

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen  
(D)  No distribution

**Datasheet for the decision  
of 27 May 2011**

**Case Number:** T 0243/08 - 3.5.03

**Application Number:** 04253535.1

**Publication Number:** 1492319

**IPC:** H04M 7/00

**Language of the proceedings:** EN

**Title of invention:**

A method and apparatus for processing calls in a core packet network using a half-call model

**Applicant:**

LUCENT TECHNOLOGIES INC.

**Opponent:**

-

**Headword:**

Call processing method/LUCENT

**Relevant legal provisions:**

EPC Art. 54, 56

**Relevant legal provisions (EPC 1973):**

-

**Keyword:**

"Novelty (main and first and second auxiliary requests) - no"  
"Inventive step (third auxiliary request) - no"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0243/08 - 3.5.03

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.03  
of 27 May 2011

**Appellant:** LUCENT TECHNOLOGIES, INC.  
600 Mountain Avenue  
Murray Hill NJ 07974-0636 (US)

**Representative:** Sarup, David Alexander  
Alcatel-Lucent Telecom Limited  
Unit 18, Core 3, Workzone  
Innova Business Park  
Electric Avenue  
Enfield EN3 7XU (GB)

**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 10 September 2007  
refusing European patent application  
No. 04253535.1 pursuant to Article 97(1) EPC  
1973.

**Composition of the Board:**

**Chairman:** F. van der Voort  
**Members:** T. Snell  
R. Moufang

## Summary of Facts and Submissions

I. This appeal is against the decision of the examining division refusing European patent application No. 04253535.1, with publication number EP 1 492 319 A, *inter alia* on the ground that the subject-matter of the independent claims was not new having regard to the disclosure of document:

WO 02/052826 A,

hereinafter referred to as D1.

II. In the notice of appeal the appellant requested that the decision be set aside and a patent granted. In a subsequently filed statement of grounds, the appellant indicated that the claims currently on file (ie the claims as originally filed) were maintained as the "Primary Request". Additionally, claims of an auxiliary request were submitted.

III. In a communication accompanying a summons to oral proceedings the board gave a preliminary opinion that the subject-matter of the independent claims of neither request met the requirement of novelty (Articles 52(1) and 54 EPC) with respect to the disclosure of D1, referring however to the following English language version of D1 (referred to hereinafter as D1-US), which the appellant presumed to be substantively identical to D1:

US 2004/0037270 A.

IV. In a letter dated 26 April 2011 in response to the board's communication, the appellant maintained the two requests on file as the main and first auxiliary requests and additionally filed claims of second and third auxiliary requests. The appellant further informed the board that it would not attend the oral proceedings and requested cancellation of the oral proceedings and continuation of the procedure in writing.

V. Oral proceedings were held on 27 May 2011 in the absence of the appellant. The board understood from the appellant's written submissions that it requested that the decision be set aside and a patent granted on the basis of claims 1 to 10 as originally filed, or, alternatively, claims 1 to 10 of the first auxiliary request filed with the statement of grounds, or, alternatively, claims 1 to 9 of the second auxiliary request or claims 1 and 2 of the third auxiliary request, both filed with the letter dated 26 April 2011. After deliberation, the board's decision was announced at the end of the oral proceedings.

VI. Claim 1 of the appellant's **main request** reads as follows:

"A method for processing calls in a voice over packet system, the system including a call controller having control modules, a plurality of media gateways, an ingress channel, an egress channel and a core packet network, the method comprising:

receiving a call having call content, originating information, and terminating information on the ingress channel;

establishing an originating half call context for the call based on the originating information;

controlling the originating half call context for the call by a first control module of the call controller;

instructing a second control module of the call controller to establish a terminating half call context for the call;

establishing the terminating half call context for the call based on the terminating information;

controlling the terminating half call context for the call by the second module;

transmitting the call content from the originating context to the terminating context based on the controlling of each call context by the first and second control modules; and,

transmitting the call content out of the system on the egress channel."

VII. Claim 1 of the **first auxiliary request** is the same as claim 1 of the main request except that, in the step of "establishing the terminating half call context ...", the words "and the instructing" are added following the expression "based on the terminating information".

VIII. Claim 1 of the **second auxiliary request** is reproduced in full in the "Reasons for the Decision" below (cf. point 5.1).

IX. Claim 1 of the **third auxiliary request** reads as follows:

"A method for processing calls in a voice over packet system, the system including a call controller having at least two distinct control modules, namely a first control module and a second control module, said system further including a media gateway, an ingress channel, an egress channel and a core packet network, the method comprising:

receiving a call having call content, originating information, and terminating information on the ingress channel;

establishing an originating half call context for the call based on the originating information, wherein the originating half call context is established in the media gateway via communication therewith by the first control module;

controlling the originating half call context for the call with the first control module of the call controller;

providing signaling from the first control module to the second control module instructing the second control module of the call controller to establish a terminating half call context for the call;

establishing the terminating half call context for the call based on the terminating information, wherein the terminating half call context is established in the media gateway via communication therewith by the second control module;

controlling the terminating half call context for the call with the second control module;

transmitting the call content from the originating half call context to the terminating half call context

based on the controlling of each call context by the first and second control modules, respectively; and, transmitting the call content out of the system on the egress channel."

## **Reasons for the Decision**

### 1. *Procedural matters*

1.1 The board considered it to be expedient to hold oral proceedings in accordance with Article 116(1) EPC for reasons of procedural economy. The appellant requested cancellation of the oral proceedings and continuation of the procedure in writing (which the board understood as a request for a further communication), but advanced no reasons for doing so. As the board saw no reason for cancelling the oral proceedings or issuing a further communication, these requests were rejected. Having verified that the appellant was duly summoned the board decided to continue the oral proceedings in the absence of the appellant (Rule 115(2) EPC and Article 15(3) RPBA).

1.2 In the communication accompanying the summons the appellant was informed of the board's preliminary objection of lack of novelty. The board also indicated that if the board were to conclude that the requirement of novelty were met, it would be necessary at the oral proceedings to discuss the issue of inventive step starting out from D1 (Articles 52(1) and 56 EPC). The appellant was therefore aware that these issues would be discussed, and indeed presented arguments in response to the board's communication. In view of the

above and for the reasons set out below, the present decision complies with Article 113(1) EPC.

2. *Document D1-US*

Document D1-US, to which the board refers in this decision and which was referred to by the appellant in the statement of grounds, is a US patent application based on document D1, but published after the priority date of the present application. The appellant presumed that D1-US was substantively identical to D1 and hence referred to text passages and figures of D1-US only. Having reviewed both documents, the board has no reason to doubt the correctness of the appellant's presumption and will therefore do the same. Hence, hereinafter text passages in relation to D1 will be derived from D1-US.

3. *Main request - novelty*

3.1 In the following analysis, references to the text of the present application relate to the published application (EP 1 492 319 A).

3.2 The present application concerns a method and apparatus for processing voice over packet calls in a core packet network, eg of a mobile switching centre MSC, using a "half call model", by which is meant that the call is divided into an originating half call and a terminating half call, in which a respective "half call context" is established for each half call. The board understands the term "call context" to concern a software entity defining the routing of a call through a media gateway, ie the associations between the data flows entering and leaving the gateway.



3.3 Document D1, which is considered by the board to represent the closest prior art, discloses a system for processing voice calls via a core packet network, eg an IP-based network. Fig. 1 of D1-US in combination with the text in paragraph [0028] ff. shows an architecture comprising an IP network consisting of two local area networks (LANs) 54, 55 connected together by way of a wide area network (WAN). The system incorporates a private branch exchange PABX at three sites each comprising a number of cluster control units (CCU). Each CCU is responsible for the communications passing through its own access points, eg lines to terminals, radio base stations, links to networks or to leased lines (cf. paragraphs [0002] and [0029]). Certain CCUs 11, 21, 40, so-called "gateway CCUs", are also connected to one of the LANs 54, 55 (cf. paragraph [0033]). Each gateway CCU is provided with one or more gateway interfaces each having an address in the IP network. Various IP terminals are connected directly to the LANs. These IP terminals are managed by two call servers 57, 58 (cf. paragraph [0038]). Call servers are involved in controlling half calls relating to the terminal (cf. paragraph [0042]).

3.4 In one embodiment, referred to in D1 as the "second embodiment" (cf. paragraph [0038], lines 8-16), each of these call servers corresponds to the call server of a gateway CCU, and such CCUs then serve as a "reference CCU" for IP terminals, which know only the IP address of their reference CCU, to which they address their requests, and whose gateway interface subsequently relays the voice signals to the destination. In this "second embodiment", the call server of a terminal is

integrated into the reference CCU of the terminal (cf. paragraph [0045]). Such an entity will be referred to hereinafter as a "CCU/call server unit". It follows from the above that a CCU/call server unit incorporates both the functionality of a media gateway routing data to and from IP terminal(s) via the IP network and the call control functionality of a call server.

3.5 In accordance with D1 (cf. D1-US, paragraph [0049] ff.), a call is set up between a requester terminal and a requested terminal by executing two half calls executed in the corresponding CCU equipped with the interface for linking to the external network, ie the CCU/call server unit serving each terminal. Each half call relating to a terminal involves the establishment of a call processing task "T\_CAP", ie a software entity, and its execution in the CCU/call server unit. "T\_CAP" groups together various tasks including Simple Call Monitor task T\_SCM, which, inter alia, is tasked with call routing, ie implicitly with controlling the data flows entering and leaving the CCU (cf. paragraph [0042]). Each T\_CAP therefore is regarded by the board as a "half call context" within the meaning of the present application.

3.6 Using the wording of claim 1 of the main request, D1 discloses a method for processing calls in a voice over packet system, the system including a call controller having control modules (CCU/call server units respectively serving the requester and requested parties), a plurality of media gateways (the same CCU/call server units), an ingress channel (implicit), an egress channel (implicit) and a core packet network (WAN 56), the method comprising:

receiving a call having call content (cf. D1-US, paragraph [0040]), originating information, and terminating information on the ingress channel (cf. paragraphs [0052] and [0053]);

establishing an originating half call context (T\_CAP task 71, 171) for the call based on the originating information (cf. paragraphs [0049]-[0051]);

controlling the originating half call context for the call by a first control module of the call controller (cf. paragraphs [0050] and [0051]);

instructing a second control module of the call controller to establish a terminating half call context for the call (cf. paragraphs [0051]-[0058]);

establishing the terminating half call context (T\_CAP task 81, 181) for the call based on the terminating information (cf. paragraph [0058]);

controlling the terminating half call context for the call by the second module (cf. paragraph [0058]);

transmitting the call content from the originating context to the terminating context based on the controlling of each call context by the first and second control modules (implicit); and,

transmitting the call content out of the system on the egress channel (implicit).

3.7 Hence, in the board's view, all the features of claim 1 of the main request are disclosed, either explicitly or implicitly, in document D1.

3.8 Opposing this view, the appellant argues in the letter dated 26 April 2011, referring to paragraph [0038] of D1-US, that the call servers 57 and 58 of D1 manage IP terminals, not gateway CCUs. Furthermore, CCUs are not media gateways, as required by claim 1.

However, in the board's view a CCU/call server unit is indeed a media gateway (cf. point 3.4 above). Moreover, as already explained, a CCU/call server unit serves both as a call controller and a reference CCU for an IP terminal, whereby within this combined unit, call control operations in respect of the establishment and execution of the T\_CAP task for each half call (ie each half call context) are carried out. The board therefore concludes that D1 discloses the steps of controlling the originating and terminating half call contexts by the first and second control modules, respectively, as required by claim 1.

3.9 The appellant argues further that document D1-US at paragraph [0038] suggests using "one call server on the IP network for all the terminals" and that "the Board has not established that the particular call server supervising the requested terminal is different from the call server supervising the requester terminal". The board however points out that the reference in D1 to one call server is only one of the options proposed in D1 and does not correspond to the "second embodiment" referred to above, in which each gateway CCU has its own call server. As explained at page 5,

left-hand col., lines 1-11 of D1-US, a call server broadcasts a setup message, and (cf. paragraph [0058]) a call server supervising the requested terminal receives the broadcast message ("The call servers to which this [setup] message is broadcast ..."). It follows that a different call server broadcasts the setup message to the call server receiving the message, ie the call server which supervises the requested terminal.

3.10 In the statement of grounds, the appellant also refers to paragraph [0078] of D1-US and alleges that in this embodiment there are not two half call contexts, but merely a single call context. However, the board does not agree that in this embodiment there are not two half call contexts, since paragraph [0078] clearly refers to the separate T\_CAP tasks 171 and 181, respectively of the departing and arriving half calls.

3.11 The appellant further argues, referring to the impugned decision, that not all the technical features asserted as being disclosed by D1 relate to the same embodiment. However, the board regards all the features identified in above point 3.4 as relating to the "second embodiment" of D1.

The board therefore finds the appellant's arguments supporting the novelty of the subject-matter of claim 1 unconvincing.

3.12 The board concludes that the subject-matter of claim 1 is not new having regard to the disclosure of D1 (Articles 52(1) and 54 EPC).

4. *First auxiliary request - novelty*

4.1 Claim 1 of the first auxiliary request differs from claim 1 of the main request only in the addition, in the step of establishing the terminating half call context, of the words "and the instructing" following the expression "based on the terminating information". The board interprets the words "and the instructing" to refer to the earlier step of "instructing a second control module of the call controller to establish a terminating half call context for the call". In the board's view this additional wording is implicit in the wording of claim 1 of the main request, since the establishing step can only be carried out following an instruction to the second control module. The same is true of the method disclosed in D1, in that the terminating T\_CAP task established by the terminating CCU/call server unit is only established as a result of the instructing message broadcast by the initiating CCU/call server unit.

Hence, the board concludes that the subject-matter of claim 1 is not new with respect to the disclosure of document D1 either (Articles 52(1) and 54 EPC).

5. *Second auxiliary request - novelty*

5.1 Claim 1 of the **second auxiliary request** reads as follows, whereby additions with respect to the wording of claim 1 of the main request are underlined and deletions are placed within square brackets:

"A method for processing calls in a voice over packet system, the system including a call controller

having at least two distinct control modules namely a first control module and a second control module, said system further including[,] a plurality of media gateways, an ingress channel, an egress channel and a core packet network, the method comprising:

receiving a call having call content, originating information, and terminating information on the ingress channel;

establishing an originating half call context for the call based on the originating information, wherein the originating half call context is established in one of the plurality of media gateways selected as an originating media gateway via communication therewith by the first control module;

controlling the originating half call context for the call [by a] with the first control module of the call controller;

providing signaling from the first control module to the second control module instructing [a] the second control module of the call controller to establish a terminating half call context for the call;

establishing the terminating half call context for the call based on the terminating information, wherein the terminating half call context is established in one of the plurality of media gateways selected as a terminating media gateway via communication therewith by the second control module;

controlling the terminating half call context for the call [by] with the second control module;

transmitting the call content from the originating half call context to the terminating half call context based on the controlling of each call context by the first and second control modules, respectively; and,

transmitting the call content out of the system on the egress channel."

5.2 In the view of the board, these amendments add nothing to that which is inherently comprised in the "second embodiment" of document D1 explained above in connection with the main request. In this respect, D1 also discloses the use of two distinct control modules (CCU/server units), originating and terminating media gateways (CCU/server units), signalling from the originating call control module to the terminating call control module ("broadcast message"), and communication between a call control module and its associated media gateway (cf. page 5, left-hand col., lines 1-2 in combination with [0050]; as a T\_CAP task is created in a call server and executed in a reference CCU, it follows that there is communication between the call server and the CCU, ie internal communication within a CCU/call server unit).

5.3 The appellant argued in the letter dated 26 April 2011 that "processing a half-call, as disclosed by D1, is different than [*sic*] controlling a half-call". However, in the board's view, the CCU/call server unit controls a half call (cf. points 3.3 and 3.4 above). The appellant also argued that "the present claims recite that each half-call is both established **and** controlled by different control modules". However, in D1 different CCU/call server units establish and control each half call (cf. point 3.9 above). The appellant's arguments are therefore not convincing.

5.4 The board therefore concludes that the subject-matter of claim 1 of the second auxiliary request is not new



with respect to the disclosure of document D1 either (Articles 52(1) and 54 EPC).

6. *Third auxiliary request - novelty and inventive step*

6.1 Claim 1 of the third auxiliary request requires "a call controller having at least two distinct control modules, namely a first control module and a second control module ... wherein the originating half call context is established in the media gateway via communication therewith by the first control module ... [and] wherein the terminating half call context is established in the media gateway via communication therewith by the second control module" (board's underlining). It follows that claim 1 of the third auxiliary request differs from claim 1 of the second auxiliary request in that the originating and terminating call contexts are established in the same media gateway.

6.2 Document D1 does not explicitly consider a call establishment procedure between terminals accessing the network via the same media gateway, ie the same CCU/call server unit. Therefore there is no disclosure of a call establishment procedure where the originating and terminating half calls are associated with the same CCU/call server unit. The subject-matter of claim 1 is therefore new with respect to document D1 (cf. Article 54 EPC).

6.3 The technical problem starting out from document D1 is regarded as how to provide a call establishment procedure for terminals accessing the same CCU/call server unit in the "second embodiment" of D1.

- 6.4 Self-evidently the posing of this problem does not contribute to inventive step as it is obvious that two such terminals may wish to set up a communication.
- 6.5 In the board's view, in order to solve this problem, the skilled person would have no reason to deviate from the half call model which is apparently used in all embodiments of D1 (cf. eg paragraphs [0042], [0048] to [0050], [0070] and [0073]). Since a call between IP terminals will logically be routed via the IP network in any case, the skilled person would have no motivation to process calls between the terminals linked to the same CCU/call server unit any differently than calls proceeding via different CCU/call server units. In fact even conventional terminals can take on the appearance of an IP terminal and communicate via the IP network (cf. paragraphs [0066] and [0104]). However, even where the call is not routed via the IP network, eg for conventional terminals, apparently the half call model is retained (cf. paragraph [0070]). Therefore the use of the half call model for terminals communicating via the same CCU/call server unit is judged not to require inventive skill.
- 6.6 The appellant argued in the letter dated 26 April 2011 that "according to D1, only one call server is disclosed as managing any given gateway. Accordingly, if both the originating half-call context and the terminating half-call context reside in the same gateway of D1 then the same call server is supervising both half-call contexts". The board agrees, but is of the view that separate processes as described in paragraphs [0078] to [0084] of D1-US would still have to be carried out for each half call within the CCU/

call server unit. Since the term "control module", in one interpretation, could relate to merely a functional entity implemented as a programming or software module (cf. eg D1-US, paragraph [0048], which states that "Various types of software modules are used to perform the signal processing"), the skilled person starting out from D1 would consider it obvious to provide separate control modules in the same CCU/call server unit to respectively establish the originating and terminating half call contexts. Hence, the board finds this argument unconvincing.

The board concludes that the subject-matter of claim 1 of the third auxiliary request does not involve an inventive step (Articles 52(1) and 56 EPC).

7. *Conclusion*

As there is no allowable request, it follows that the appeal has to be dismissed.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar

The Chairman

C. Vodz

F. van der Voort