

judgment

COURT THE HAGUE

Trade team

Case number / docket number: C/09/582823 / HA ZA 19-1139

Judgement of 4 November 2020

in the case of

the legal person under foreign law
SISVEL INTERNATIONAL S.A.,
in Luxembourg (Luxembourg),
plaintiff in the main proceedings,
defendant in the counterclaim under the main proceedings,
plaintiff in the procedural issue for an interim injunction pursuant to Article 223 of the
Code of Civil Procedure,
defendant in the production of exhibits procedural issue,
plaintiff in the conditional exhibition procedural issue,
defendant in counterclaim in the conditional production of exhibits procedural issue,
Attorney at law G. Kuipers, Amsterdam,

versus

1. the legal person under foreign law
XIAOMI CORPORATION,
Beijing (People's Republic of China),
2. the legal person under foreign law
XIAOMI H.K. LIMITED,
Hong Kong (Special Administrative Region of the People's Republic of China),
3. the legal person under foreign law
XIAOMI COMMUNICATIONS CO. LTD,
established in Beijing (People's Republic of China),
4. the legal person under foreign law
BEIJING XIAOMI MOBILE SOFTWARE CO. LTD,
established in Beijing (People's Republic of China),
5. the legal person under foreign law
XIAOMI INC.,
established in Beijing (People's Republic of China),
6. **XIAOMI TECHNOLOGY NETHERLANDS B.V.**,
in Amsterdam,

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defendants in the main proceedings,
 counterclaimants in the main proceedings,
 defendants in the procedural issue regarding an interim injunction pursuant to article 223 Rv, plaintiffs in the production of exhibits procedural issue,
 Defendants in the conditional production of exhibits procedural issue,
 counterclaimants in the conditional production of exhibits procedural issue,

Attorney at law mr. R.E. Ebbink in Amsterdam.

The parties will hereinafter be referred to as Sisvel and Xiaomi c.s. (jointly) or Xiaomi Corporation, Xiaomi H.K., Xiaomi Communications, Xiaomi Software, Xiaomi Inc. and Xiaomi Netherlands (each separately).

The technical part of the case (see below under 1.2 and 1.3) was dealt with substantively for Sisvel by the aforementioned lawyer, B.M. ter Woort and O.V. Lamme, attorneys at law in Amsterdam, and m.ir. F.A.T. van Looijengoed, patent attorney, and for Xiaomi c.s. by the aforementioned attorney at law, R. Broekstra, D.F. de Lange and J. Santman, attorneys at law in Amsterdam, and H. Hutter and H. Shi, patent attorneys.

1. The procedure

1.1. The course of the procedure is evident from:

- the order of the Interim Injunction Judge of that court of 28 June 2019 granting leave to institute proceedings under the rules governing accelerated proceedings on the merits in patent cases;
- the writ of summons, also containing an incidental claim for interim relief pursuant to Article 223 of the Dutch Code of Civil Procedure (“DCCP”) of 11 July 2019;
- the minutes of the case management hearing held on 30 September 2019 (see also below under 1.2);
- the submission of Sisvel’s exhibits from 6 November 2019, with exhibits EP1 to EP 19;
- the incidental statement ex article 1019a j° article 843a DCCP and/or application of article 22 DCCP of Xiaomi c.s. dated 6 November 2019, with exhibits GP01 up to and including GP29;
- the statement of defense in the procedural issue of 11 December 2019;
- the incidental procedural claim ex article 843a DCCP of Sisvel of 18 December 2019;
- the reply in conditional procedural issue by Xiaomi c.s., also counterclaim of 8 January 2020;
- the statement of defense, also counterclaim – technical defence of 8 January 2020, with exhibits GP22 to GP38²;

² The Court finds that the productions, in terms of numbering, do not match the productions that were added to

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- the statement of defense (FRAND and other defenses) of 15 January 2020, with exhibits GP39 to GP44;
- the docket decision of 22 January 2020 containing an order for the production of documents in accordance with Article 22 DCCP (with the imposition of a confidentiality regime);
- the docket decision of 5 February 2020 adapting the confidentiality regime imposed by the docket decision of 22 January 2020;
- the act of submission of Sisvel's exhibits of 12 February 2020, with exhibits EP20 to EP22;
- the act of submission of exhibits (confidential documents pursuant to Article 22 of the Order in Council) by Xiaomi c.s. of 12 February 2020, with exhibit GP45;
- the incidental claim to intervene/join the proceedings pending pursuant to Article 217 DCCP of 12 February 2020, filed by the legal person under foreign law NNT Docomo Inc. (in Tokyo, Japan);
- the Act concerning the submission of further exhibits (FRAND and other exclusions) by Xiaomi c.s. of 24 February 2020, with exhibits GP46 to GP88 inclusive;
- the reply in the intervention/join procedural issue by Sisvel of 26 February 2020;
- the reply to the intervention procedural issue pursuant to Article 217 DCCP by Xiaomi c.s. on 26 February 2020;
- the judgment in the intervention/join procedural issue of 18 March 2020 (dismissing the claimant);
- the statement of defense in counterclaim, including the submission of exhibits, from 11 March 2020, with exhibits EP23 to EP26;
- the reply to confidential documents Sisvel of Xiaomi c.s. of 11 March 2020, containing exhibits GP89 and GP90;
- the reply to exhibits submitted by Xiaomi pursuant to Article 22 DCCP, also regarding the production of exhibits, by Sisvel of 11 March 2020, with exhibits EP27 and EP28;
- the document containing the submission of further exhibits (technique EP '272) by Xiaomi c.s. of 8 April 2020, with exhibits GP91 and GP92;
- the deed of 22 April 2020 regarding the submission of additional exhibit with regard to the Sisvel technique, with exhibit EP29;
- the deed concerning the submission of further exhibits (FRAND and other defenses) by Xiaomi c.s. of 22 April 2020, including exhibits GP93 to GP95;
- the act of submission of additional non-technical exhibits, also containing Xiaomi's reply to confidential documents Sisvel van Sisvel of 22 April 2020, containing exhibits EP30 to EP76;
- the deed concerning the submission of reactive exhibits with regard to the technique by Sisvel from 15 May 2020, with exhibits EP77 to EP79;
- the deed concerning the submission of reactive exhibits (technique EP 272) by Xiaomi c.s. of 15 May 2020, with exhibit GP96;
- the deed concerning the submission of reactive exhibits by Sisvel from 19 May 2020, with exhibits EP80 to EP82;
- the deed concerning the submission of further reactive exhibits by Sisvel from 22 May 2020, with exhibits EP83 to EP86;

the incidental conclusion prior to the conclusion in reply, also demand in counterclaim pursuant to Article 1019a j° Article 843a DCCP and/or application of Article 22 DCCP of Xiaomi c.s..

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- the deed concerning the submission of reactive exhibits by Xiaomi c.s. of 22 May 2020, including exhibits GP97 to GP110;
- the court's decision of 3 June 2020 on Sisvel's application to disregard Chapters 1 and 2 of the deed of 22 May 2020 on the production of reactive exhibits by Xiaomi c.s. and the accompanying (expert) statements and other exhibits (GP97 to GP102 and GP110) for the purpose of assessing the case and Xiaomi c.s.'s application to do the same with Sisvel's exhibits EP60 and EP61, which – in short – implies that Xiaomi c.s. reduces exhibit GP97 to a maximum of ten pages and exhibit GP101 to a maximum of three pages, that exhibit GP100 remains in the proceedings only with regard to Xiaomi c.s.'s argument that there would be Sisvel patents without a handset claim, that Chapters 1 and 2 of the deed on the submission of reactive exhibits by Xiaomi c.s. remain in the proceedings, in so far as those chapters do not appear to omit passages, and that the requests for the remainder are rejected;
- the written pleading notes submitted and exchanged by the parties on 3 June 2020 (see below under 1.3);
- the e-mail message from Xiaomi c.s. of 4 June 2020 with an overview of the costs of proceedings attached;
- the e-mail message from Xiaomi c.s. of 5 June 2020 with the abridged version of exhibit GP101 attached.

1.2. At a combined case management hearing in these proceedings (and in a number of other patent cases brought by Sisvel), held on 30 September 2019, it was agreed with the parties that the technical aspects of the case (validity and infringement) and the non-technical aspects (including the FRAND defenses) would be included in separate procedural documents and dealt with at separate hearings.

1.3. The technical part of the case was dealt with in substance at a video hearing, which took place on 5 June 2020, after the parties had exchanged their pleading notes on 3 June 2020. During the video hearing, the court asked questions to the parties and the parties had the possibility for a reply and rejoinder³.

1.4. As regards the non-technical part of the case, the exchange of pleadings took place on 17 June 2020 and the video hearing on 19 June 2020.

1.5. Judgement has been rendered today.

2. The facts

2.1. Sisvel is the parent company of the Sisvel group. The Sisvel group manages an extensive patent portfolio with patents held by itself and third parties in – inter alia – the field of wireless communications.

2.2. Sisvel is the proprietor of the European patent EP 2 139 272. The patent was granted on one of the international divisional applications WO 02/32177, dated 13 October 2000 and published on 30 December 2009. Publication of the grant of the patent took place on 30 April 2014. According to its short designation (in the authentic

³ The plea has been adapted and video-linked as a result of the Coronavirus outbreak.

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English text), the patent relates to a 'Method and system for attaching a mobile equipment to a wireless communication network' and applies, inter alia, to the Netherlands. No opposition was lodged against the grant of EP 272. Sisvel was transferred (after grant) EP 272 from Nokia Corporation ('Nokia'), including the right to claim damages for current and past infringement.

2.3. EP 272 has 16 claims, some of which relate to a working method and some to an establishment. Form of order sought in this case 1, 2, 7, 8 and 10 in the authentic English version are as follows:

1. A method comprising initiating a combined attach and communication channel establishment procedure between a mobile station (1) and network including at least a support node (2), a gateway support node (4) and a radio access network (RAN. BSS), wherein the mobile station sends an attach request via the radio access network (RAN, BSS) to the support node (2), wherein the attach request is configured to trigger a create communication channel default procedure between said support node (2) and the gateway support node (4); wherein the mobile station receives a radio bearer setup signal from the radio access network; and wherein the mobile station sends a radio bearer setup complete signal to the radio access network.

2. A method according to claim 1. wherein the attach request is further configured to cause the generation of said radio bearer setup signal.

7. An apparatus being configured to initiate a combined attach and communication channel establishment procedure between a mobile station (1) and a network including at least a support node (2). a gateway support node (4) and a radio access network (RAN. BSS), wherein said apparatus is configured to:

send an attach request via the radio access network (RAN. BSS) to the support node (2), wherein the attach request is configured to trigger a create communication channel default procedure between said support node (2) and the gateway support node (4);
receive a radio bearer setup signal from the radio access network; and send a radio bearer setup complete signal to the radio access network.

8. An apparatus according to claim 7. wherein the attach request is further configured to attach the mobile station to the network, and
cause the generation of said radio bearer setup signal.

10. An apparatus according to claim 7 or 8 wherein said apparatus is included in the mobile station.

2.4. In the (undisputed) Dutch translation these claims read as follows:

1. Werkwijze omvattende het initiëren van een gecombineerde aansluit- en communicatiekanaal-tot-stand-breng-procedure tussen een mobiel station (1) en een netwerk omvattende ten minste een ondersteuningsknooppunt (2), een toegangsondersteuningsknooppunt (4) en een radiotoegangsnetwerk (RAN, BSS) waarbij het mobiele station een aansluitverzoek verzendt via het radiotoegangsnetwerk (RAN, BSS) naar het ondersteuningsknooppunt (2), waarbij het aansluitverzoek wordt gevormd om een standaard creëer-communicatiekanaal-procedure te initiëren tussen het ondersteuningsknooppunt (2) en het toegangsondersteuningsknooppunt (4); waarbij het mobiele station een radiodragersetup-signaal ontvangt van het radiotoegangsnetwerk; en waarbij het mobiele station een radiodragersetup-compleet-signaal naar het radiotoegangsnetwerk stuurt.

2. Werkwijze volgens conclusie 1, waarbij het aansluitverzoek verder wordt gevormd om de aanmaak van het radiodragersetup-signaal te veroorzaken.

7. Inrichting die is gevormd om een gecombineerd aansluit- en communicatiekanaal-tot-stand-breng-procedure te initiëren tussen het mobiele station (1) en het netwerk omvattende ten minste een ondersteuningsknooppunt (2), een toegangsondersteuningsknooppunt (4) en een radiotoegangsnetwerk (RAN, BSS), waarbij de inrichting is samengesteld om:

een aansluitverzoek te sturen via het radiotoegangsnetwerk (RAN, BSS) naar het ondersteuningsknooppunt (2), waarbij het aansluitverzoek is gevormd om een standaard creëer-communicatiekanaal-procedure te initiëren tussen het ondersteuningsknooppunt (2) en het toegangsondersteuningsknooppunt (4);
een radiodragersetup-signaal te ontvangen van het radiotoegangsnetwerk; en
een radiodragersetup-compleet-signaal te sturen naar het radiotoegangsnetwerk.

8. Inrichting volgens conclusie 7, waarbij het aansluitverzoek verder is gevormd om het mobiele station aan het netwerk aan te sluiten, en het ontstaan van het radiodragersetup-signaal te veroorzaken.

10. Inrichting volgens conclusie 7 of 8, waarbij de inrichting in het mobiele station is opgenomen.

2.5. EP 272 contains, among other things, the following figures:

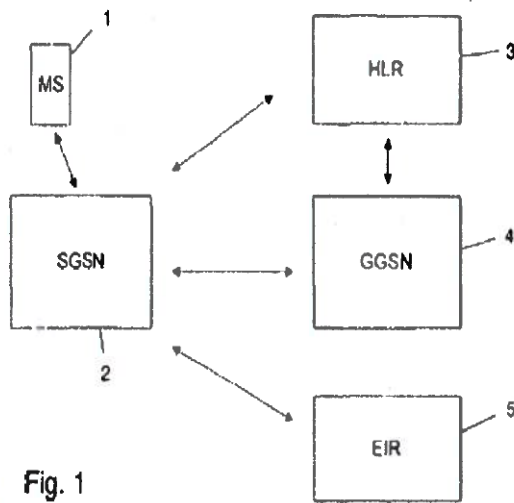


Fig. 1

Fig. 2

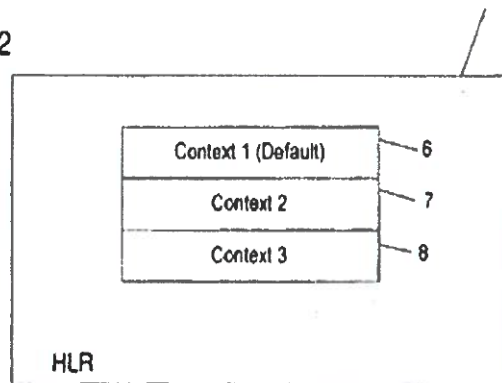


Fig. 3

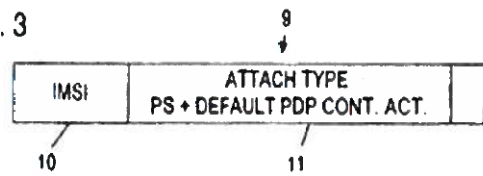


Fig. 4

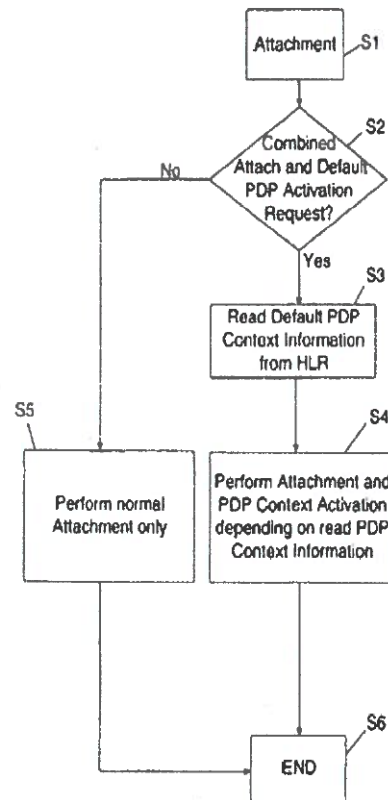
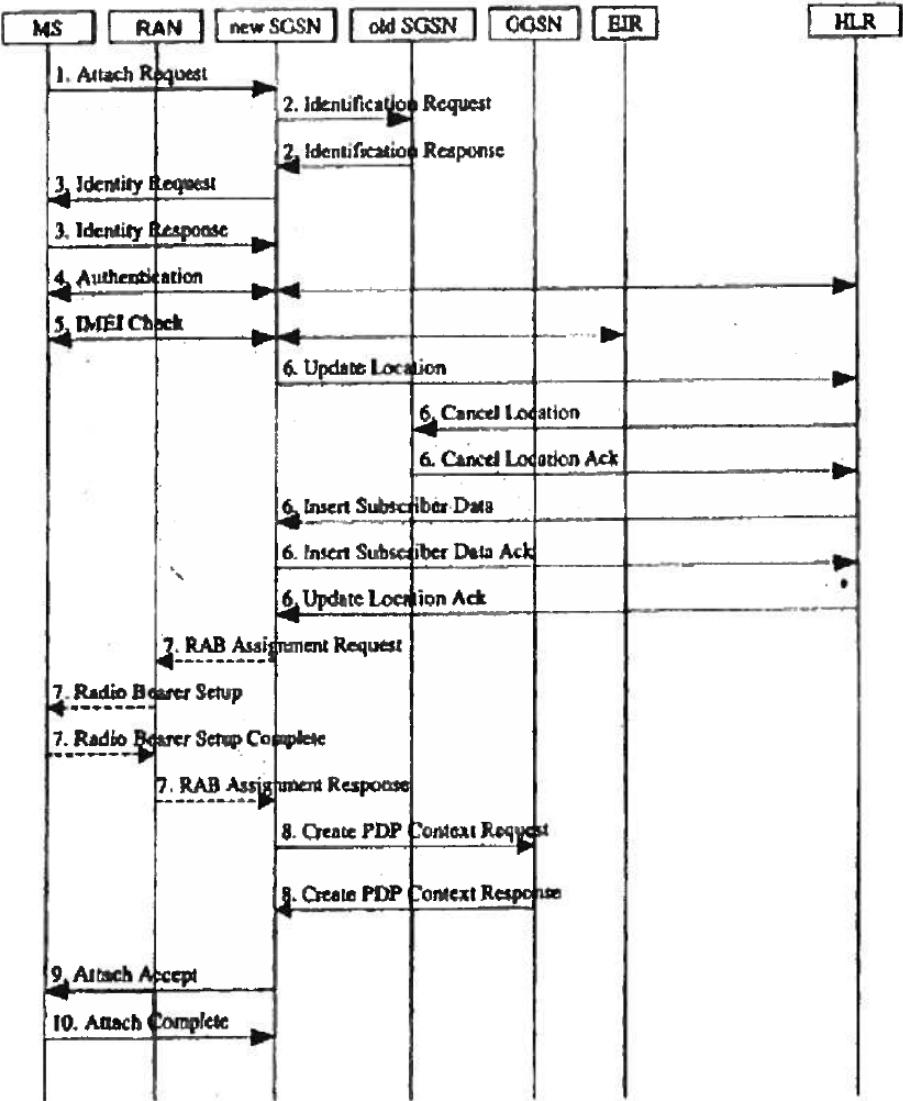


Fig. 5



2.6. In the authentic description of EP 272, the following has been included, where relevant:

FIELD OF THE INVENTION

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[0001] The present invention is directed to methods and devices for attaching a mobile equipment, such as a mobile station (MS) or any other arbitrary type of user equipment, to a wireless communication network so as to be able to originate or receive media such as a phone call, or data or message transmission. Further, the invention relates to a network element usable in such methods or for such devices.

BACKGROUND OF THE INVENTION

(0002) When a user equipment is newly attached to a wireless communication network for receiving and/or originating calls, data transmissions or the like, an attachment process for attaching the user equipment to the wireless communication network is necessary. When a subscriber is then intending to originate or receive a message or a call, an additional communication channel establishment process may be necessary. For instance, in a GSM system (Global System for Mobile Communications) such as a packet switched service, for instance GPRS (General Packet Radio Service), or in a UMTS system (Universal Mobile Telecommunications System), the user equipment exchanges a signalling flow with its associated node for establishing a communication channel, for instance a PDP (Packet Data Protocol) context or the like. This signalling leads to an additional load on the network and may additionally result in a certain brief delay before actually being able to start the transmission or reception.

(...)

SUMMARY OF THE INVENTION

[0006] The present invention aims at providing methods and apparatuses which allow a novel manner of attachment and activation. In accordance with one aspect of the invention, the invention aims at reducing the signaling load on the network, and/or to reduce the delay before being able to start a transmission or receipt process.

(...)

[0009] According to one aspect of the invention, a combined attach and communication connection establishment process may be performed when attaching a user equipment such as a mobile station to the network. This combined attach and communication connection establishment process provides several advantages. For instance, the signaling load on the network is reduced as the attach and communication connection establishment process can be initiated by sending only one request from the user equipment to the network. Previously, two separate messages (first an attach request and then, later on, a separate communication connection, e.g. communication channel, establishment process for allowing a user traffic transmission reception) were sent, with the necessity of sending two different requests from the user equipment to the network. In addition, after performing this combined attach and communication connection establishment process, the subscriber or his/her equipment is able to start immediately with any requested transmission or receipt process. Hence, the time delay previously experienced because of the necessity of performing an communication connection establishment process before starting the communication, is eliminated.

[0010] According to one aspect of the invention being also applicable with a normal activation procedure irrespective of any combined attach and activation procedure, a register contains some communication channel data which is set as default value and can therefore be automatically selected without necessity of specifying activation details by a support node or by a user equipment. In detail, one or many of the communication connection data sets provided for a subscriber in a register are set as a default value which can be automatically selected from the register when not receiving any selection request. This provision of a default value further reduces the signaling load as the user equipment now does not need to send any specific selection data for selecting communication connection data sets. The data transmission or other communication can immediately commence based on the selected default values.

[0011] When the wireless communication system is structured as a packet switched system such as GPRS or UMTS, the combined attach and communication connection establishment request may be a combined Attach and Activate PDP Context Request. A normal Activate PDP Context Request is defined in the GPRS standard or UMTS standard, see for instance the 3GPP specification TS 23.060.

[0012] The present invention is applicable to a great variety of telecommunication systems including call and/or data or message transmitting networks, and is preferably implemented in a mobile packet switched network

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using, for instance. PDP context for data transmission.

[0013] In accordance with another aspect, the invention provides a network element usable in a method or system as described above and explained below in more detail.

(...)

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

[0015] Figure 1 illustrates the basic layout of a part of a wireless communication network (for instance a PLMN) which here is implemented as a GPRS system. A mobile station (MS) 1 communicates with a Serving GPRS Support Node (SGSN) 2. The system comprises at least one Home Location Register (HLR) 3, at least one Gateway GPRS Support Node (GGSN) 4 and an Equipment Identification Register (EIR) 5. The parts may communicate with each other as indicated by the arrows shown in Figure 1. The system will normally contain a plurality of mobile stations or other user equipments 1 although only one mobile station is shown in Figure 1. Likewise, a plurality of support nodes 2 is provided which support the mobile stations or other user equipments located within the area covered by the support nodes. This structure as well as the normal signaling and information flow between the components of the wireless communication network is known and will therefore not be described in greater detail.

[0016] Figure 2 schematically illustrates part of the storage contents of a home location register 3. The register 3 stores, for each subscriber, or each group of subscribers, or at least for some of the subscribers or groups, at least one communication connection (e.g. channel) information set which here is designated as PDP context information, one of which is set as default value and is automatically selected when not receiving any specific selecting request pointing to a different PDP context information. The register (HLR) 3 includes subscription information and then information about the PDP contexts of the subscriber. One or many of the PDP contexts may be set as default.

[0017] In the present embodiment, for each subscriber, or at least some of the subscribers, three different PDP context information sets (for PDP context activation or creation, or the like) 6, 7, 8 are respectively stored, wherein context information 1 (reference numeral 6) is set as default value. The context information "Context 2", reference numeral 7, and "Context 3", reference numeral 8, are deliberately selectable by a subscriber when requested by the subscriber. The database of register 3 contains such triplets of information for each subscriber or at least for some of the subscribers or a group of subscribers. Of course, the number of alternative PDP context information sets may be varied according to design and need and may range from only one (default value only), to two, three or more selectively selectable information.

[0018] Generally, before the mobile station 1 is able to send or receive information, it must first perform an attach proceedings, for instance after switching it on. In addition, in some services such as packet data switching oriented networks, for instance GPRS or UMTS, an additional communication channel establishment procedure will normally be carried out which is called PDP context activation (or creation) in GPRS or UMTS. According to the present invention, the attach and PDP context activation processes are combined. The mobile stations can therefore perform a combined attach and default PDP context activation which decreases signaling in the radio interface (air-interface).

[0019] This combined attach and communication channel establishment procedure is shown in Figures 4 and 5. The default PDP context or contexts is (are) activated according to the subscription-based information stored in the register 3, that is based on "Context 1" information, reference numeral 6. If requested by the subscription of one or more subscribers, multiple default PDP contexts are allowed.

[0020] The quality of service (QoS) of the default PDP context is preferably such that the mobile station 1 is only charged if data is transferred or received on the default PDP context, but no time-based charging is performed for the default PDP context alone. The quality of service of the default PDP context will be decided based on the subscription and will be a default value unless otherwise prescribed. If a specific quality of service is desired, the subscriber will then have to select one of the different context information such as 7. or 8, provided same define an appropriate QoS (Quality of Service).

[00211] Subscribers mainly using the packet switched service (for instance GPRS or UMTS) for transferring voice, are allowed to define the QoS of the default PDP context appropriately.

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[0022] Figure 3 shows part of an Attach request 9 which is sent from the mobile station 1 to the support node 2 for initiating the attach procedure, which is, in the present invention, a combined attach and PDP context activation request. The Attach request 9 comprises a data field 10 defining IMSI (International Mobile Subscriber Identifier) or, if available, P-TMSI and RAI (Routing Area Identity). The "Attach Type" field 11 of the Attach request 9 indicates which type of attach is to be performed which may basically be "GPRS attach only", "GPRS attach while already IMSI attached", "combined GPRSIMSI attach" or, as indicated in Figure 3, combined "PS (packet switched) + default PDP context activation".

[0023] In case the attach request transmitted from the mobile station 1 specifies the attach type "PS + DEFAULT PDP CONTEXT ACTIVATION" as shown in Figure 3, the system is informed on the desired combined attach and PDP context activation. The support node 2 then not only performs a "packet switched" attach but is furthermore adapted so as to automatically initiate, when receiving this request and having the attachment effected, a default PDP context activation without necessity for the mobile station 1 to send any additional command.

[0024] The attach request 9 contains further fields such as "DRX parameters" which are not shown in Figure 3 and are in accordance with the customary specification of attach requests, see the respective standards. The attach request 9 differs from these standards only in so far as it is now possible to indicate, in field 11, a combined attach and communication channel establishment process such as "attach and default PDP context activation".

[0025] Figure 4 shows an attach process flow. In step S1, the mobile station 1 sends an Attach request to the support node 2 which then checks, in step S2, the received Attach request so as to detect whether a normal attach such as a "packet switched" attach is requested, or a combined attach and default PDP context activation request is transmitted. This check is performed by examining the data field 11 of the Attach request 9 specifying the desired attach type. When combined attach and default PDP activation request is received by the support node 2, same is adapted to address the Home Location Register 3, and to read (or receive) the subscriber information including the default PDP context information stored therein. All the subscription information is transferred from the HLR to the SGSN. In step S4, the system then performs an attachment as well as one or many PDP context activations depending on the read default PDP context information

[0026] If no combined attach and default PDP activation request is detected in step S2, the process proceeds to step S5 and performs a normal attachment only according to the designated attach type. As part of steps S4, S5, the support node 2 may also send an Attach Accept message to the mobile station 1 for informing same on the effected attachment. The attach process then ends (step S6).

[0027] Figure 5 shows the combined attach and PDP context activation in greater detail.

[0028] In step 1., the mobile station 1 initiates an attach and default PDP context activation by sending an Attach Request as shown in Figure 3. The Attach Type parameter 11 indicates that combined attach and default PDP context activation is required. In the present case, the Attach Request is sent because the mobile station 1 has switched on. In step 2., the new support node 2 (new SGSN) sends an Identification Request to the old support node (old SGSN) which responds with an Identification Response defining the IMSI of the mobile station 1. If the mobile station 1 should be unknown in both the old and new SGSN, the new support node sends an Identity Request to the mobile station 1 (step 3.) which transmits an Identity Response indicating its IMSI. In step 4., an authentication may be performed. Further, in step 5., an equipment checking ("IMEI check; IMEI = International Equipment Identification") may be performed by addressing the Equipment Identification Register (EIR) 5.

[0029] In step 6., the support node 2 informs the Home Location Register 3 on the new location in case the support node number has changed since the GPRS detach, or it is the very first attach. The old support node is requested to cancel the location which is acknowledged by sending back an Cancel Location Acknowledgment.

[0030] Further, the Home Location Register 3 sends an Insert Subscriber Data to the new support node 2 which subscriber data includes information on the default PDP context(s). The new support node validates the MS's presence in the new routing area, and sends back an Insert Subscriber Data Acknowledgement to the Home Location Register 3. Furthermore, the Home Location Register 3 sends back, as part of step 6, an Update Location Acknowledgement message.

[0031] In step 7., RAB assignment procedure is performed for the default PDP context(s) according to the

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information received from the Home Location Register 3 in step 6. This is a preferred implementation of the invention. The procedure consists in sending a RAB Assignment Request from the new support node 2 to the radio access network RAN transmitting/receiving the radio waves to/from the mobile station 1, setting up the radio bearer between the radio access network RAN and MS (by sending a Radio Bearer Setup and a Radio Bearer Setup Complete, and finally sending a RAB Assignment Response.

[0032] In the next step 8., the new support node 2 sends a Create **PDP** Context Request to the gateway support node 4 so that the default PDP context(s) is (are) activated in the support node(s) 4 according to the information received from the Home Location Register 3 in step 6. In step 9" the support node 2 sends an Attach Accept message to the mobile station 1 for acknowledging the attach and default PDP context activation. The attached accept message may include information about the activated PDP context(s). The mobile station 1 may acknowledge the parameters sent by the support node 2, by sending an Attach Complete message in step 10. However, step 10. may also be omitted.

[0033] Steps 7 and 8 are performed N times, N representing the number of default **PDP** contexts.

[0034] According to the invention, the combined attach and default PDP context activation is therefore performed by storing default PDP context information in a register such as a Home Location Register, and by activating the default PDP context(s) according to the subscriber-based information stored in the register. The quality of service (QoS) of the default PDP context(s) may be fixed but may also be decided based on the subscription.

[0035] A basic idea is to activate default PDP context(s) according to the subscription information received from the HLR. As an alternative, the mobile station MS may send some parameters for the default PDP context(s) and the HLR completes the missing parameters. As an example, APN (Access Point Name) may be sent from MS, and QoS from HLR.

[0036] The PDP context activation(s) is (are) therefore automatically performed based on the HLR subscription. This leads to a reduction of the signalling in the radio interface, without creating any limitations on the network and its use. Furthermore, it is not necessary, for PDP context activation, to send a QoS field and/or APN from the mobile station 1 to support node 2 or 3, because the Home Location Register has one or more special contexts which are marked as default contexts and are automatically selected. This possibility of setting default contexts in the Home Location Register has also advantages with regard to more advanced services such as UMTS services wherein the users are likely to have more than one subscribed context, which accordingly define different session handling parameters.

(...)

[0038] In the first embodiment shown in Figs. 1 to 5, the default PDP context(s) are automatically activated at PS attach. In the embodiment of Fig. 6, the MS first performs a PS attach and then afterwards indicates that the default PDP context(s) should be activated. In both cases, the default PDP context information comes from the HLR.

[0039] According to the embodiments, default contexts are provided also in cases where a normal procedure (attach being performed with a subsequent PDP context activation upon request) does not apply.

(...)

[0041] Although specific embodiments have been described above, the invention is also applicable with regard to other types of communication networks such as fixed or circuit-switched networks.

2.7. In order to enable the widest possible application of mobile communication technology, that technology has been standardized. EP 272 was submitted (by Nokia) as a standard essential patent applied in the LTE ('Long Term Evolution') standard for mobile communications (also called 4G standard). This standard was developed by the 3rd Generation Partnership Project Group (3GPP), a partnership between the European Telecommunications Standards Institute (ETSI) and standards bodies in other parts of the world. The standard is laid down in – amongst others – the standard specification

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document entitled '3GPP TS 23.401, 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; General Packet Radio Services (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access (Release 8), version 8.18.0 of March 2013' (hereinafter: standard specification document TS 401).

2.8. Xiaomi Corporation, Xiaomi HK, Xiaomi Communications and Xiaomi Netherlands focus – among other things – on the sale of mobile phones. Xiaomi Corporation is also active in the manufacture of mobile phones and Xiaomi Communications in the development of mobile phones. Xiaomi Software offers technical support and related services and is responsible for patent licensing within the Xiaomi Group. Xiaomi Inc. owns and manages the websites on which advertisements are placed in which the mobile phones are offered for sale and holds the brands under which the mobile phones are marketed.

2.9. Both Nokia and Sisvel are members of ETSI. Members of ETSI have committed themselves to the ETSI Rules of Procedure, of which the ETSI Intellectual Property Rights Policy is a part. In order to allow third parties to use the standardized technology for a reasonable fee, the ETSI Intellectual Property Rights Policy prescribes that a holder of a standard essential patent must declare his willingness to grant a license to third parties under that patent on so-called 'fair, reasonable and non discriminatory' (FRAND) terms. Both Sisvel and its legal predecessor Nokia have made such a declaration.

2.10. Xiaomi c.s. is not a member of ETSI. Xiaomi c.s. does not have a license with Sisvel for use of the patent.

3. The dispute

In the main proceedings' original action

3.1. Sisvel claims – in summary – that the court should rule, as far as possible, provisionally enforceable that:

Primary:

- Xiaomi c.s. is prohibited, subject to forfeiture of a penalty payment, from infringing the Dutch part of EP 272 and from acting unlawfully towards Sisvel;
- Xiaomi c.s. is ordered (i) to organise a recall among resellers, (ii) to destroy the recalled and stocked infringing products, (iii) to remove references to the infringing products on its websites, (iv) to inform economic operators (such as customers and professional users) about the infringement/infringement and to request them to return the infringing products in their possession, (v) declare the profits made as a result of the infringement/ wrongful act and (vi) provide details of resellers, subject to forfeiture of a penalty payment, and (vii) compensate Sisvel for damages suffered or transfer to Sisvel the profits made as a result of the infringement/wrongful act;

In the alternative:

As long as Xiaomi c.s. has not accepted Sisvel's offer to have the license conditions of the Sisvel Mobile Communication Program determined by the arbitrators, to impose Xiaomi c.s. the prohibitions and orders as primarily claimed;

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More subsidiary:

- declares that (i) dealing without a license with products that comply with or support the LTE standard constitutes an infringement of the Dutch part of EP 272 and (ii) acts unlawfully by participating in the infringement of the Dutch part of EP 272;
- Xiaomi c.s. is ordered, subject to forfeiture of a penalty payment, to suspend the LTE functionality of the infringing products in the Netherlands and to inform resellers and other market participants (such as customers and professional users) about the infringement/abuse;
- Xiaomi c.s. is prohibited, subject to forfeiture of a periodic penalty payment, the sale of infringing products to resellers until such time as those resellers have complied with the requests which Xiaomi Co. must make to them;
- Xiaomi c.s. is ordered, subject to forfeiture of a periodic penalty payment, to declare the profits made as a result of the infringement/ wrongful act and to provide details of resellers;
- Xiaomi c.s. is ordered to compensate Sisvel for damages suffered or to transfer to Sisvel the profits made as a result of the infringement/ wrongful act;

Both primary, subsidiary and more subsidiary:

order Xiaomi c.s. jointly and severally to pay the costs of the proceedings pursuant to Article 1019h of the Dutch Code of Civil Procedure and the usual additional costs, increased by statutory interest.

3.2. Sisvel bases this claim on the following.

Claims 1, 2, 7, 8 and 10 of EP 272 are incorporated in the LTE standard. The mobile phones marketed by Xiaomi c.s. – among others in the Netherlands – are 'LTE compatible'; Xiaomi c.s. applies this standard. By marketing those mobile telephones, Xiaomi c.s. therefore infringes claims 1, 2, 7, 8 and 10 of the patent (directly or indirectly, or by way of equivalence). Also, or in any event, it is acting unlawfully vis-à-vis Sisvel.

3.3. Xiaomi c.s. puts forward a defense against Sisvel's claim for dismissal of that claim and orders Sisvel to pay the costs of the proceedings in accordance with Article 1019h of the Dutch Code of Civil Procedure, in the event of non-payment within five working days of the date of this judgment, together with interest at the statutory rate. Xiaomi c.s. disputes the validity of the claims 1, 7 and 8 invoked by Sisvel because they contain added matter and attacks the validity of all the claims invoked by Sisvel because they lack novelty and are not inventive. Xiaomi c.s. further defended itself by arguing that not all the features of the claims relied on by Sisvel are included in the LTE standard (and that the patent is therefore not essential by default), so that the application of that standard in the mobile telephones which it markets in the Netherlands does not mean that it infringes the patent. Finally, by way of defense, Xiaomi c.s. submits that Sisvel has failed to comply with the contractual and competition law obligations attached to the registration of a patent as a standard essential to the LTE standard (the FRAND defense).

In original action in the procedural issues

In the procedural issue regarding an interim provision pursuant to Article 223 of the Code of Civil Procedure

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3.4. Sisvel claims that the Court should impose an interim injunction for the duration of the proceedings, imposing on Xiaomi c.s. an order prohibiting infringement of the Dutch part of EP 272 and unlawful conduct, primarily unconditional and, in the alternative, subject to the condition that Sisvel's offer to have the license conditions of the Sisvel Mobile Communication Program established by arbitrators is not accepted, with Xiaomi c.s. being jointly and severally ordered to pay the costs of the proceedings under Article 1019h of the Dutch Code of Civil Procedure and the usual additional costs, plus interest at the statutory rate.

3.5. Sisvel's claim is based on the same ground as that on which it bases the prohibitions claimed in the main proceedings in the original action.

3.6. Xiaomi c.s. puts forward a defense against the claim.

In the procedural issues related to the production of documents

3.7. In the context of its FRAND defense, Xiaomi claims that the court should order Sisvel, subject to forfeiture of a penalty payment, to pay the amount which Xiaomi claims to have been ordered to pay. relevant documents according to Xiaomi c.s. for the assessment of that defense, or whether it applies the provisions of Article 22 of the Dutch Code of Civil Procedure and obliges Sisvel in that context to bring those documents into the proceedings, all this with Sisvel being ordered to pay the costs of the procedural issue in accordance with Article 1019h of the Dutch Code of Civil Procedure.

3.8. Sisvel puts forward a defense against Xiaomi c.s.'s claim, requesting a declaration of inadmissibility or dismissal of that claim, and requests an order for Xiaomi c.s. to pay the costs of the procedural issue in accordance with Article 1019h of the Dutch Code of Civil Procedure and, in the event of failure to pay within fourteen days of the date of this judgment, to be increased by statutory interest. Conditionally, in the event that the court should award the incidental claim of Xiaomi c.s., Sisvel claims that the court should order Xiaomi c.s., as far as possible provisionally enforceable, to produce certain documents which, according to Sisvel, in the context of the assessment of the FRAND defense of Xiaomi c.s., are relevant, subject to forfeiture of a penalty payment, or alternatively oblige Xiaomi c.s., in accordance with Article 22 DCCP, to bring these documents into dispute, with Xiaomi c.s. being ordered to pay the costs of the procedural issue in accordance with Article 1019h DCCP and in the event of non-payment within fourteen days of the date of this judgment, plus statutory interest.

3.9. Xiaomi et al puts forward a defense against Sisvel's conditional incidental claim, which culminates in (i) an application for dismissal of that claim, with Sisvel being ordered to pay the costs of that procedural issue, and (ii) a counterclaim by which the Court orders Sisvel, on pain of forfeiture of a penalty payment, to produce further documents which, in Xiaomi et al's view, are relevant to the assessment of its FRAND defense.

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In the main proceedings in (conditional) counterclaim

3.10. Xiaomi c.s. claims – after reduction of the claim during the video hearing – that the court, by judgment, enforceable on a provisional basis, conditionally, in the event that the court should come to the claim that there has been an infringement of EP 272, will nullify the Dutch part of EP 272, ordering Sisvel to pay the costs of the proceedings pursuant to Article 1019h of the Dutch Code of Civil Procedure, in the event of non-payment within five working days of the date of this judgment, to be increased by statutory interest.

3.11. Xiaomi c.s. bases this claim on the fact that EP 272 is null and void for the reasons described under 3.3 above.

3.12. Sisvel puts forward a defense against that counterclaim.

4. The assessment

Jurisdiction

4.1. Pursuant to the provisions of Article 4, paragraph 1 Brussels I bis-Vo,⁴ the Dutch court has jurisdiction to hear Sisvel's claim to the extent directed against Xiaomi Netherlands because that company has its registered office in the Netherlands. That jurisdiction has not, moreover, been contested. The Netherlands court also has jurisdiction to hear Sisvel's claim, in so far as it is directed against the legal entities established in China; that jurisdiction can already be based on the provisions of Article 26(1) Brussel I bis-Vo, since the legal entities established in China have not contested that jurisdiction. The (exclusive) relative jurisdiction of this court to hear Sisvel's claim, in so far as it is based on infringement of EP 272, is based on the provisions of Article 80 paragraph 2 sub a Dutch Patent Act 1995. Sisvel's claim, in so far as it is based on wrongful acts, is to be regarded as related to the claim based on patent infringement, so that this court can also hear Sisvel's claim in so far as it is based on patent infringement. Incidentally, the relative jurisdiction has been left undisputed.

4.2. The jurisdiction of the Netherlands court to hear the defense in the main proceedings, in so far as invalidity of the Netherlands part of EP 272 is invoked, as well as of the claim under the conditional counterclaim, follows from the provisions of Article 24(4)(b) and (4) of the Brussels Convention. The relative jurisdiction of this court follows from the provisions of section 80 subsection 1 under a Dutch Patent Act 1995.

4.3. Now that jurisdiction is conferred by the original action in the main proceedings, there is also jurisdiction to hear and determine Sisvel's claim for interim relief and the claims brought by Sisvel and Xiaomi c.s. in the procedural issues arising out of and in connection with the FRAND defense brought by Xiaomi c.s. in the main

⁴ Regulation (EU) 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters

proceedings by the original action.

In the main proceedings in the original action

Infringement?

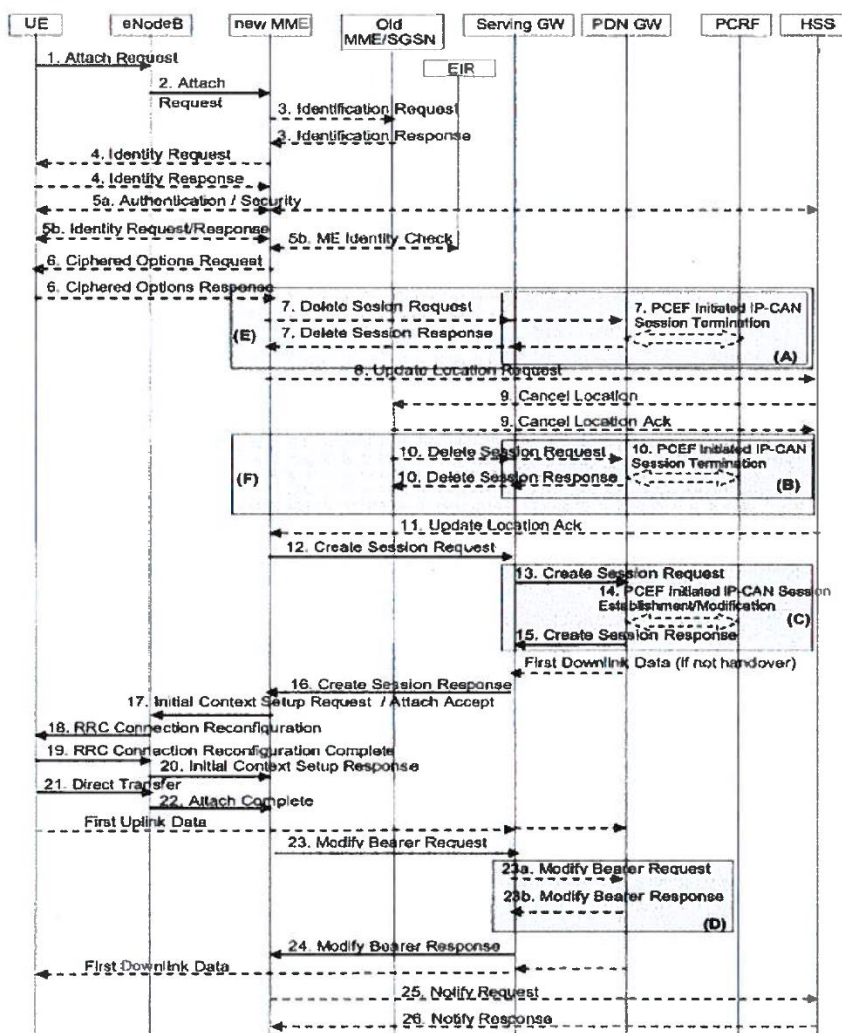
4.4. The court first considers the question whether Xiaomi c.s. infringed EP 272 by trading their mobile phones.

4.5. According to Sisvel, the LTE standard uses the invention of EP 272. According to Sisvel, claims 1, 2, 7, 8 and 10 are incorporated in it. Since the mobile telephones marketed by Xiaomi c.s. apply the LTE standard, it infringes those patent claims, according to Sisvel.

4.6. Sisvel explained the infringement through the way in which in the LTE standard connection of a mobile phone to an external wireless network and transmission of data from that network to the mobile phone and vice versa. It has used the step-by-step plan set out below, with the abbreviations where relevant:

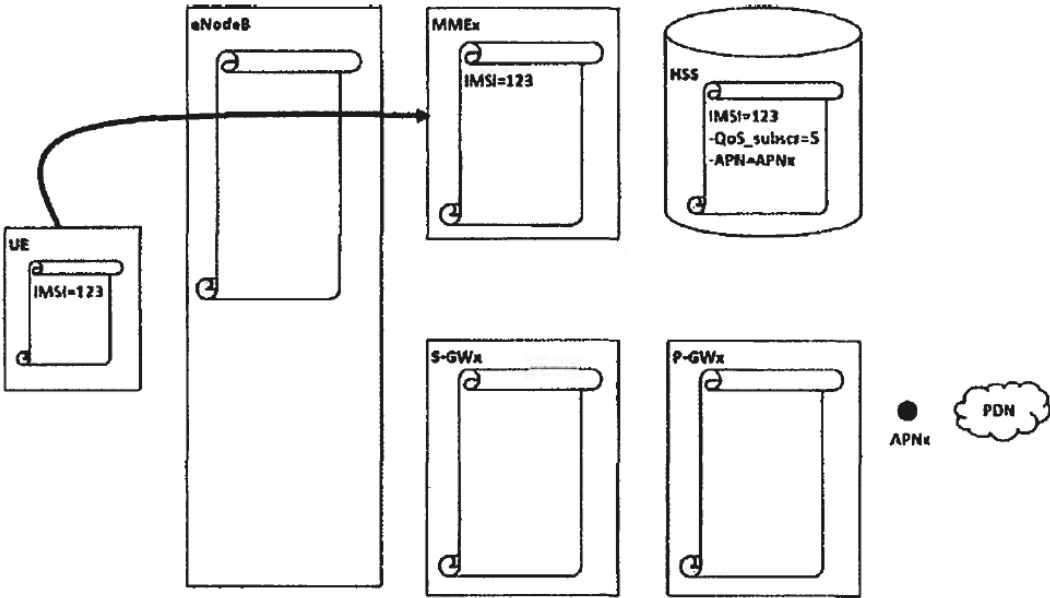
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- UE: user equipment (mobile telefoon)
- eNodeB: E-UTRAN Node B/Evolved Node B (basisstation)
- MME: Mobility Management Entity
- Serving GW/S-GW: Serving Gateway
- PDN GW/P-GW: Packet Data Network Gateway
- HSS: Home Subscriber Server (bevat abonnee-informatie voor de UE)
- IMSI: International Mobile Subscriber Identity
- QoS: Quality of Service
- APN: Access Point Name
- PDN: Packet Data Network
- TEID: Tunnel Endpoint Identifier

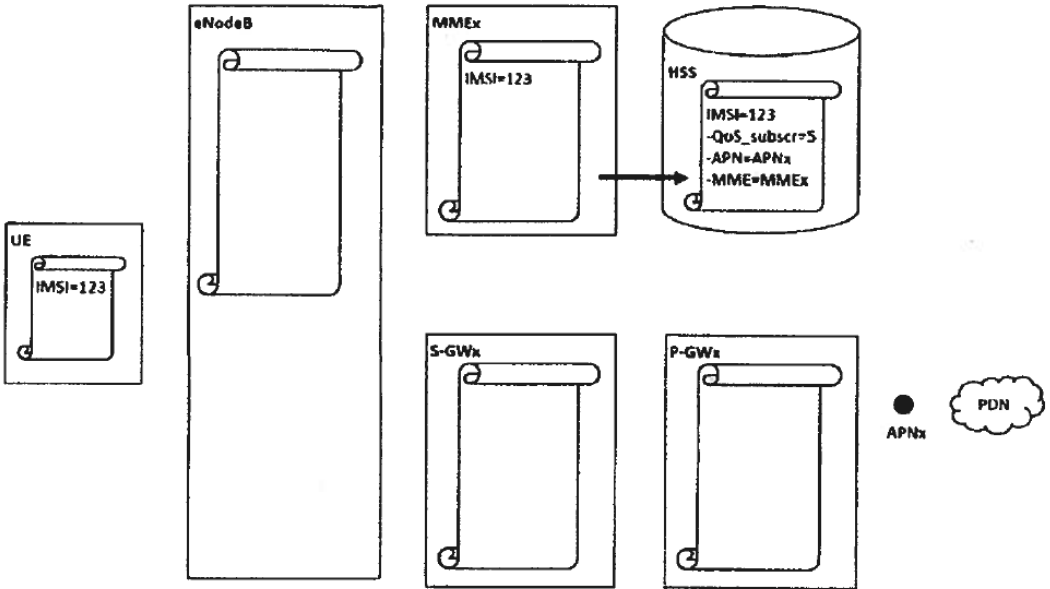


4.7. Steps 1 to 4, 8, 11, 12, 13, 15, 16, 17, 20 and 23 and the final situation have been clarified by Sisvel by means of the following illustrations:

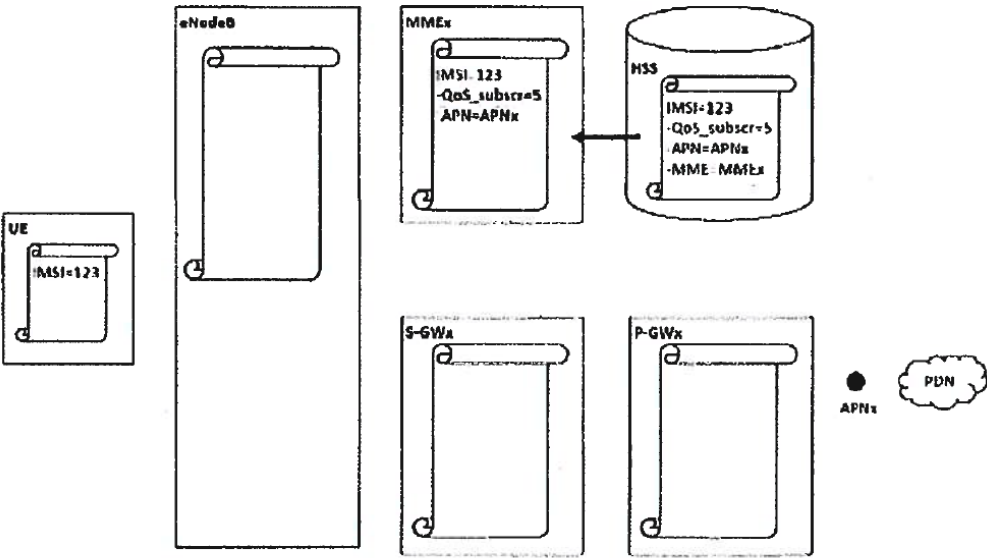
stappen 1 tot en met 4



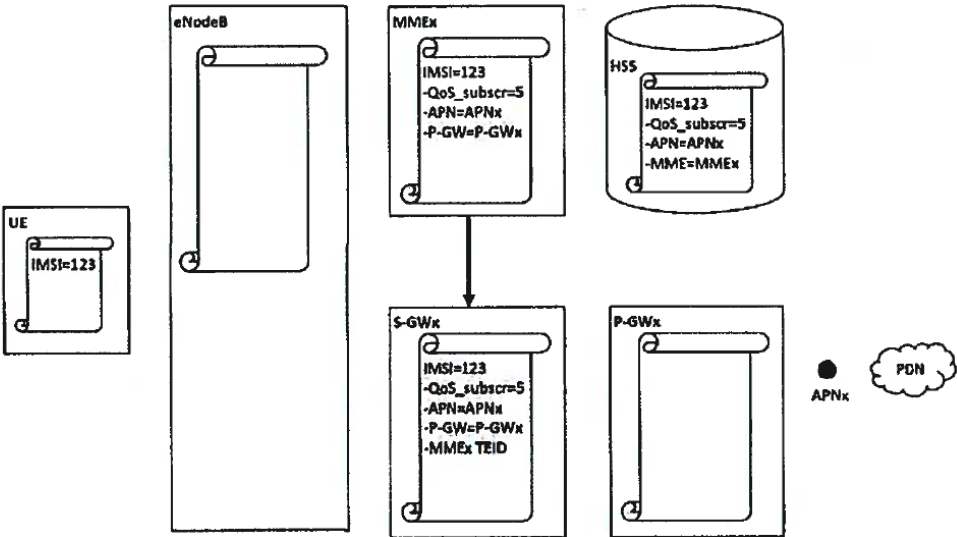
stap 8



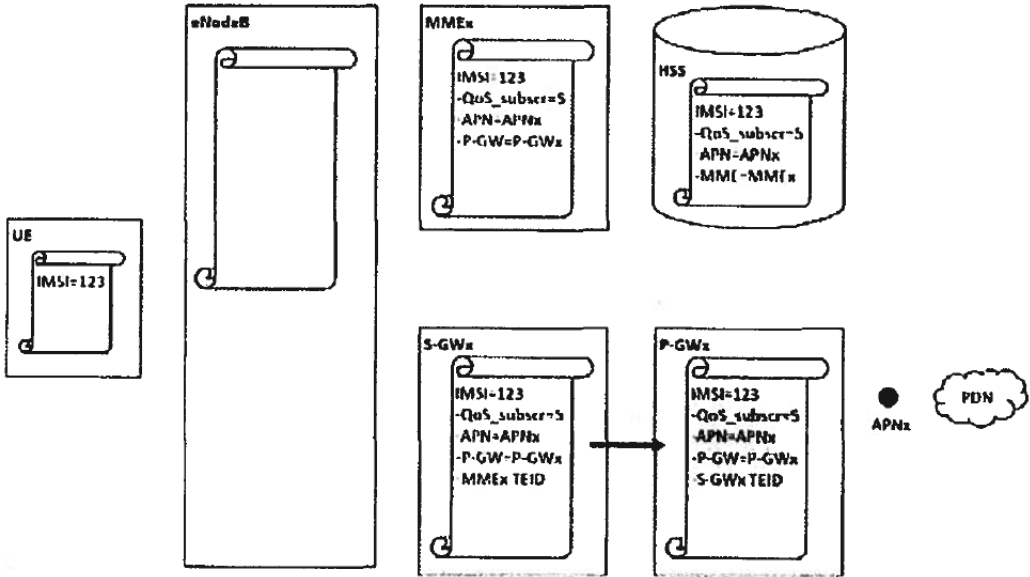
stap 11



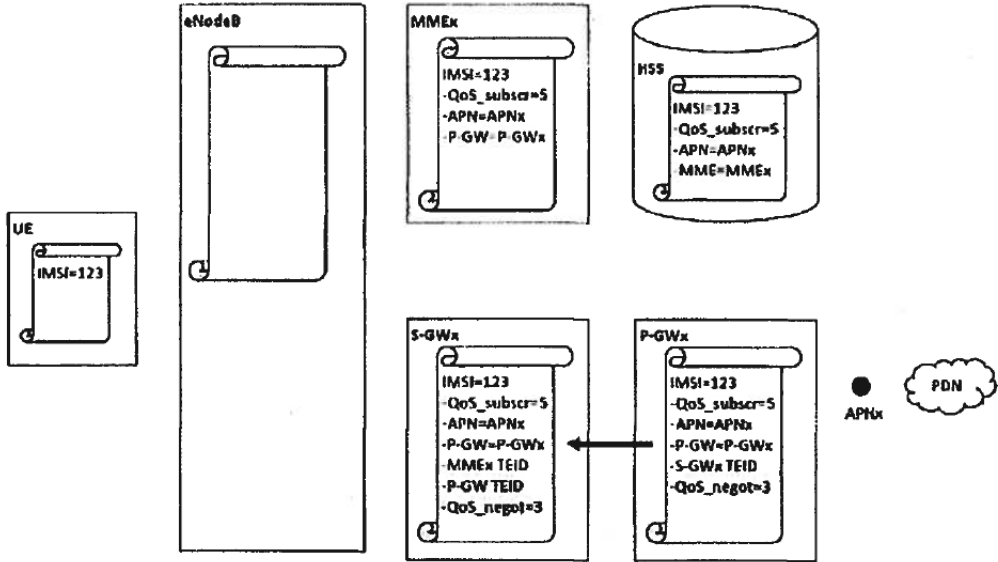
stap 12



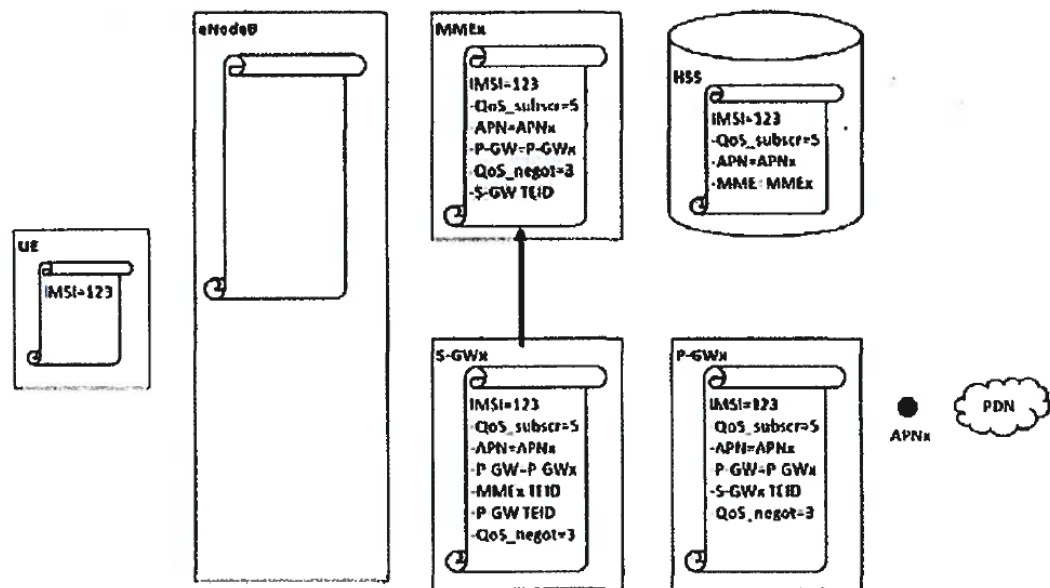
stap 13



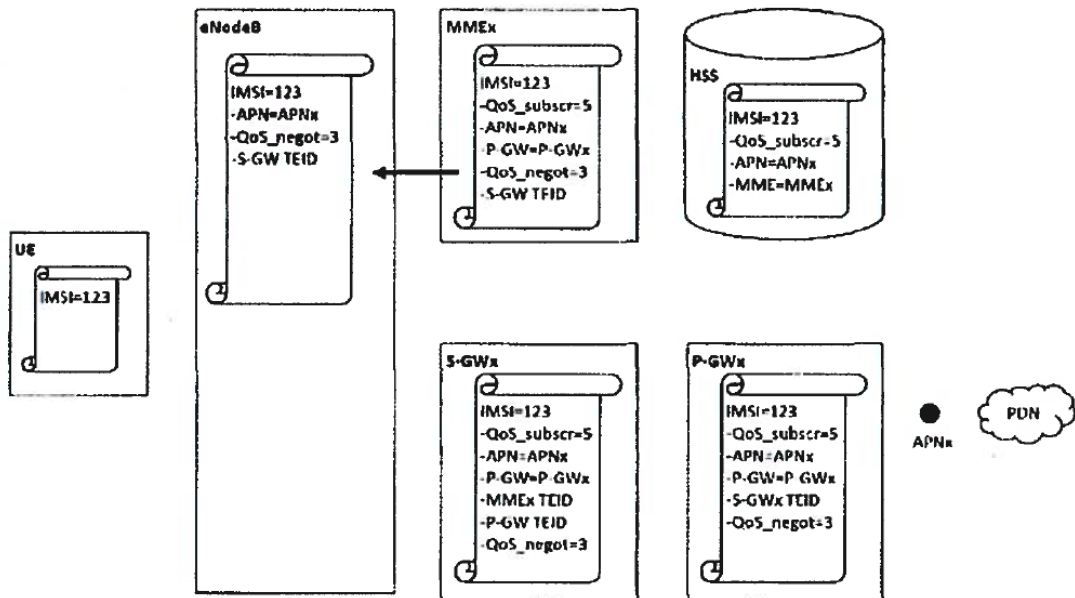
stap 15



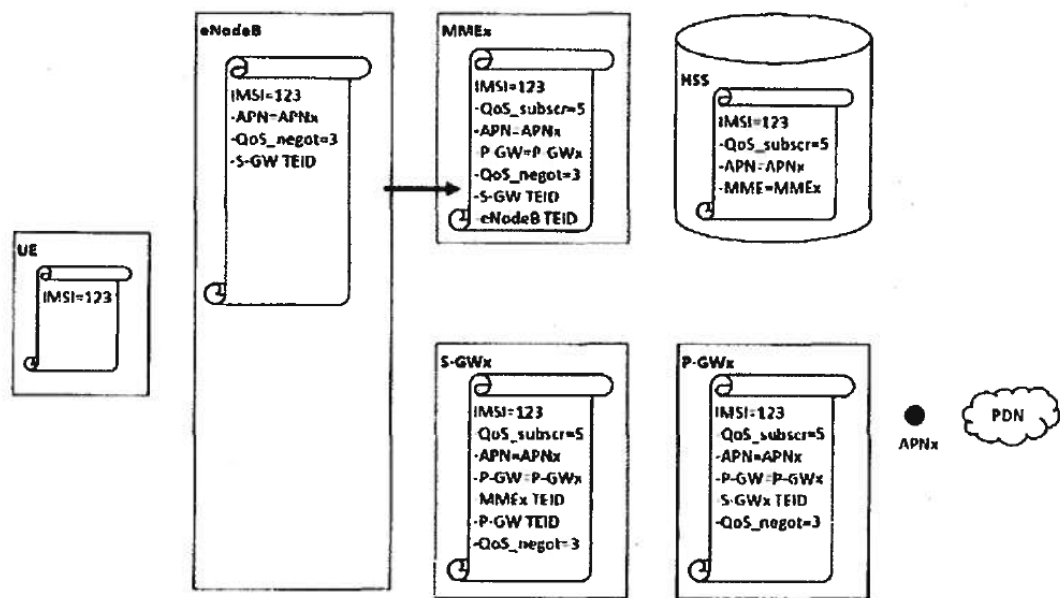
step 16



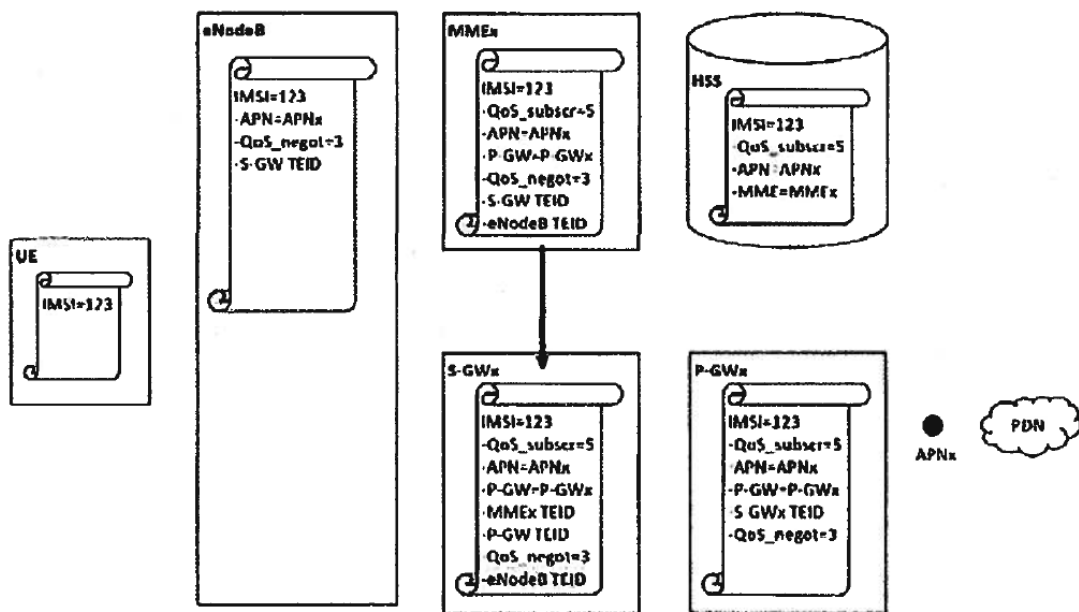
step 17



step 20

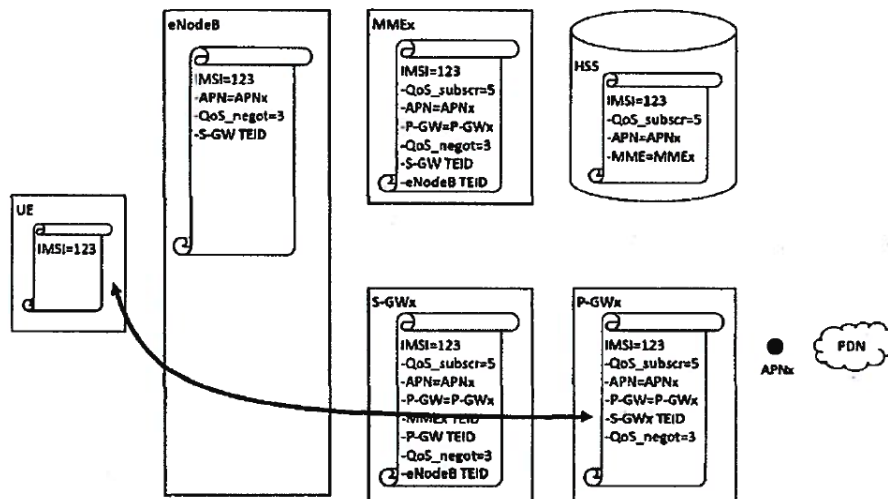


step 23



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de eindsituatie



4.8. Sisvel argues that it follows from the step-by-step plan shown above and the subsequent illustrations – among other things – that in the LTE standard, as with the invention embodied in the patent, the mobile phone sends an attach request (configured in a certain way) to the support node in the wireless network (in the LTE standard the MME and in the patent the SGSN), that initiates a create communication channel default procedure ('triggert') in that network between that support node and the gateway support node (in the LTE standard the P-GW and in the patent the GGSN). The claim feature referred to by Sisvel in this respect ("*wherein the attach request is configured to trigger a create communication channel default procedure between said support node (2) and the gateway support node (4)*") have in common the independent process claim (claim 1) and the independent design claim (claim 7) of the patent.

4.9. Xiaomi c.s. contests Sisvel's argument that, because of the differences between the network architecture of the patent and that of the LTE standard, it cannot be said that they infringe the patent by marketing mobile phones which support the LTE standard. More specifically, Xiaomi c.s. submits that:

- in the LTE standard, as in the patent, although the mobile phone sends an attach request to the support node (MME) in the network in a certain manner and that request, as in the patent, reaches (ultimately) the gateway support node (P-GW), this is not achieved, as in the patent, by sending a signal from the support node (SGSN) (directly) to the gateway support node (GGSN); that signal goes, according to Xiaomi c.s., to the S-GW, a network element which does not qualify as a gateway support node within the meaning of the patent;
- in the LTE standard, data packets can only be exchanged between the mobile phone and the network, and thus the procedure for setting up a communication channel is only complete, once the base station (the eNodeB) has been informed of the S-GW to which it must send packets intended for the mobile phone and the S-GW knows to which base station data intended for the mobile phone must be sent (this concerns step 17, 20, 23 and 24 of the step-by-step plan referred to by Sisvel), while in the network covered by the patent a procedure between the support node (SGSN) and gateway support node (GGSN) is sufficient

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to enable the exchange of data packets between the mobile phone and the network.

4.10. Sisvel first responded to this defense by acknowledging that the network architecture of the patent (based on GPRS/GSM) is not the same as the network architecture of the LTE standard. However, in Sisvel's view, these differences do not matter as far as the question of infringement is concerned:

- (i) The claims invoked are (exclusively) aimed at (the configuration of) a mobile phone and not at (the construction of) the wireless network;
- (ii) These differences only concern the number of network elements and the patent can also be applied to networks consisting of more elements than those described in the claims and the description of the patent;
- (iii) The S-GW in the LTE standard only functions as a 'conduit' between the MME and the P-GW;
- (iv) the MME and the S-GW in the LTE standard jointly perform the function of a support node within the meaning of the patent (forming a functional unit);
- (v) the claims relied on do not require the presence of a base station;
- (vi) the claims relied on do not require the procedure concerning the setting up of the communication channel to be completed.

4.11. The court will discuss the defenses of Xiaomi c.s. and Sisvel's response to them separately below.

Ad (i)

4.12. In agreement with Xiaomi c.s., the Court is of the opinion that it cannot be said that the claims invoked by Sisvel only put (a certain configuration of) a mobile phone under protection. The wording of the claims points to the contrary; after all, they also describe what the wireless network must (in any event) consist of, namely a support node, a gateway support node and a radio access network. In addition, it describes the procedure for setting up the communication channel between those network elements. Moreover, Sisvel seems to contradict itself on this point, where it also states the following: 'the patent eliminates both a role for the mobile station (the modified attach request) and a role for the network (detection of that modification in the attach request and subsequent action to set up that standard channel) for the purposes of setting up the standard communication channel'⁵.

Ad (ii)

4.13. It may be that (which can be deduced from the words 'at least' in claims 1 and 7 and from the statement in paragraph [0012] of the patent description that the invention contained therein '*is applicable to a great variety of telecommunication systems*'), for the patent *to be* applicable, in principle it does not matter how many elements the network consists of, but the number of network elements is not the only one in which the network of the patent differs from that of the LTE standard. As will be considered below, the LTE standard has a network that is (also) differently organized with a procedure for setting up a communication channel between other network elements. Therefore, the Court does not follow Sisvel in its arguments.

⁵ No. 24 of Sisvel's pleading notes.

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Ad (iii)

4.14. The Court holds first of all that Sisvel does not claim that the MME in the LTE standard (according to Sisvel the support node within the meaning of the patent) signals directly with the P-GW (according to Sisvel the gateway support node within the meaning of the patent), but only with the S-GW. Nor does Sisvel claim that the S-GW in the LTE standard qualifies as a gateway support node within the meaning of the patent. However, according to Sisvel, the S-GW in the LTE standard only acts as a conduit between the MME and the P-GW.

4.15. The Court does not follow Sisvel in this argument. A feature of a conduit is that information received by it is transmitted without processing or examination. If the S-GW only fulfilled the function of a conduit, all the information necessary to 'trigger' the procedure relating to the setting up of the communication channel by the mobile telephone should already have been provided to the MME, so that that information could, via the S-GW, reach the P-GW unaltered. That is not the case at present. From a comparison between the images that Sisvel has submitted in relation to this part of the procedure concerning the setting up of a communication channel (see paragraph 4.7, steps 12 and 13), it follows that the S-GW, after having received the request from the MME to set up a communication channel from the mobile phone, adds information to the message of the MME to that effect, namely its own TEID, and removes information from that message, namely the TEID of the MME, before sending the message to the gateway support node (the P-GW). It also follows that if the S-GW from the P-GW receives a response to the request from the MME (step 15), the S-GW adds its own TEID to the message it then forwards to the MME (step 16) and removes the TEID from that message from⁶.

4.16. The fact that the S-GW adds and removes information from the MME's request and the P-GW's response in the manner described above is also contained in the standard specification document TS 401 (EP10B) submitted by Sisvel in support of the infringement. Moreover, it follows from that document that the S-GW adds not only its own TEID to the notification, but also its own address (for the user plane⁷). Reference is made in this connection to the following passages (underlining court):
(section 5.3.2.1. step 13, pages 79 and 80)

The Serving GW creates a new entry in its EPS Bearer table and sends a Create Session Request (IMSI, MSISDN, APN, Serving GW Address for the user plane, Serving GW TEID of the user plane, Serving GW TEID of the control plane, RAT type, Default EPS Bearer QoS, PDNType, PDN Address, subscribed APN-AMBR, EPS Bearer Identity, Protocol Configuration Options, Handover Indication, ME Identity, User Location Information (ECGI), MS Info Change Reporting support indication, Selection Mode, Charging Characteristics, Trace Reference, Trace Type, Trigger Id, OMC Identity, Maximum APN Restriction, Dual Address Bearer Flag) message to the PDN GW indicated by the PDN GW address received in the previous step.

⁶ The Court notes that from the figures concerning steps 15 and 16 (see paragraph 4.7) it seems that it can be deduced that the TEID of the MME is also included in the Create Session Response message from the P-GW to the S-GW, which TEID, however, is not passed on to the MME. As it was not able to detect this difference in the standard specification document TS 401, which is still to be discussed below, it did not take this into account.

⁷ In the LTE standard, the user data goes via the '*user plane*' and the control data via the '*control plane*'.

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(Section 5.3.2.1, step 16, page 81; the P-GW is referred to as PDN GW)

The Serving GW returns a Create Session Response (PDN Type, PDN Address, Serving GW address for User Plane, Serving GW TEID for User Plane, Serving GW TEID for control plane, EPS Bearer Identity, EPS Bearer QoS, PDN GW addresses and TEIDs (GTP-based S5/S8) or GRE keys (PMIP-based S5/S8) at the PDN GW(s) for uplink traffic, Protocol Configuration Options, Prohibit Payload Compression, APN Restriction, Cause, MS Info Change Reporting Action (Start), APN-AMBR) message to the new MME.

4.17. Contrary to what Sisvel argues, the information thus added and removed by the S-GW is not just information to stay connected. A TEID, for example, serves to identify, as its name (Tunnel Endpoint Identifier) suggests, the end point of a tunnel/channel. By adding its own TEID to the messages of the MME and the P-GW and deleting the TEID of the MME and the P-GW, the S-GW determines (also) between which network elements the communication channel will be located, i.e. (in the case of the LTE standard) between the P-GW, the S-GW and the base station (eNodeB); the MME is not part of that channel. Sisvel also acknowledges that the S-GW adds its own TEID that performs this function, at least in the summons. In this respect, the court refers to paras. 33 and 36 of the writ of summons, which read as follows: (marginal 33)

In step 13, the S-GW forwards the received request to the P-GW, where the S-GW inserts its own TEID, referred to as "S-GWx TEID", which the P-GW will eventually use to send data packets for the UE to the S-GW'.

(marginal 36)

Then, in step 16, the S-GW sends the answer to the MME (...), replacing the TEID of the P-GW with the TEID of the S-GW itself, the "S-GWx TEID". The base station will eventually use this TEID to send data packets to the S-GW. '

The Court also found support for this in the aforementioned standard specification document TS 401, which states that *"the Serving GW is the gateway which terminates the interface towards E-UTRAN"* and that one of the functions of the S-GW is 'packet routing and forwarding' (cf. section 4.4.3.2 on page 41). This means that the S-GW in the LTE standard is also an essential part of setting up a communication channel and therefore this procedure does not only take place between the MME (the support node according to Sisvel) and P-GW (the gateway support node according to Sisvel), as is the case with the patent.

Ad (iv)

4.18. First of all, the Court observed that Sisvel explicitly referred in the writ of summons to the MME present in the network of the LTE standard as the (only) support node within the meaning of the patent. By arguing otherwise at a later stage of the proceedings, in response to a defense by Xiaomi c.s., it undermines the strength of the (later) position that the MME and S-GW would be a functional unit. However, even in that later position Sisvel cannot be followed.

4.19. It follows from what has been considered above in paragraphs 4.14-4.17 that it cannot be said, as Sisvel argues, that the MME and the S-GW in the LTE standard are a 'split-level' support node within the meaning of the patent. Indeed, both the MME and the S-GW have a separate role in signaling for setting up a communication channel between the P-GW and the mobile phone and respond with different messages/signaling to the mobile

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phone's attach request. Furthermore, if there were in fact a functional unit, it would not be necessary for the MME to signal with the S-GW and vice versa, and the information contained in the mobile telephone's request to initiate a procedure for setting up a communication channel would, after being sent to the MME, remain the same until it left the alleged 'functional unit', which is not the case.

4.20. In the District Court's opinion, what also does not fit in with being a functional unit is that the MME and the S-GW can perform their functions in ever-changing compositions; for example, during the create communication channel procedure the MME can remain the same, while the S-GW can change. In this respect, the District Court refers to paragraph 5.5.1.1.3 of standard specification document TS 401 (page 151 et seq.), which is entitled '*X2-based handover with Serving GW relocation*'.

4.21. In so far as Sisvel argues that it is also apparent from the patent that the mobile telephone does not always communicate with the same physical SGSN, with reference, for example, to Figure 5, which shows the possibility that the mobile telephone communicates with a new SGSN where it used to communicate with an old SGSN, that argument fails. Claim 7 in figure 5 reads entirely on the new SGSN. In Figure 5, the standard create communication channel procedure takes place between the (new) support node and the GGSN (step 8) following an attach request from the mobile phone sent to the same (new) support node (step 1). Therefore, the court does not read the dynamics that Sisvel wants to read in figure 5. In other words, no example can be found in the patent in which '*a support node (2)*' to which the attach request is sent is not the same '*(said) support node (2)*' that, together with the '*gateway support node*', sets up the communication channel default procedure. In the LTE standard, however, these are distinct network elements (the MME and the S-GW), which can also operate in varying combinations.

4.22. The Court also considers it important in that regard that if, as Sisvel states, the MME and the S-GW were a functional unit, this should mean that, at the time when the mobile telephone sends the request to set up a communication channel procedure, the combination of MME and S-GW would be established. However, Xiaomi c.s. have undisputed, and this is also confirmed by Sisvel's confirmation in the image relating to steps 1-4 cited above, that the mobile telephone sends the request in question to the MME only because, at that time, it does not yet know which element in the network will act as S-GW; the association between the MME and the S-GW only arises after the attach request has been sent by the mobile telephone and received by the network. In other words, at the time of sending the request to set up a communication channel procedure, the mobile phone's request is only configured to trigger a procedure between any MME/-S-GW combination (to be defined later) (and any P-GW). This is also recognized by Sisvel's expert N. Wiffen, where he mentions the following in his report of 17 April 2020 (marginal number 208): '*When the MME receives the Combined Attach Request from the UE, the MME (like the SGSN in a GPRS system on receipt of a PDP Context Activation Request) internally processes this Attach Request to trigger the establishment of a communication channel in the network. (...) When triggering this process, the MME has to determine which* [underline Wiffen, addition court] *S-GW would be appropriate to use (...).* '

4.23. The fact that, in order to complete the procedure for setting up a communication channel (see also below), the S-GW transmits its own TEID to the base station (eNodeB) also does not point in the direction of Sisvel's assertion that MME and S-GW are a functional unit; transmitting its own TEID would not be necessary if MME and S-GW were one; the

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base station would then not have to be informed of the separate existence of the S-GW.

4.24. Sisvel's argument, taken together, boils down to the fact that the network in the LTE standard, in relation to the network in the patent, in fact has the character of a 'black box'; in Sisvel's view, the structure of the network in question does not matter, as long as it is clear and perceptible what request is made to the network and how this request will come back to the network and the steps relating to it correspond to steps taken in the patent. It follows from what has been considered above that Sisvel cannot be followed.

Ad (v)

4.25. The fact that the claims invoked by Sisvel do not require the presence of a base station is, in the opinion of the court, irrelevant. What matters in this case is whether the proceedings concerning the setting up of a communication channel in the LTE standard involve the same network elements with the same functions as in (the relied claims of) the patent. The District Court answers this question in the negative, as follows from what has been considered above and will be considered below.

Ad (vi)

4.26. In the opinion of the court, the claims invoked by Sisvel do require that the procedure concerning the setting up of a communication channel be completed. The invention embodied in the patent seeks to ensure that the mobile telephone can send and receive data packets from the network; the mobile telephone's 'attach request' is aimed at this, as is the procedure for setting up a communication channel. In that regard, the Court refers to paragraphs [0001] and [0002] of the description of the patent, which, in so far as they are currently relevant, read as follows:

(paragraph [0001])

'The present invention is directed to methods and devices for attaching a mobile equipment (...) to a wireless communication network so as to be able to originate or receive media such as a phone call, or data or message transmission. '

(paragraph [0002])

'When a user equipment is newly attached to a wireless communication network for receiving and/or originating call, data transmissions or the like, an attachment process for attaching the user equipment to the wireless communication network is necessary. '

This also follows from figure 5 of the patent, which includes 'Attach Complete' as the final step (step 10). Moreover, according to the patent it is precisely the advantage of the 'combined attach and communication channel procedure' that no further signaling is required and data transmission can start immediately (see paragraph [0010] of the patent description). Moreover, the argument does not alter the fact that, as considered above and contrary to the patent claims, in the LTE standard the attach request is sent to another network element (the MME) than the network element (the S-GW) which sets up the communication channel procedure with the P-GW.

Conclusion infringement

4.27. In conclusion, the Court is of the opinion that Xiaomi c.s. has not infringed independent claims 1 and 7 of the patent, either directly or indirectly. All other claims (2, 8

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and 10) invoked by Sisvel are dependent on claims 1 and 7, so that (direct or indirect) infringement cannot be established based on those claims either.

4.28. Sisvel also submits that, even if it is to be assumed that Xiaomi's mobile telephones do not comply with the literal wording of the claims relied on by Sisvel, Xiaomi is nevertheless infringing because, in any event, the mobile telephones marketed by Xiaomi are equivalent to the invention protected by the patent. Nor does the Court follow these arguments from Sisvel.

4.29. Sisvel has not substantiated its claim that there is equivalence in its writ. It merely stated that Xiaomi c.s.'s mobile telephones perform essentially the same function in essentially the same way and with essentially the same result. That is insufficient. In so far as Sisvel has further substantiated this assertion in her pleading (marginal numbers 174-175), this, if not already too late, must be disregarded. After all, as considered above, the procedure 'triggered' by the mobile telephone's request to set up a communication channel procedure is carried out in a clearly different manner in the network of the patent than in the network of the LTE standard. More, different and distinguishable network elements are involved. Thus, it is not 'essentially the same function'. The District Court can leave the answer to the question as to whether the LTE standard does not (have to) send more signals due to the involvement of more elements in the setting up of the communication channel procedure, which is precisely what the patent says it wants to avoid.

Acting unlawful?

4.30. Sisvel also bases its claims on unlawful conduct on the part of Xiaomi c.s. However, irrespective of the alleged infringing conduct (direct or indirect or by way of equivalence) and the failure to negotiate with FRAND, Sisvel has failed to substantiate her position. Now that the Court is of the opinion that Xiaomi c.s. does not infringe the patent, there is no unlawful conduct. In so far as Sisvel's assertions should read that it accuses Xiaomi c.s. of other unlawful acts, such as acting in a group and (otherwise) involvement in patent infringement, it has not made this sufficiently concrete either, and this accusation is equally based on the incorrect premise that there is infringement of the patent. Consequently, in so far as the claims are based on a commune tort or delict, they cannot be allowed either.

Conclusion

4.31. As a result of the foregoing, Sisvel's claim must be dismissed in the main proceedings in the original action. The other non-infringement defenses of Xiaomi c.s. no longer need to be discussed, as does her FRAND defense.

In the procedural issues

4.32. What applies to the action in the main proceedings under the original action also applies to Sisvel's claim for interim relief, which must also be rejected, since Sisvel bases the prohibitions it seeks in that regard on the same basis as the prohibitions it seeks in the main proceedings under the original action.

4.33. The fact that the FRAND defense of Xiaomi c.s. no longer needs to be discussed in the main proceedings of the original action also means that Xiaomi c.s. no longer has any interest in a decision on the exhibition procedural issue which she raised in connection with

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that defense, so that the claim in that procedural issue must be dismissed. That rejection means that the condition under which Sisvel raised its claim in connection with the exhibition procedural issue has not been met, so that an assessment of that claim is not permissible. The counterclaim brought by Xiaomi c.s. in the context of that conditional exhibition procedural issue shares that fate.

4.34. The District Court assumes that Sisvel and Xiaomi c.s. will return or destroy the confidential documents submitted within the framework of the District Court's Article 22 DDCP order (see above under 1.1) and will keep the knowledge they have acquired on the basis of those documents secret as previously determined by the District Court.

Objections

4.35. Sisvel submits that, in its exhibit document, Xiaomi c.s. adopted further positions (technique, EP 272) which it did not take in procedural documents of an earlier date. Those (new) assertions must therefore be disregarded, Sisvel submits. However, none of the assertions which, according to Sisvel, should be disregarded in the assessment concerns the non-infringement defense of Xiaomi c.s. which the Court follows. Sisvel therefore no longer has any interest in a decision on the objection it has raised.

4.36. A decision on the objection raised by Xiaomi c.s. against the four (new) auxiliary requests submitted by Sisvel in respect of the technique at the time of the deed of submission can also be omitted due to lack of interest in the matter, since the court, ignoring the question of the validity of the patent (to which the auxiliary requests relate), has ruled that there is no infringement.

In conditional counterclaim

4.37. The outcome of the main proceedings in original action means that the condition under which Xiaomi c.s. brought her counterclaim is not satisfied. It is therefore that this claim is not assessed.

Litigation costs

4.38. With another hearing on the FRAND defense of Xiaomi c.s. still to come (see above under 1.2 and 1.4), the parties have not yet fully specified their costs.

4.39. The court will therefore stay any decision until the date to be (further) determined as the date on which a final judgment will be delivered following the hearing held on 19 June 2020.

5. The decision

The court:

shall reserve any decision until the date to be (further) determined as the date on which a final judgment will be rendered after the end of the oral hearing held on 19 June 2020;

shall bring this interlocutory judgment to the attention of the assembly before which the oral argument was made on 19 June 2020.

This judgment has been rendered by E.F. Brinkman, J.E. Bierling and J.H.F. de Vries and publicly pronounced by D. Nobel, docket judge, on 4 November 20

