



(11) **EP 3 499 785 A8**

(12) **CORRECTED EUROPEAN PATENT APPLICATION**

(15) Correction information:
Corrected version no 1 (W1 A1)
Corrections, see
Bibliography INID code(s) 72

(51) Int Cl.:
H04L 5/14 ^(2006.01) **H04L 5/00** ^(2006.01)

(48) Corrigendum issued on:
15.07.2020 Bulletin 2020/29

(43) Date of publication:
19.06.2019 Bulletin 2019/25

(21) Application number: **18210345.7**

(22) Date of filing: **12.05.2017**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD

(30) Priority: **13.05.2016 US 201615154212**

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
17727742.3 / 3 443 704

(71) Applicant: **Telefonaktiebolaget LM Ericsson**
(PUBL)
164 83 Stockholm (SE)

(72) Inventors:

- **El Essaili, Ali**
52072 Aachen (DE)
- **Khayrallah, Ali S.**
Mountain View, CA 94040 (US)
- **Zaidi, Ali**
602 19 Norrköping (SE)
- **Carlsson, Anders**
222 40 Lund (SE)
- **Furuskär, Anders**
113 46 Stockholm (SE)
- **Stjernman, Anders**
437 41 Lindome (SE)
- **Bergström, Andreas**
584 31 Linköping (SE)
- **Cedergren, Andreas**
237 36 Bjärred (SE)
- **Reial, Andres**
211 17 Malmö (SE)

- **Gattami, Ather**
112 19 Stockholm (SE)
- **Lindoff, Bengt**
237 35 Bjärred (SE)
- **Olsson, Bengt-Erik**
Mountain Lakes, NJ 07046 (US)
- **Hagerman, Bo**
Morristown, NJ 07960 (US)
- **Capar, Cagatay**
01170 Cukurova/Adana (TR)
- **Kilinc, Caner**
974 55 Luleå (SE)
- **Larsson, Christina**
431 59 Mölndal (SE)
- **Tidestav, Claes**
746 31 Bålsta (SE)
- **Shi, Cong**
Beijing 100102 (CN)
- **Hui, Dennis**
Sunnyvale, CA 94087 (US)
- **Sundman, Dennis**
169 36 Solna (SE)
- **Kang, Du Ho**
194 66 Upplands Väsby (SE)
- **Ramos, Edgar**
02400 Kirkkonummi (SE)
- **Karipidis, Eleftherios**
113 30 Stockholm (SE)
- **Myhre, Elena**
177 70 Järfälla (SE)
- **Semaan, Eliane**
174 66 Sundbyberg (SE)
- **Ringh, Emil**
169 57 Solna (SE)
- **Wittenmark, Emma**
222 40 Lund (SE)
- **Dahlman, Erik**
112 23 Stockholm (SE)

EP 3 499 785 A8

- Eriksson, Erik
585 93 Linköping (SE)
- Athley, Fredrik
429 30 Kullavik (SE)
- Gunnarsson, Fredrik
587 50 Linköping (SE)
- Harrysson, Fredrik
416 78 Göteborg (SE)
- Lindqvist, Fredrik
175 66 Järfälla (SE)
- Fodor, Gabor
165 52 Hässelby (SE)
- Li, Gen
Beijing 100102 (CN)
- Klang, Göran N.
122 32 Enskede (SE)
- Bark, Gunnar
586 65 Linköping (SE)
- Mildh, Gunnar
192 55 Sollentuna (SE)
- Wang, Hai
Ottawa, ON K2K 2V6 (CA)
- Axelsson, Håkan
582 46 Linköping (SE)
- Björkegren, Håkan
187 46 Täby (SE)
- Asplund, Henrik
117 34 Stockholm (SE)
- Sahlin, Henrik
435 41 Mölnlycke (SE)
- Tullberg, Hugo
611 37 Nyköping (SE)
- da Silva Icaro, L. J.
170 77 Solna (SE)
- Aktas, Ismet
41468 Neuss (DE)
- Maric, Ivana
Stanford, CA 94305 (US)
- Berg, Jan-Erik
191 40 Sollentuna (SE)
- Peisa, Janne
02130 Espoo (FI)
- Vikberg, Jari
153 38 Järna (SE)
- Wang, Jianfeng
Beijing 100102 (CN)
- Liu, Jinhua
Beijing 100102 (CN)
- Sachs, Joachim
191 34 Sollentuna (SE)
- Axmon, Joakim
216 31 Limhamn (SE)
- Huschke, Jörg
52074 Aachen (DE)
- Axnäs, Johan
171 62 Solna (SE)
- Furuskog, Johan
111 23 Stockholm (SE)
- Rune, Johan
181 29 Lidingö (SE)
- Sköld, Johan
169 72 Solna (SE)
- Torsner, Johan
02400 Kyrkslätt (FI)
- Fridén, Jonas
431 69 Mölndal (SE)
- Fröberg Olsson, Jonas
590 74 Ljungsbros (SE)
- Kronander, Jonas
741 42 Knivsta (SE)
- Medbo, Jonas
753 28 Uppsala (SE)
- Pradas Jose, Luis
118 27 Stockholm (SE)
- Ansari, Junaid
90768 Fürth (DE)
- Norrman, Karl
116 28 Stockholm (SE)
- Werner, Karl
141 72 Segeltorp (SE)
- Wang Helmersson, Ke
587 25 Linköping (SE)
- Hiltunen, Kimmo
02750 Esbo (FI)
- Balachandran, Kumar
Pleasanton, CA 94566 (US)
- Lindbom, Lars
654 62 Karlstad (SE)
- Manholm, Lars
417 57 Göteborg (SE)
- Sundström, Lars
247 91 Södra Sandby (SE)
- Stattin, Magnus
194 44 Upplands Väsby (SE)
- Ericson, Mårten
974 44 Luleå (SE)
- Hessler, Martin
587 58 Linköping (SE)
- Johansson, Martin
431 68 Mölndal (SE)
- Coldrey, Mikael
504 58 Borås (SE)
- Fallgren, Mikael
164 44 Kista (SE)
- Prytz, Mikael
144 63 Rönningen (SE)
- Tercero Vargas, Miurel Isabel
191 33 Sollentuna (SE)
- Brahmi, Nadia
31139 Hildesheim (DE)
- Wiberg, Niclas
585 97 Linköping (SE)
- Jaldén, Niklas
749 42 Enköping (SE)
- Johansson, Niklas
753 29 Uppsala (SE)
- Seifi, Nima
170 62 Solna (SE)
- He, Ning
191 34 Sollentuna (SE)

- Queseth, Olav
170 69 Solna (SE)
- Osman Nuri Can, Yilmaz
02280 Espoo (FI)
- Frenger, Pål
583 34 Linköping (SE)
- Karlsson, Patrik
191 33 Sollentuna (SE)
- Rugeland, Patrik
117 58 Stockholm (SE)
- Alriksson, Peter
242 31 Hörby (SE)
- von Wrycza, Peter
114 56 Stockholm (SE)
- Wallentin, Pontus
582 39 Linköping (SE)
- Ramachandra, Pradeepa
583 32 Linköping (SE)
- Lu, Qianxi
Beijing 100102 (CN)
- Miao, Qingyu
Beijing 100102 (CN)
- Moosavi, Reza
583 33 Linköping (SE)
- Abrahamsson, Richard
741 45 Knivsta (SE)
- Baldemair, Robert
170 69 Solna (SE)
- Lindgren, Robert
426 56 Västra Frölunda (SE)
- Fan, Rui
Beijing 100102 (CN)
- Sharma, Sachin
141 52 Huddinge (SE)
- Landström, Sara
974 34 Lulea (SE)
- Ashraf Shehzad, Ali
52064 Aachen (SE)
- Tombaz, Sibel
171 52 Stockholm (SE)
- Järmyr, Simon
128 34 Skarpnäck (SE)
- Hong, Songnam
Yongin-si 16943 (KR)
- Parkvall, Stefan
167 57 Bromma (SE)
- Wager, Stefan
02360 Espoo (FI)
- Jacobsson, Sven
413 07 Göteborg (SE)

- Petersson, Sven
433 69 Sävedalen (SE)
- Rimhagen, Thomas
583 37 Linköping (SE)
- Waldeen, Thomas
587 31 Linköping (SE)
- Lohmar, Thorsten
52072 Aachen (DE)
- Irnich, Tim
41462 Neuss (DE)
- Palenius, Torgny
246 57 Barsebäck (SE)
- Gustavsson, Ulf
413 13 Göteborg (SE)
- Engström, Ulrika
448 35 Floda (SE)
- Saxena, Vidit
177 34 Järfälla (SE)
- Garcia, Virgile
06600 Antibes (FR)
- Müller, Walter
194 62 Upplands Väsby (SE)
- Zheng, Yanli
Beijing 100102 (CN)
- Wang, Yi-Pin Eric
Fremont, CA 94539 (US)
- Selén, Yngve
754 34 Uppsala (SE)
- Zhang, Zhan
Beijing 100102 (CN)
- Zhang, Zhang
Beijing 100102 (CN)
- Jiang, Zhiyuan
Beijing 100102 (CN)

(74) Representative: Ericsson
Patent Development
Torshamnsgatan 21-23
164 80 Stockholm (SE)

Remarks:

This application was filed on 05-12-2018 as a divisional application to the application mentioned under INID code 62.

(54) **NETWORK ARCHITECTURE, METHODS, AND DEVICES FOR A WIRELESS COMMUNICATIONS NETWORK**

(57) A fifth-generation wireless communications network includes a server node, radio network equipment and a wireless device. In an example method, a server node receives first user data in response to (i) the wireless device receiving from the radio network equipment information indicating a plurality of uplink access configurations,

each uplink access configuration including a random access configuration; (ii) the wireless device receiving an uplink access configuration index; (iii) the wireless device using the uplink access configuration index to identify an uplink access configuration from among the

indicated plurality of uplink access configurations, and (iv) the wireless device transmitting the first user data to the wireless communications network according to the identified uplink access configuration. In the example method, further, the server node initiates transmission of second and third user data. This causes the wireless device to (v) receive from the radio network equipment, in a first downlink subframe, a first OFDM transmission formatted according to a first numerology and carrying the second user data, and (vi) receive from the radio network equipment, in a second downlink subframe, a second OFDM transmission formatted according to a second numerology and carrying the third user data, wherein the numerologies have different subcarrier spacings.

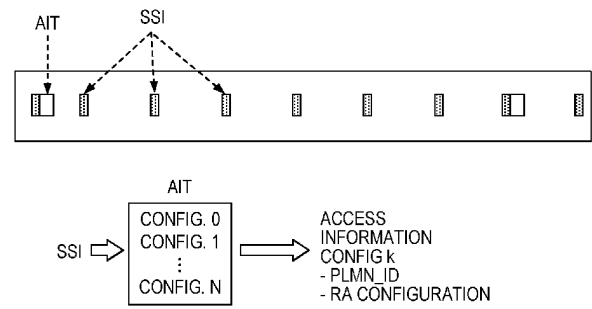


FIG. 78