

Amended Particulars of Claim by Decision of Mr Justice Henry Carr dated 27 February 2018 and consequent Order of Mr Justice Henry Carr as sealed by the Court on 14 June 2018

Claim no. HP-2017-000048

**IN THE HIGH COURT OF JUSTICE
CHANCERY DIVISION
PATENTS COURT**

B E T W E E N:

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

Claimant

- and -

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

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

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

(4) ZTE (UK) LIMITED

Defendants

AMENDED PARTICULARS OF CLAIM

THE CLAIMANT AND THE PATENTS

1. The Claimant (“Conversant”) is a limited liability company incorporated under the laws of Luxembourg with registered offices at 12 Rue Jean Engling, L-1466, Luxembourg. Until 20 July 2017 Conversant was known by the company name “Core Wireless Licensing S.à r.l”.
2. In 2011 Conversant acquired around 2000 patents and patent applications previously owned by Nokia Corporation (“Nokia”) along with the right to sue for past, present or future infringements of the patents and patent application acquired.

3. By reason of the aforesaid, Conversant has, since 2011 been the proprietor of, *inter alia*, the following patents (and where applicable the applications that led to their grant) (the “Patents”) and the right to sue in respect of them:
 - a. European Patent (UK) 1,031,192 (“the ‘192 Patent”).
 - b. European Patent (UK) 0,978,210 (“the ‘210 Patent”).
 - c. European Patent (UK) 1,797,659 (“the ‘659 Patent”).
 - d. European Patent (UK) 1,878,177 (“the ‘177 Patent”).
4. The date of publication of the application, the date of grant and the date that Conversant’s proprietorship was recorded with the United Kingdom Intellectual Property Office for each the Patents (or their applications) was as follows:

Patent	Application published	Granted with effect from	Date recorded as proprietor
‘192	30 August 2000	9 July 2003	5 April 2012
‘210	9 February 2000	13 December 2006	15 January 2012
‘659	20 June 2007	18 February 2015	2 May 2012
‘177	16 January 2008	21 June 2017	22 February 2012

5. The Patents are in force.

ESSENTIALITY OF THE PATENTS

6. The term “Essential” (and like terms as used herein) has the meaning ascribed to it in the ETSI IPR Policy under the ETSI Rules of Procedure dated 5 April 2017. The meaning of Essential (and like terms used herein) in previous versions of the ETSI IPR Policy under the ETSI Rules of Procedure has at all material times been the same in all material respects as in the version dated 5 April 2017.
7. The Patents are part of a portfolio of patents and patent applications declared Essential to certain 3GPP standards and technical specifications (the “Conversant Portfolio”).
8. The Patents are and at all material times have been Essential to certain versions and releases (the “Relevant Versions and Releases”) of the standards and technical specifications as set out in Schedule 1.

9. Insofar as any future versions and releases of the standards and technical specifications identified in Schedule 1 are made available in respect of which there is no material difference with those set out in Schedule 1, Conversant will rely at trial on such further releases as being included in the Relevant Versions & Releases.

THE DECLARATIONS MADE IN RESPECT OF THE PATENTS

10. Conversant and/or Nokia have made declarations of Essentiality to ETSI in respect of the Conversant Portfolio including, *inter alia*, in respect of each of the Patents in accordance with clause 4.1 of the ETSI IPR Policy. Upon the acquisition referred to above, Conversant took the patents acquired, including the Patents, subject to all existing encumbrances including the aforesaid declarations made by Nokia.
11. Each of the declarations referred to at paragraph 10 above, includes an IPR Licensing Declaration to the effect that the declarant is prepared to grant irrevocable licences under the declared essential patent(s) or patent application(s) on terms and conditions which are in accordance with clause 6.1 of the ETSI IPR Policy, that is to say, on terms that are fair, reasonable and non-discriminatory (“FRAND”).
12. Further, and in any event, on 22 July 2014, Conversant made a General IPR Licensing Declaration to ETSI in accordance with clause 6.1 of the ETSI IPR Policy to the effect it is prepared to grant irrevocable licences under declared essential patents and patent applications that it owns on terms and conditions that are FRAND.
13. Accordingly, Conversant is and at all material times has been prepared to grant licences under the Conversant Portfolio on FRAND terms in accordance with the said declarations and the ETSI IPR Policy.

HUAWEI AND THEIR ACTS ABOUT WHICH COMPLAINT IS MADE

14. The First Defendant is a Chinese company, with headquarters at Bantian, Loggan District, Shenzhen, 518129, Guangdong, People’s Republic of China. The First Defendant is, amongst other things, a manufacturer and global supplier of mobile devices and mobile telecommunications network infrastructure equipment.
15. The Second Defendant is a limited company incorporated under the laws of England and Wales, with registered company number 04295981 and registered offices at 300

South Oak Way, Green Park, Reading, Berkshire RG2 6UF. The Second Defendant is a wholly owned subsidiary of the First Defendant.

16. The First and Second Defendants (together “Huawei”) have infringed the Patents and continue to do so as set out in the Huawei Particulars of Infringement served herewith.
17. In accordance with its FRAND obligations, Conversant has pursued negotiations with Huawei seeking to license, *inter alia*, the Patents on FRAND terms. The offers to license the Patents made by Conversant to Huawei were offers made in accordance with Conversant’s FRAND obligations and were offers of licenses on FRAND terms, for at least the reasons set out in Conversant’s Confidential Statement of Case on FRAND (Huawei) served herewith.
18. Thus far Conversant has been unsuccessful in its negotiation efforts with Huawei. Huawei have declined to take a license on the FRAND terms offered by Conversant and have not offered to take a license on terms that are FRAND. Conversant intends to continue its negotiating efforts with Huawei.
- 18A Furthermore Huawei is not a willing licensee. In support of the foregoing but without prejudice to the generality of the same Conversant will rely upon the fact that Huawei has not confirmed (or confirmed with any clarity) the following:
 - a. That Huawei is willing to take a licence on FRAND terms;
 - b. That, insofar as there is any dispute as to whether a licence structure or other terms are FRAND, it is not for Huawei to reserve to itself the right to resolve that dispute;
 - c. That Huawei’s willingness to take a licence on FRAND terms is unconditional, both as to the circumstances in which and timing at which they will enter into a licence.

ZTE AND THEIR ACTS ABOUT WHICH COMPLAINT IS MADE

19. The Third Defendant is a Chinese company with registered office address at ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong Province, People’s Republic of China. The Third Defendant is, amongst other things, a manufacturer and global supplier of mobile devices and mobile telecommunications network infrastructure equipment.

20. The Fourth Defendant is a limited company incorporated under the laws of England and Wales, with registered company number 04269408 and registered offices at Part 2nd Floor, Landmark Place, Windsor Road, High Street, Slough SL1 1JL. The Fourth Defendant is a wholly owned subsidiary of the Third Defendant.
21. The Third and Fourth Defendants (together “ZTE”) have infringed the Patents and continue to do so as set out in the ZTE Particulars of Infringement served herewith.
22. In accordance with its FRAND obligations, Conversant has pursued negotiations with ZTE seeking to license, *inter alia*, the Patents on FRAND terms. The offers to license the Patents made by Conversant to ZTE were offers made in accordance with Conversant’s FRAND obligations and were offers of licenses on FRAND terms, for at least the reasons set out in Conversant’s Confidential Statement of Case on FRAND (ZTE) served herewith.
23. Thus far Conversant has been unsuccessful in its negotiation efforts with ZTE. ZTE have declined to take a license on the FRAND terms offered by Conversant and have not offered to take a license on terms that are FRAND. Conversant intends to continue its negotiating efforts with ZTE.
- 23A Furthermore ZTE is not a willing licensee. In support of the foregoing but without prejudice to the generality of the same Conversant will rely upon the fact that ZTE has not confirmed (or confirmed with any clarity) the following:
 - a. That ZTE is willing to take a licence on FRAND terms;
 - b. That, insofar as there is any dispute as to whether a licence structure or other terms are FRAND, it is not for ZTE to reserve to itself the right to resolve that dispute;
 - c. That ZTE’s willingness to take a licence on FRAND terms is unconditional, both as to the circumstances in which and timing at which they will enter into a licence.

THE RELIEF SOUGHT

24. By reason of the matters complained of, Conversant has suffered loss and damage. The Defendants and each of them threaten and intend to continue to infringe the Patents in the manner set out in the Huawei Particulars of Infringement and ZTE Particulars of Infringement whereby Conversant will suffer further loss and damage.

25. Conversant seeks that Huawei and ZTE enter into licences that are FRAND, and pay the royalties that would have been due under such a licence for their respective periods of unlicensed activity. Accordingly, Conversant seeks a declaration that it has made the Defendants, and each of them, offers in accordance with its FRAND obligations and on FRAND terms, or in the alternative, being as there is an extant, clearly defined and commercially real dispute between the parties as to what the FRAND terms for licencing the Patents are, a determination of the FRAND terms for the licensing of the Patents to Huawei and / or ZTE and a declaration that such terms are FRAND.
26. Failing Huawei and / or ZTE taking a licence to the Patents on terms determined to be FRAND, Conversant will seek relief in respect of the acts of infringement about which complaint is made. Conversant is not at present able to give particulars of all of Huawei and ZTE's acts of infringement but will seek relief in respect of any such acts if Huawei and / or ZTE do not take a licence to the Patents on terms determined to be FRAND. In respect of acts complained of that were carried out after publication of the application for the '177 Patent and '659 Patent and before grant of those patents, Conversant will seek relief pursuant to section 69 of the Patents Act 1977 on the basis that the acts would have infringed not only each of those patents but also, had they been granted on the date of the publication of the applications for them, the applications for them as published.
27. Furthermore and / or in the alternative, insofar as Huawei and / or ZTE are not willing licensees in respect of the Patents and each of them and / or fails to take a licence to the Patents on terms determined to be FRAND, Conversant seeks a FRAND injunction (as defined by Mr Justice Birss in *Unwired Planet v Huawei* [2017] EWHC 1304 at [20]). Such an injunction will cease to have effect if the Defendants enter into a licence on FRAND terms which covers the said Patents.

AND THE CLAIMANT CLAIMS:

- (1) A declaration that the Huawei Offers and the ZTE Offers (as those terms are defined in the Huawei and ZTE FRAND Statements of Case respectively) and / or each of them were made in accordance with Conversant's FRAND obligations and were themselves FRAND, or in the alternative a determination of the FRAND terms for the licensing of the Patents to Huawei and / or ZTE and a declaration that such terms are FRAND.

- (2) A declaration that Huawei and ZTE, and each of them, have failed to comply with their FRAND obligations.
- (3) A declaration that the Patents and each of them is Essential.
- (4) A declaration that the Patents and each of them have been or will be infringed by the Defendants' actual or intended unlicensed actions.
- (4A) An injunction to restrain the Defendants and each of them, either by themselves or through their agents, affiliates, through third parties or howsoever otherwise, from infringing the Patents and each of them, the said injunction to be lifted if and insofar as the Defendants or any of them enter into a licence for the Patents on terms held to be FRAND. Further the said injunction is subject to a liberty to apply in the event that any FRAND licence that is entered into ceases to have effect for any reason.
- (5) An inquiry as to damages for patent infringement (including damages in accordance with the IP (enforcement etc.) Regulations 2006) or at the Claimant's option an account of profits made by the Defendants and each of them by their unlicensed actions.
- (6) An order that the Defendants pay the Claimant all sums found due together with interest pursuant to section 35A of the Senior Courts Act 1981 or pursuant to the Court's equitable jurisdiction for such period and at such rate as the Court thinks is fit.
- (7) An order for appropriate measures for the dissemination and publication of the judgment to be taken at the expense of the Defendants and each of them.
- (8) Further or other relief.
- (9) Costs.

ADRIAN SPECK QC
THOMAS JONES
EIP LEGAL
24 July 2017

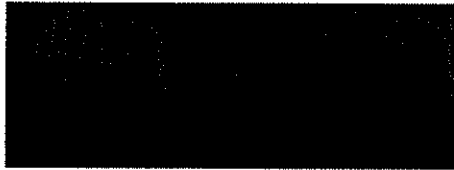
ADRIAN SPECK QC
ISABEL JAMAL
THOMAS JONES
EIP LEGAL

17 January 2018

STATEMENT OF TRUTH

The Claimant believes that the facts stated in these Particulars of Claim are true. I am duly authorised by the Claimant to sign this statement.

Signed:



Name: Gary Moss

Position: Partner at EIP Europe LLP (Solicitors for the Claimant)

Dated: 24 July 2017

SERVED this day of July 2017 by EIP Europe LLP of Fairfax House, 15 Fulwood Place, London, WC1V 6HU. Solicitors for the Claimant.

STATEMENT OF TRUTH

The Claimant believes that the facts stated in these Amended Particulars of Claim are true. I am duly authorised by the Claimant to sign this statement.

Signed:



Name: Gary Moss

Position: Partner at EIP Europe LLP (Solicitors for the Claimant)

Dated: 15 June 2018

SERVED this day of 2018 by EIP Europe LLP of Fairfax House, 15 Fulwood Place, London, WC1V 6HU. Solicitors for the Claimant.

Schedule 1 to the Particulars of Claim

Patent alleged to be infringed	Standard(s) to which the patent is Essential	Technical Specification(s) to which the patent is Essential	Relevant Versions & Releases to which the patent is Essential	Products alleged to infringe
'177	LTE	3GPP TS 36.321	All versions of Releases 8, 9, 10, 11, 12, 13, 14 made available on or after 22 December 2008.	Huawei 4G Mobile Devices ZTE 4G Mobile Devices
		3GPP TS 36.213		
		3GPP TS 36.331		
'210	LTE	3GPP TS 36.331	All versions of Releases 8, 9, 10, 11, 12, 13, 14 made available on or after 23 March 2009.	Huawei 4G Mobile Devices ZTE 4G Mobile Devices
		3GPP TS 36.304		
'210	UMTS	3GPP TS 25.331	All versions of Releases 1999, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 made available on or after 16 October 2000.	Huawei 3G Mobile Devices ZTE 3G Mobile Devices
		3GPP TS 25.304		
'210	GSM	3GPP TS 44.018	All versions of Releases 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 made available on or after 10 October 2000.	Huawei 2G Mobile Devices ZTE 2G Mobile Devices
		3GPP TS 45.008		
'192	LTE	3GPP TS 36.300	All versions of Releases 8, 9, 10, 11, 12, 13, 14 made available on or after 17 June 2008	Huawei 4G Mobile Devices ZTE 4G Mobile Devices
		3GPP TS 36.321		
		3GPP TS 36.213		
'659	UMTS	3GPP TS 25.321	All versions of Releases 7, 8, 9, 10, 11, 12, 13, 14 made available on or after 28 March 2007	Huawei 3G Mobile Devices ZTE 3G Mobile Devices
		3GPP TS 25.308		
		3GPP TS 25.331	All versions of Releases 7, 8, 9, 10, 11, 12, 13, 14 made available on or after 9 April 2007	

Unconditional claim set Annex A

Claim (granted)	Claim (amended)	PCT
1,5,9,13	1, 7, 13,18	Page 2 lines 3-13 Page 17 lines 11-18
2, 6, 10, 14	4, 10, 15, 21	Page 10 lines 26-27 (granted claim 4)
3, 4, 7, 8, 11, 12, 15, 16	deleted	
	2, 8, 19	Page 10 lines 8-10 and Figure 5 (steps 50, 52, 54) Page 12 lines 29-31 Page 10 lines 18, 19 (step 60) Page 17 lines 11-18
	3, 9, 14, 20	Page 17 lines 11-13
	5, 11, 16, 22	Page 11 lines 1-2 Page 14 lines 8-17
	6, 12, 17, 23	Page 3 lines 14-17
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 10 lines 26-27 (granted claim 4)
	25, 29, 36	Page 11 lines 9-11 and 17-20
	26, 30, 33, 37	Page 11 lines 15-17
	27, 31, 34, 38	Page 11 lines 1-2 Page 14 lines 8-17

Conditional claim set Annex B

Claim (granted)	Claim (amended)	PCT
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 17 lines 11-18

Claim no. HP-2017-000048

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
INTELLECTUAL PROPERTY LIST (ChD)
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(2) HUAWEI TECHNOLOGIES (UK) CO., LIMITED

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

(4) ZTE (UK) LIMITED

Defendants

ANNEX A
TO THE STATEMENT OF GROUNDS

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, wherein the first control information comprises transmission parameters, the transmission parameters comprising at least one of a modulation and coding scheme used on the shared data channel; and

———radio resources used on the data channel;

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; characterized by

for at least one subsequent transmission on the shared data channel, 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.

2. The method of claim 1, wherein the method comprises, at the mobile station:

determining, using a mask for the mobile station, that the control information signalled for said at least one subsequent transmission matches the mobile station;

decoding said at least one subsequent transmission using the control information signalled for said at least one subsequent transmission; and

in response to the indicating, when the indicating indicates to the mobile station that the transmission parameters of the control information signalled for said at least one subsequent transmission should be stored, storing the transmission parameter values of the control information signalled for said at least one subsequent transmission.

3. The method of claims 1 or 2, wherein:

the indicating indicates to the mobile station that the transmission parameters of the control information signalled for said at least one subsequent transmission should be stored if said at least one subsequent transmission is a first transmission of a data packet; and

the indicating indicates to the mobile station that the transmission parameters of the control information signalled for said at least one subsequent transmission should not be stored if said at least one subsequent transmission is a retransmission of a data packet.

24. The method of any preceding claim 4, further comprising:

signalling second control information, the second control information for defining a periodicity of transmissions of data packets 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.

5. The method of claim 4, wherein the second control information comprises a periodicity parameter (T), said periodicity parameter indicating a 20ms time period.

6. The method of any preceding claim, wherein the first data packet and said at least one subsequent transmission are VoIP data packets.

~~3. The method of Claim 1, where the first control information is carried on a control channel associated with the data channel.~~

~~4. The method of any of claims 1-3, where the signaling of second control information is based on Radio-Resource-Control.~~

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, wherein the first control information comprises transmission parameters, the transmission parameters comprising at least one of: a modulation and coding scheme used on at the shared data channel; and

~~radio resources used on the data channel;~~

receiving a first data packet on the shared data channel using the transmission parameters of the first control information; characterized by

for at least one subsequent reception on the shared data channel, 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, wherein the first control information comprises transmission parameters, the transmission parameters comprising at least one of: a modulation and coding scheme used on the shared data channel; and

radio resources used on the data channel;

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;

characterized by being configured to:

for at least one subsequent transmission on the shared data channel, 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.

14. The network element of claim 13, wherein:

the indicating indicates to the mobile station that the transmission parameters of the control information signalled for said at least one subsequent transmission should be stored if said at least one subsequent transmission is a first transmission of a data packet; and

the indicating indicates to the mobile station that the transmission parameters of the control information signalled for said at least one subsequent transmission should not be stored if said at least one subsequent transmission is a retransmission of a data packet.

1015. The network element (Node B, 10) of Claims 913 or 14, further configured to:

signal second control information, the second control information for defining a periodicity of transmissions of data packets 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 layer.

16. The network element of claim 15, wherein the second control information comprises a periodicity parameter (T), said periodicity parameter indicating a 20ms time period.

17. The network element of any of claims 13 to 16, wherein the first data packet and said at least one subsequent transmission are VoIP data packets.

11. The network element (Node B, 10) of Claim 9, wherein the first control information is carried on a control channel associated with the data channel.

12. ~~The network element (Node B, 10) of any of Claims 9-11, where the signaling of second control information receiving second control information, is based on Radio Resource Control.~~

4318. 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, wherein the first control information comprises transmission parameters, the transmission parameters comprising at least one of: a modulation and coding scheme used on the shared data channel, and~~

~~radio resources used on the data channel;~~

~~receive a first data packet on the shared data channel using the transmission parameters of the first control information; characterized by being configured to~~

~~for at least one subsequent reception on the shared data channel, 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.~~

19. The mobile station of claim 18, wherein the mobile station is further configured to:

determine, using a mask for the mobile station, that the control information received for said at least one subsequent reception matches the mobile station;

decode said at least one subsequent reception using the control information received for said at least one subsequent reception; and

in response to the indication, when the indication indicates to the mobile station that the transmission parameters of the control information received for said at least one subsequent reception should be stored, store the transmission parameter values of the control information received for said at least one subsequent reception.

20. The mobile station of claims 18 or 19, wherein:

the indication indicates to the mobile station that the transmission parameters of the control information received for said at least one subsequent reception should be stored if said at least one subsequent reception is a first transmission of a data packet; and

the indication indicates to the mobile station that the transmission parameters of the control information received for said at least one subsequent reception should not be stored if said at least one subsequent reception is a retransmission of a data packet.

1421. The mobile station (UE1, 10) of any of Claims 18 to 20-13, further configured to:
receive second control information, the second control information for defining a periodicity of transmissions of data packets 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.

22. The mobile station of claim 21, wherein the second control information comprises a periodicity parameter (T), said periodicity parameter indicating a 20ms time period.

23. The mobile station of any of claims 18 to 22, wherein the first data packet and said at least one subsequent reception are VoIP data packets.

~~15. The mobile station (UE1, 10) Claim 13, wherein the first control information is carried on a control channel associated with the data channel.~~

~~16. The mobile station (UE1, 10) of any of Claims 13-15, wherein the signaling of second control information is based on Radio Resource Control.~~

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 the shared data channel; and

~~radio resources used on the data channel;~~

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.

25. The method of claim 24, comprising, at the mobile station:
for said at least one subsequent transmission, only storing for future use transmission parameter values of control information signalled on the shared control channel for the HARQ process ID signalled at the radio resource control layer.

26. The method of claims 24 or 25, wherein the HARQ process ID signalled at the radio resource control layer is always used for a fixed allocation of VoIP data packets.

27. The method of any of claims 24 to 26, wherein the second control information comprises a periodicity parameter (T), said periodicity parameter indicating a 20ms time period defining the periodicity of transmissions of data packets in 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 the shared data channel; and

radio resources used on the data channel;

-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.

29. The method of claim 28, further comprising:
for said at least one subsequent reception, only storing for future use transmission parameter values of control information received on the shared control channel for the HARQ process ID received at the radio resource control layer.

30. The method of claims 28 or 29, wherein the HARQ process ID received at the radio resource control layer is always used for a fixed allocation of VoIP data packets.

31. The method of any of claims 28 to 30, wherein the second control information comprises a periodicity parameter (T), said periodicity parameter indicating a 20ms time period defining the periodicity of transmissions of data packets in 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 the shared data channel, and

~~radio resources used on the data channel;~~

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.

33. The network element of claim 32, wherein the HARQ process ID signalled at the radio resource control layer is always used for a fixed allocation of VoIP data packets.

34. The network element of claims 32 or 33, wherein the second control information comprises a periodicity parameter (T), said periodicity parameter indicating a 20ms time period defining the periodicity of transmissions of data packets in 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 the shared data channel; and

radio-resources used on the data channel;

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.

36. The mobile station of claim 35, wherein the mobile station is further configured to:

for said at least one subsequent reception, only store for future use transmission parameter values of control information received on the shared control channel for the HARQ process ID received at the radio resource control layer.

37. The mobile station of claims 35 or 36, wherein the HARQ process ID received at the radio resource control layer is always used for a fixed allocation of VoIP data packets.

38. The mobile station of any of claims 35 to 37, wherein the second control information comprises a periodicity parameter (T), said periodicity parameter indicating a 20ms time period defining the periodicity of transmissions of data packets in the fixed allocation.

Claim no. HP-2017-000048

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

B E T W E E N:

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

Claimant

- and -

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

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

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

(4) ZTE (UK) LIMITED

Defendants

ANNEX B
TO THE STATEMENT OF GROUNDS

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 the shared data channel; and

~~radio resources used on the data channel;~~

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 the shared data channel; and

~~radio resources used on the data channel;~~

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 the shared a data channel; and

~~radio resources used on the data channel;~~

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.

4318. 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 the shared a data channel; and

~~radio resources used on the data channel;~~

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.