of the first control information, the first data packet being in a said fixed allocation;

for at least one subsequent reception on the shared data channel in the fixed allocation, receive control information at the mobile station (UE1, 10) on the shared control channel, the control information comprising one or more different transmission parameter values, only if one or more transmission parameter values for said at least one subsequent reception differ from one or more corresponding values used for receiving the first data packet;

receive second control information, the second control information for defining a periodicity of transmissions of data packets in the fixed allocation, from the radio access network to the mobile station (UE1, 10) on the shared data channel, the second control information being signalled at a radio resource control layer; and

receive, at the radio resource control layer, a HARQ process ID used for the fixed allocation.