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**Datasheet for the decision
of 23 January 2026**

Case Number: T 0986/25 - 3.5.05

Application Number: 20895049.3

Publication Number: 4088543

IPC: H04W76/10

Language of the proceedings: EN

Title of invention:

Methods and systems for multicast and broadcast service establishment in wireless communication networks

Applicant:

ZTE Corporation

Headword:

Multicast broadcast messaging service/ZTE

Relevant legal provisions:

EPC Art. 123(2)

RPBA 2020 Art. 12(4), 13(2)

Keywords:

Added subject-matter - main and 2nd auxiliary request (yes)
Admittance of claim requests filed on appeal - 1st and 3rd
auxiliary requests (no): admittance would lead to increased
complexity + *prima facie* not allowable under Art. 123(2) EPC
Admittance of claim requests filed after Art. 15(1) RPBA
communication - 4th and 5th auxiliary requests (no): at least
not *prima facie* allowable under Art. 123(2) EPC



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Case Number: T 0986/25 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 23 January 2026

Appellant:
(Applicant)

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted on 11 March 2025
refusing European patent application
No. 20895049.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair K. Bengi-Akyürek
Members: K. Schenkel
C. Heath

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division to refuse the present European patent application on the ground that the then main request did not comply with Articles 56 and 123(2) EPC and that the then auxiliary request did not comply with Article 123(2) EPC.
- II. With its statement setting out the grounds of appeal, the appellant requested that the appealed decision be set aside and that a patent be granted on the basis of a main request or one of auxiliary requests 1 to 3. The main request and auxiliary request 2 corresponds to the main request and the auxiliary request underlying the appealed decision respectively.
- III. In a communication under Article 15(1) RPBA, the board expressed its preliminary view that all claim requests on file did not comply with Articles 56 and 123(2) EPC and that it was minded not to admit auxiliary requests 1 and 3 into the proceedings.
- IV. In its letter of reply, the appellant filed two further auxiliary requests, i.e. auxiliary requests IV and V, and comments as to auxiliary request 2 and the two newly filed auxiliary requests.
- V. Oral proceedings were held before the board on 23 January 2026.

The appellant finally requested that the decision under appeal be set aside and that a patent be granted on the basis of the **main request**, or one of **auxiliary requests 1 to 3**, all filed or re-filed with the

statement of grounds of appeal, or one of **auxiliary requests IV and V** filed with letter dated 5 January 2026.

At the end of the oral proceedings, the board's decision was announced.

VI. Claim 1 of the **main request** reads as follows (board's labelling):

- (a) "A data communication method, comprising:
- (b) determining, by a core network, whether to set up one or more data traffic flows for a mobile device;
- (c) transmitting, upon determination to set up the one or more data traffic flows, to a radio access network, flow establishment configuration information including a unicast flow identifier, a corresponding unicast tunnel, and a corresponding quality of service, QoS, profile, wherein the unicast flow identifier includes a quality of service, QoS, flow identifier; and
- (d) adding, upon determination that the flow establishment configuration information does not further include a multicast broadcast service, MBS, flow identifier, a corresponding multicast shared tunnel[,] and a corresponding multicast quality of service, QoS, profile, the QoS flow identifier to user data of the data traffic flow, and transmitting, by the core network, the data traffic flows with the QoS flow identifier to the radio access network through the unicast tunnel corresponding to the QoS flow identifier; or
- (e) adding, upon determination that the flow establishment configuration information further includes the multicast broadcast service, MBS, flow identifier, the corresponding multicast shared

tunnel[,] and the corresponding multicast quality of service, QoS, profile, the MBS identifier to the user data of the data traffic flows, and transmitting, by the core network, the data traffic flows with the MBS identifier to the radio access network through the multicast shared tunnel,

(f) wherein, in a case that only the unicast tunnel is available, the user data is transmitted through the unicast tunnel, and in a case that both the unicast tunnel and the multicast shared tunnel are available, the user data is transmitted only through the multicast shared tunnel."

VII. Claim 1 of **auxiliary request 1** differs from claim 1 of the main request in that features (c) to (f) now read as follows (board's labelling and underlining of added text):

(c') "transmitting, upon determination to set up the one or more data traffic flows, to a radio access network, flow establishment configuration information including a unicast flow identifier, a corresponding unicast tunnel[,], and a corresponding quality of service, QoS, profile, wherein the unicast flow identifier is a quality of service, QoS, flow identifier; and

(d') adding, upon determination that the flow establishment configuration information does not further include a multicast broadcast service, MBS, flow identifier, a corresponding multicast shared tunnel[,], and a corresponding multicast quality of service, QoS, profile, a first identifier to user data of the data traffic flow, and transmitting, by the core network, the data traffic flows with the first identifier to the radio access network through the corresponding

- unicast tunnel, wherein the first identifier includes a quality of service, QoS, flow identity, QFI; or
- (e') adding, upon determination that the flow establishment configuration information further includes the multicast broadcast service, MBS, flow identifier, the corresponding multicast shared tunnel, and the corresponding multicast quality of service, QoS, profile, a second identifier to the user data of the data traffic flows, and transmitting, by the core network, the data traffic flows with the MBS identifier to the radio access network through the corresponding multicast shared tunnel, wherein the second identifier includes a multicast broadcast service, MBS, identity,
- (f') wherein the user data of the data traffic flow is multicast broadcast service, MBS, user data, and
wherein, in a case that only the unicast tunnel is available, the MBS user data is transmitted through the unicast tunnel, and in a case that both the unicast tunnel and the multicast shared tunnel are available, the MBS user data is transmitted only through the multicast shared tunnel, and the unicast tunnel is maintained as a dummy tunnel."

VIII. Claim 1 of **auxiliary request 2** differs from claim 1 of auxiliary request 1 in that features (d'), (e') and (f') now read as follows (board's labelling):

- (d'') "adding, upon determination that the flow establishment configuration information does not further include a multicast broadcast service, MBS, flow identifier, a corresponding

multicast shared tunnel[,] and a corresponding multicast quality of service, QoS, profile, a first identifier including the QoS flow identifier to user data of the data traffic flow, and transmitting, by the core network, the data traffic flows with the QoS flow identifier to the radio access network through the unicast tunnel corresponding to the QoS flow identifier; or

(e'') adding, upon determination that the flow establishment configuration information further includes the multicast broadcast service, MBS, flow identifier, the corresponding multicast shared tunnel[,] and the corresponding multicast quality of service, QoS, profile, a second identifier including the MBS identifier to the user data of the data traffic flows, and transmitting, by the core network, the data traffic flows with the MBS identifier to the radio access network through the multicast shared tunnel,

(f'') wherein, in a case that only the unicast tunnel is available, the user data is transmitted through the unicast tunnel, and in a case that both the unicast tunnel and the multicast shared tunnel are available, the user data is transmitted only through the multicast shared tunnel, and wherein the data traffic flow is a multicast flow, and the user data of the data traffic flow is MBS user data."

IX. Claim 1 of **auxiliary request 3** differs from claim 1 of auxiliary request 2 in that feature (f'') now reads as follows (board's labelling and underlining of added text):

(f''') "wherein, in a case that only the unicast tunnel is available, the user data is transmitted through the unicast tunnel, and in a case that both the unicast tunnel and the multicast shared tunnel are available, the user data is transmitted only through the multicast shared tunnel, and the unicast tunnel is maintained as a dummy tunnel and wherein the data traffic flow is a multicast flow, and the user data of the data traffic flow is MBS user data".

X. Claim 1 of **auxiliary request IV** differs from claim 1 of the main request in that feature (c) has been replaced by feature (c') and feature (d) now reads as follows (board's labelling):

(d''') "adding, upon determination that the flow establishment configuration information does not further include a multicast broadcast service, MBS, flow identifier, a corresponding multicast shared tunnel, and a corresponding multicast quality of service, QoS, profile, a first identifier to user data of the data traffic flow, and transmitting, by the core network, the data traffic flows with the first identifier to the radio access network through the corresponding unicast tunnel , wherein the first identifier is a quality of service (QoS) flow identifier (QFI); or".

XI. Claim 1 of **auxiliary request V** differs from claim 1 of auxiliary request IV in that features (e) and (f) now read as follows (board's labelling):

(e''') adding, upon determination that the flow establishment configuration information further

includes the multicast broadcast service, MBS, flow identifier, the corresponding multicast shared tunnel, and the corresponding multicast quality of service, QoS, profile, a second identifier to the user data of the data traffic flows, and transmitting, by the core network, the data traffic flows with the MBS identifier to the radio access network through the corresponding multicast shared tunnel, wherein the second identifier is a multicast broadcast service, MBS, identity,

(f''') wherein the user data of the data traffic is multicast broadcast service (MBS) user data, and wherein in a case that only the unicast tunnel is available, the user data is transmitted through the unicast tunnel, and in a case that both the unicast tunnel and the multicast shared tunnel are available, the MBS user data is transmitted only through the multicast shared tunnel, and the unicast tunnel is a dummy tunnel through which no data is transmitted."

Reasons for the Decision

1. Background of the invention

The present invention relates to the field of mobile communications and in particular to the set-up of unicast and multicast/broadcast data traffic flows.

2. As to **features (d) and (e)** and their respective variations in auxiliary requests 1, 2, 3, IV and V, the board notes that the comma at the end of the wording "*corresponding multicast shared tunnel,*" is disregarded since the following word "and" suggests an enumeration

with its last element following that "and", as it was the case in claim 1 as originally filed.

3. Main request - added matter (Article 123(2) EPC)

3.1 According to **features (d) and (e)**, the inclusion of the following three elements within the "*flow establishment configuration information*" is determined:

- (i) a "MBS flow identifier",
- (ii) a "corresponding multicast shared tunnel"
- (iii) a "corresponding QoS profile".

Claim 1 as originally filed, however, only includes determining whether elements (i) and (iii) are included. The only basis for checking all three elements (i) to (iii) is the paragraph bridging pages 10 and 11 of the present description as filed.

3.2 The paragraph of pages 10 and 11 as filed includes the wording "*unicast flow identifier (e.g., QFI)*", where "QFI" corresponds to "QoS flow identifier" according to the original description (see, for example, page 8, second paragraph "[...] *QFI (QoS flow identifier) [...]*"). This wording ("*e.g., QFI*") equates the "*unicast flow identifier*" with the "*QFI (QoS flow identifier)*" which is however different from only "*including*" the QFI since the latter does not exclude further elements. Hence, there is no basis for the wording "*wherein the unicast flow identifier includes a quality of service, QoS, flow identifier*" according to **feature (c)**, as also found by the examining division in its decision.

3.3 Furthermore, claim 1 states in **feature (d)** that, in the event that the "*flow establishment configuration*

information" does not include the three elements (i) to (iii), "the QoS flow identifier" (emphasis added by the board) is added to the user data of the data traffic flow. Yet, the only "QoS flow identifier" mentioned in claim 1 hitherto and to which "the QoS flow identifier" could refer is the "QoS flow identifier" mentioned in feature (c). There is however no basis, in the application as originally filed, that the same identifier which was already included in the "*flow establishment configuration information*" is added to "user data". Instead, throughout the original application, it is always a *different* identifier, namely a "first identifier", which is added.

- 3.4 The appellant argued that page 11 of the description as filed provided a basis for the "*flow establishment configuration information*" including a "unicast flow identifier" and that the "QFI" was presented as a *specific* illustrative example of the *generic* term "unicast flow identifier" (referring to page 11, first paragraph: "*unicast flow identifier (e.g., QFI)*").

The board is not convinced. The above findings as to the disclosure on page 11 as filed are not contested. However, feature (c) does not only state that the "*flow establishment configuration information*" includes a "unicast flow identifier" or "QFI" respectively, but that the "unicast flow identifier" includes a "QFI" thus leaving room for further elements.

- 3.5 The appellant, in support of the above argument, also referred to claim 8 as originally filed and argued that the "QFI" was an "always-configured" element for unicast transmission reinforcing its role as or part of the "unicast flow identifier".

The board is not convinced by this, either. Firstly, claim 1 of the main request does not refer to a "first identifier" and, secondly, claim 8 as filed only refers to a "QoS flow identity", not to an "identifier".

- 3.6 It was further brought forward that, according to a skilled person's understanding, the term "e.g." provided an example which was not necessarily exclusive. The third paragraph on page 8 would also show the *inclusion* rather than the *equation* of a "QFI element".

The board however notes, that the paragraph referred to only discloses that the unicast tunnel and QFI are "always configured" but does not make any statement as to the relationship between a "unicast flow identifier" and a "QoS flow identifier".

- 3.7 The main request is therefore not allowable under Article 123(2) EPC.

4. Auxiliary requests 1 and 3 - admittance (Article 12(4) RPBA)

- 4.1 Since the appealed decision is not based on **auxiliary requests 1 and 3** filed for the first time with the statement of grounds of appeal, the admissibility of this "amendment" into the proceedings is at the board's discretion under Article 12(4) RPBA.

- 4.2 According to Article 12(4), fifth sentence, RPBA, the board shall exercise its discretion in view of *inter alia* the complexity of the amendment, the suitability of the amendment to address the issues which led to the decision under appeal, and the need for procedural

economy.

4.3 The appellant argued that the decisive ground for the refusal as to the question of inventive step crystallised only during the oral proceedings before the examining division, i.e. at a very late stage. As to the substance of these auxiliary requests, the amendments did not introduce a "fresh case" but focused the debate on the core technical contribution. In addition, the filing was justified in light of a completely new situation at the end of the first-instance proceedings that could not be addressed then and there. It had not been possible to draft carefully a well-founded response during the one to two hours given by the examining division. As to inventive step, no new search was necessary and the substantive discussion could immediately be started. The claim requests did therefore not constitute a "fresh case".

4.4 The board is not convinced for the following reasons:

- The oral proceedings before the examining division closed at 11:03 hrs according to their minutes and there was, on an objective basis, enough time to react to even new grounds for refusal raised by the examining division.

- In addition, adding the feature that "*the unicast tunnel is maintained as dummy tunnel*" to claim 1 of auxiliary requests 1 and 3 (cf. features (f') and (f''')) creates the following new issue under Article 123(2) EPC which increases the underlying complexity. In particular, a "dummy tunnel" is mentioned in the application as filed only in the description on page 8 (end of the first paragraph) and on page 9 (end of last paragraph). Yet, in both

cases, a situation is described where a unicast and a multicast tunnel are available and user data of one or more "MBMS QoS flows" are transmitted through the multicast tunnel and no user data is transmitted through the unicast tunnel. The two paragraphs state that, in this case, "*the unicast tunnel may/can be referred to as 'dummy tunnel'*". There is, however, no direct and unambiguous basis for actively "maintaining" a "dummy tunnel", and introducing this amendment thus renders claim 1 of auxiliary requests 1 and 3 *prima facie* not allowable under Article 123(2) EPC.

4.5 Auxiliary requests 1 and 3 were therefore not admitted into the appeal proceedings (Article 12(4) RPBA).

5. Auxiliary request 2 - added matter (Article 123(2) EPC)

5.1 According to the new **feature (d')**, the "first identifier" includes "the QoS flow identifier".

However, the only basis in the originally filed application for an element included in the "first identifier" is claim 8 as originally filed and clause 8 on page 16 of the description. There, it is in fact stated that the "first identifier" includes "QoS flow identity (QFI)". Yet, an "identifier" is typically different from an "identity". Hence, there is no direct and unambiguous basis for the technical teaching that the "first identifier" includes a "QoS flow identifier".

5.2 Furthermore, the wording used in feature (d') states that the "first identifier" includes the "QoS flow identifier" being the "unicast flow identifier" included in the "*flow establishment configuration*

information" (see **feature (c)**). But there is no direct and unambiguous basis for the "first identifier" including an element, let alone an "identifier", included in the "*flow establishment configuration information*" transmitted to the respective "radio access network".

5.3 According to the new **feature (e')**, the "second identifier" includes "the MBS identifier".

Similar to the situation as to feature (d'), there is only one basis for the "second identifier" including an "MBS identity" in claim 9 and clause 9 on page 16 as filed. Since an "identifier" is different from an "identity", there is no direct and unambiguous basis for the technical teaching that the "second identifier" includes an "MBS identifier".

5.4 In that regard, the appellant argued that one could equate an "identity" with an "identifier". This was also supported by the fact that the term "QFI" was used on page 8 as filed as an abbreviation for the expression "QoS flow identifier".

The board however notes that the method of claim 1 is based on the embodiment described on page 11 of the original description, for which the term "QFI" is only disclosed as an abbreviation for the term "unicast flow identifier" included in the "*flow establishment configuration information*". Furthermore, the originally filed claims rather support the understanding of the terms "identifier" and "identity" being different. This is because claim 1 as filed already introduces "a unicast flow identifier" and "a multicast broadcast service (MBS) flow identifier". In claims 8 and 9 as filed, however, the two "identities" are introduced as

new elements with an indefinite article suggesting that these are new elements different from the identifiers already introduced in claim 1.

5.5 Hence, auxiliary request 2 is not allowable under Article 123(2) EPC, either.

6. Auxiliary requests IV and V - admittance (Article 13(2) RPBA)

6.1 **Auxiliary requests IV and V** were filed for the first time *after* the board's communication under Article 15(1) RPBA and less than one month before the oral proceedings before the board. Such claim requests shall, in principle, not be taken into account unless there are "exceptional circumstances", which have been justified with cogent reasons by the party concerned (Article 13(2) RPBA).

6.2 Irrespective of the presence of any "exceptional circumstances" in the present case, the board is also free to use the criterion explicitly mentioned in Article 13(1) RPBA, namely *prima facie* allowability of the amendments concerned.

6.3 In the present case, **feature (d'')** of claim 1 of auxiliary requests IV and V states that "*the first identifier is a quality (QoS) flow identifier (QFI)*".

Yet, as set out in point 5 above, the application as originally filed does not disclose that "the first identifier" *includes* or *is* a "(QoS) flow identifier" since the relevant passages, i.e. claim 8 and clause 8 on page 15 of the description as filed, only refer to an "identity". Furthermore, these passages only disclose that the "first identifier" includes but not

is a "(QoS) flow identifier" as in feature (d''').

6.4 According to **feature (e''')** of claim 1 of auxiliary request V, the "*second identifier is a multicast broadcast service, MBS, identity*".

However, original claim 9 and clause 9 on page 15 of the description as filed which could provide a basis state that the "second identifier" includes but not is a "multicast broadcast service (MBS) identity" as in feature (e''').

6.5 Auxiliary requests IV and V are therefore at least *prima facie* not allowable under Article 123(2) EPC.

6.6 In view of the above, auxiliary requests IV and V were not admitted into the appeal proceedings.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



B. Brückner

K. Bengi-Akyürek

Decision electronically authenticated