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**Datasheet for the decision
of 24 October 2023**

Case Number: T 1250/21 - 3.5.03

Application Number: 17162460.4

Publication Number: 3206438

IPC: H04W48/08, H04W8/02

Language of the proceedings: EN

Title of invention:

Communication method, mobile communication system, user equipments and radio network controller in such a system

Patent Proprietor:

Mitsubishi Electric Corporation

Headword:

Closed subscriber groups/MITSUBISHI

Relevant legal provisions:

EPC Art. 54

EPC R. 103(1)(a)

Keyword:

Novelty - main and auxiliary request (no)

Reimbursement of the appeal fee in full - (no): appeal not allowable and no substantial procedural violation recognisable



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Case Number: T 1250/21 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 24 October 2023

Appellant:
(Applicant)

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted on 22 March 2021
refusing European patent application
No. 17162460.4 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 grounds of lack of novelty (Article 54 EPC) of the sole claim request, having regard to the following prior-art documents:

D1: SAMSUNG: "Home cell 'whitelist' handling", 3GPP DRAFT; R2-083611_CSG WHITELIST HANDLING, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE 01 COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, 02 vol. RAN WG2, no. Warsaw, Poland; 20080630 - 20080704, 2 July 2008 (2008-07-02);

D5: HUAWEI: "Rel-8 UE idle mode mobility for HNB", 3GPP DRAFT; R2-082203, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES; F-06921 SOPHIA-ANTIPOLIS CEDEX; FRANCE, vol. CT WG1, no. Zagreb, Croatia; 20080612, 12 June 2008 (2008-06-12).

II. Oral proceedings were held before the board on 24 October 2023.

The appellant's final request was that the decision under appeal be set aside and that a patent be granted on the basis of a **main request** underlying the appealed decision or an **auxiliary request** filed for the first time with the grounds of appeal. The appellant further requests reimbursement of the appeal fee for an alleged substantial procedural violation.

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

III. Claim 1 of the **main request** includes the following limiting features (board's labelling):

- (a) "A communication method performed in a mobile communication system which comprises specific user equipments, base stations provided to cells for specific subscribers that are accessible by the user equipments and a radio network controller managing an access made by the user equipments to the cells for specific subscribers and a tracking area for tracking location of the user equipments, comprising the following steps:
- (b) requesting an update of a tracking area from the user equipments to the radio network controller through the base stations manually selected by the user equipments;
- (c) checking in the radio network controller whether access made by the user equipments to the cells for specific subscribers is allowed;
- (d) sending an acceptance of a tracking area update request from the radio network controller to the base stations and then to the user equipments, in the case where access made by the user equipments to the cells for specific subscribers is allowed; and
- (e) adding the cells for specific subscribers by the user equipments to a list of cells for specific subscribers authorized to access in a case where the user equipments are accepted to update a tracking area."

- IV. Claim 1 of the **auxiliary request** is identical to claim 1 of the main request.

Reasons for the Decision

1. Main and auxiliary request - novelty (Article 54 EPC)

- 1.1 Background of the invention

The present invention relates to a wireless communication system with closed subscriber groups, CSGs (i.e. cells which allow access only to a group of specific subscribers) and the handling of a tracking area (i.e. a group of cells in which a user equipment, UE, can be located when it is inactive).

- 1.2 Introductory remarks

The board understands a cell allowing access of "specific subscribers", as phrased in claim 1, as a "closed subscriber group" (CSG). It is further noted that claim 1 refers to a mobile communication system which implies that the UE is connected via a wireless interface to the network system. Since no specific standard is claimed, the "base stations" are understood as any network components with a wireless interface for allowing access of the UEs and the "radio network controller" is understood as any component carrying out administrative tasks in the underlying network system.

- 1.3 Prior-art documents

- 1.3.1 Document **D1** refers to mobile communication systems, i.e. to a UMTS and an LTE system, and in particular to the handling of a "Home cell whitelist" in such a

system (cf. title and section 1). The depicted UMTS system includes a core network "CN", a home Node-B "Home-NB" and a user equipment "UE" (page 2, Figure 1). It is known to a skilled person in the field of wireless communication systems that a UMTS network includes a radio network controller (RNC) which is connected to the Node-Bs and that, in UMTS systems, these are the "base stations" which provide the wireless connections to the UEs. The term "home cell" means a cell for specific subscribers only, it being noted that D1, like the present application, uses the abbreviation "CSG" (closed subscriber group; page 2, penultimate paragraph). Furthermore, D1 on page 2 describes a method for providing access of a UE to such a "home cell", in which

- the UE scans the surrounding and displays the text strings sent by available home cells ("Step2"),
- the user selects - implicitly in a manual way - the desired home cell in order to initiate a TAU (tracking area update) on this home cell ("Step3") and
- if the TAU is successful, the UE stores the identifier of this cell in its whitelist ("Step4").

1.3.2 Document **D5** also refers to a method of handling "home Node-Bs (NBs)" or, in other words, cells for specific subscribers in a wireless communication system as implied by the terms 3GPP and WCDMA (page 1, section 2 "Discussion"). For including a "home NB" in the whitelist of "allowed home NBs", a manual selection is supported (page 1, section 2, sixth to eighth paragraphs). More specifically, the method includes the following steps (page 1, last paragraph):

- the user triggers the UE to search for the home NB

- the UE sends a TAU to the network, and
- if the UE receives a location area update accept message it adds the home NB to its whitelist.

1.4 It is undisputed that the method of claim 1 is disclosed by D1 and D5, with the exception of the following features:

- the TAU is sent from the UE through the base station
- an acceptance of a "tracking area update request" is sent from the RNC to the UE through the base station.

1.5 Exchange of messages through the base stations - features (b) and (d)

1.5.1 The appellant argued that in the drawing of Figure 1 of document **D1**, the double-pointed arrow corresponding to "Step3" extended directly between "UE" and the core network "CN". Therefore, the TAU request would be sent in "Step3" directly from the UE to the core network and not *through* a base station (home cell) as required by feature (b) of claim 1. Likewise, the implicit response to the TAU was sent in the opposite direction directly from the RNC to the UE and not *through* a base station as done in claim 1 (cf. paragraphs [54], [56] and [59] of the statement of grounds of appeal).

Likewise, the last paragraph of page 1 of document **D5** disclosed that the "location area update message" and, in response to it, the "location area update accept message" was exchanged directly between the UE and the core network and not using the home cell (cf. paragraphs [108] to [114] of the statement of grounds of appeal).

1.5.2 The board's view is as follows:

Document **D1** refers explicitly to a UMTS system with standard components which, as known by a skilled person in the field of mobile communications, include UEs with wireless interfaces and base stations which are called "Node-Bs". Further, at the application's filing date, it was notoriously known to a skilled person in the field of mobile communications that in cellular mobile communication systems like the UMTS system of D1, the access of the UEs to the system is provided exclusively by base stations, i.e. Node-Bs in the UMTS system, which include the necessary wireless interface. From this, it follows that every message from or to the UE must be routed *through* the Node-B. This view is also consistent with the fact that, for the communication in "Step2" between the home owner and the network, an example of the communication channel is explicitly indicated ("IMSI to CN via WebPage"), whereas, for the communication between the UE and the network, no further details need to be given. The arrow extending directly between "UE" and the network "CN" in Figure 1 indicates certainly that messages are exchanged between the UE and the network. However, in view of the concept of a UMTS system, the skilled person would not have regarded this as a "direct" transmission leaving out the Node-B, since this would have been contrary to the typical setup of a UMTS system and would have raised the question how this transmission could actually be accomplished and how the necessary wireless interface could in fact be provided.

Document **D5** likewise explicitly refers to a cellular mobile communication system (see e.g. the reference to 3GPP in section 2). As in the case of D1, it would have been clear to the skilled person that, in such a

communication system, a UE does not exchange messages "directly" with the network but through the necessary wireless interface of the respective cell, i.e. the base station or Node-B. Furthermore, D5 explicitly discloses that the UE sends a "location area update message" to the network when it camps on the "home NB", i.e. when it is already connected to the cell but is still waiting for getting full access. Given the situation that a wireless interface is required, there is indeed no doubt that the "location area update message" is sent *through* the home Node-B on which the UE camps.

The board thus concludes, in accordance with the appealed decision (see Reasons 2.3 and 3.2) that it was well-known and directly understood from the D1 and D5 that the messages are sent through the home Node-B.

- 1.5.3 Further, in the appellant's view, documents D1 and D5 related to a different situation than that underlying the present invention. Documents D1 and D5 referred to cases in which there is already an existing connection which is to be transferred to a base station of a cell for a CSG and in which the communication is through the base station of the existing connection. As to D1, the home owner communicated to the core network while the UE was still in contact with the base station and attempted to make a new, different contact communicating through the existing contact. In document D5, the fact that the UE camps on the new base station did not mean that it was only connected through this base station. The teachings of documents D1 and D5 would only be taken into account for cases with *existing* connections.

The board is not convinced by that. Claim 1 does not

exclude that there is an *existing* connection during the exchange of the TAU messages or beforehand. Assuming that in the methods of D1 and D5 there was an existing connection, the relevant question is rather whether the TAU messages are exchanged via the manually selected base station or via another base station of the existing connection. However, neither D1 nor D5 discloses another base station different from the "home NB" (HNB). The assumption of "another base station" and that it would be used for exchanging the TAU messages is mere speculation. In the system of **D1**, the exchange of the TAU messages starts with step 3 in which the "Visiting friend selects home-cell to attempt TAU on". A further cell with a corresponding base station is however not mentioned. Document D1 rather states that the procedure is simple and that a mechanism is required by which the home owner informs the network (step 1), but does not mention any other requirement (see e.g. page 2, seventh paragraph). Moreover, in the method of **D5**, the user can trigger the UE to search for "the" HNB cell and, if the UE camps on "the" HNB cell, it will send the update message to the network (page 1, last paragraph). There is no reason to assume that the TAU messages were not transmitted via this specific HNB cell with which the UE is connected ("camps on") and the corresponding base station respectively. Thus, the board concludes that D1 and D5 indeed disclose an exchange of the TAU messages via the base station corresponding to the selected cell.

- 1.5.4 The board therefore agrees with the findings of the examining division as to the disclosures of D1 and D5. The skilled person would in fact have understood D1 and D5 such that the exchange of messages between the UE and the network is routed through the base stations.

- 1.6 Exchange of an acceptance of a tracking area update - feature (d)
 - 1.6.1 The appellant further argues that D1 did not disclose sending a TAU request from the RNC to the UE. From the disclosed condition "If TAU succeeds" in "Step4", it did not follow necessarily that such a message was actually sent.
 - 1.6.2 The board is not convinced. Document D1 in fact discloses that "UE" initiates in "Step3" a TAU while it is exchanging messages or general information with the core network "CN". In the following "Step4", "UE" stores the cell ID in its white list if the condition "TAU succeeds" is fulfilled. It is thus implicit that the UE has to learn whether or not the TAU has succeeded and that this information is somehow conveyed to the UE. It is noted in this respect that claim 1 does not further specify this information exchange but only refers to an "acceptance" which encompasses *any* flow of information. It is also implicit that a determination has to take place whether the tracking area update is successful or, in other words, whether the TAU is granted and that this determination being part of the access management is accomplished by the RNC.
- 1.7 The board therefore agrees with the examining division that D1 and D5 indeed disclose a method with all the features of claim 1 of the main and the auxiliary requests (Article 54 EPC). The main request and the auxiliary request are therefore not allowable under Article 54 EPC.
2. Reimbursement of the appeal fee - alleged substantial procedural violation

2.1 According to Rule 103(1)(a) EPC, one of the conditions for reimbursement of the appeal fee is that the board deems the appeal to be allowable. Since this condition is not met, the request for reimbursement of the appeal fee is to be rejected for this reason alone.

2.2 At any rate, the board is not convinced by the appellant's arguments that the examining division did not provide any evidence for its understanding of the disclosure of D1 and D5 which rendered the decision unreasoned (paragraphs [77] and [116] of the statement of grounds of the appeal) for the following reasons:

2.2.1 The examining division concluded in Reasons 2.3 and 3.2 of the appealed decision that it was well-known to and well understood by the skilled person in the relevant art that the messages are sent through the "home Node-B". This conclusion, in the board's view, is based on the skilled person's common general knowledge of the set-up of cellular wireless communication systems, as set out above, which can even be assumed to be notorious at the earliest priority date of the application at hand. Thus, the examining division considered the arguments brought forward by the then applicant without a need to produce further evidence in support of its conclusion. The examining division also took into account the argument regarding the transmission of an "acceptance" of the tracking area update in D1 (Reasons 2.2 of the appealed decision). In particular, given the very generic nature of this feature of claim 1, it was in fact not necessary to produce a document showing that an information playing the role of the "acceptance" message is transmitted from the RNC to the UE.

2.2.2 Even if, *arguendo*, the appellant was correct, it would have been necessary to demonstrate that the appealed decision is based on this violation. In this regard, the board notes that the decision has found a lack of novelty not only with respect to D1, but also to D5. Even if the reasoning in regard of D1 was procedurally flawed, this appears not to be the case for the reasoning as regards D5 upon which the decision is equally based. In other words, even if the alleged lack of evidence of the skilled person's common general knowledge as to whether a TAU success in document D1 could indeed only take place if a TAU acceptance has been received from the network (cf. statement of grounds of appeal, paragraphs [60] and [61]) were indeed to be considered a substantial procedural violation rather than, if at all, just an error of judgment, at least the examining division's reasoning in view of document D5 (which is equally part of the decision's *ratio decidendi*) is neither flawed nor constitutes any procedural violation, let alone a substantial one (see points 1.3.2, 1.5.1 and 1.5.2 above).

2.3 Thus, even if the appeal had been successful in substance, the request for a reimbursement of the appeal fee would have failed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



B. Brückner

K. Bengi-Akyürek

Decision electronically authenticated