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**Datasheet for the decision  
of 8 August 2006**

**Case Number:** T 0112/06 - 3.5.03

**Application Number:** 95307024.0

**Publication Number:** 0708572

**IPC:** H04Q 7/24

**Language of the proceedings:** EN

**Title of invention:**

Virtual circuit management in a cellular telecommunication network

**Applicant:**

AT&T CORP.

**Opponent:**

-

**Headword:**

Virtual circuit management/AT&T

**Relevant legal provisions:**

EPC Art. 123(2), 113

EPC R. 71(2)

**Keyword:**

"Amendments - added subject-matter (yes)"

"Oral proceedings held in absence of appellant"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 0112/06 - 3.5.03

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.03  
of 8 August 2006

**Appellant:** AT&T Corp.  
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**Representative:** Sarup, David Alexander  
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**Decision under appeal:** Decision of the examining division of the  
European Patent Office posted 14 September 2005  
refusing European application No. 95307024.0  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** A. S. Clelland  
**Members:** F. van der Voort  
R. Moufang

## Summary of Facts and Submissions

- I. This appeal is against the decision of the examining division to refuse European patent application 95 307 024.0 (publication number EP 0 708 572 A).
- II. With the statement of grounds of appeal the appellant filed an amended set of claims and submitted arguments in support of the appeal.
- III. In a communication accompanying a summons to oral proceedings the board gave a preliminary opinion in which objections under Articles 84 and 123(2) EPC were raised, both in respect of the set of claims as decided upon by the examining division and which were understood by the board as pertaining to a main request and the amended set of claims as filed with the statement of grounds of appeal, which were understood by the board as pertaining to an auxiliary request.
- IV. In response to the board's communication, the appellant submitted arguments and requested that the impugned decision be set aside and a patent be granted based on the main or, alternatively, the auxiliary request, referred to above. Further, the appellant informed the board that he would not attend the oral proceedings and requested that they be cancelled and that the procedure be continued in writing.
- V. In a subsequent communication the board informed the appellant that the request to cancel the oral proceedings could not be granted and that the date fixed for the oral proceedings was maintained. Reasons were given.

VI. Oral proceedings were held on 8 August 2006 in the absence of the appellant. After deliberation, the board's decision was announced at the end of the oral proceedings.

VII. Claim 1 of the main request reads as follows:

"A method for establishing a downlink virtual circuit comprising:

receiving, at a radio port, a virtual circuit (VC) identifier from a wireless terminal;

attaching said virtual circuit identifier to an Operations Administration & Maintenance (OA&M) cell;

sending a set-reverse-VC message in said OA&M cell;

transmitting, from said radio port, said OA&M cell to a radio port manager over an uplink virtual circuit;

receiving said OA&M cell by a switch in said uplink virtual circuit;

reading said set-reverse-VC message; and

in response to said set-reverse-VC message, establishing said downlink virtual circuit in said switch."

Claim 1 of the auxiliary request reads as follows:

"A method for establishing a downlink virtual circuit in an ATM-based network for facilitating a handoff, comprising:

receiving, at a radio port, a virtual circuit (VC) identifier from a wireless terminal;

characterized by  
attaching said received virtual circuit identifier  
to an Operations Administration & Maintenance (OA&M)  
cell at said radio port;  
sending a set-reverse-VC message from said radio  
port in said OA&M cell;  
transmitting, from said radio port, said OA&M cell  
to a radio port multiplexer over an uplink virtual  
circuit;  
receiving said OA&M cell by a switch in said  
uplink virtual circuit;  
reading said received set-reverse-VC message at  
said switch; and  
in response to said set-reverse-VC message,  
establishing said downlink virtual circuit in said  
switch when resources for said downlink virtual circuit  
are available."

## **Reasons for the Decision**

1. *Article 123(2) EPC - claim 1 of the main request*
- 1.1 Claim 1 of the main request includes the feature of  
"sending a set-reverse-VC message in said OA&M cell",  
which was not included in the single claim as  
originally filed.
- 1.2 The application as originally filed does not however  
provide a basis for this feature for the following  
reasons:
- 1.3 The only passage in the description relating to the  
step of sending a set-reverse-VC message is at

column 41, lines 20 to 33 of the application as published (hereinafter reference is always made to the application as published). This passage relates to Fig. 17, which depicts the timing of the message flows for a successful hand-off event directed by a wireless terminal, and includes the following sentence:

*"The Target Radio Port attaches the VCI it received from the accessing wireless terminal and sends a set\_reverse\_VC message in a signaling OA&M cell to the radio port multiplexer which routes the OA&M ATM cell to the Packet Handler over the pre-established uni-directional VC connection."*

"VCI" is an abbreviation of virtual circuit indicator, see col. 8, lines 46 and 47.

1.4 Compared to the above-mentioned feature of present claim 1, this passage thus additionally specifies that it is a target radio port which sends the set-reverse-VC message; in the context of this application "target" in "target radio port" is interpreted by the board as referring to a handoff procedure in which the target radio port is that of the new route to be set up by the handoff, see also the title of corresponding main section 5.2 ("*Procedure for Wireless Terminal Directed Hand-Off: Messaging Details*"), col. 40, lines 29 to 46 ("*Target Radio Port*"), and Fig. 17 ("*handoff\_request*" and "*Target RP*").

1.5 Further, according to the above-quoted passage, the set-reverse-VC message is sent in an OA&M cell, which is a signalling OA&M cell, to a radio port multiplexer. The passage also specifies that the radio port

multiplexer routes the OA&M ATM cell to a packet handler over a pre-established uni-directional VC connection.

1.6 Since present claim 1 is not directed to a wireless terminal directed hand-off procedure and omits the features that the radio port is a target radio port, that the OA&M cell is sent to a radio port multiplexer and that the radio port multiplexer routes the OA&M ATM cell to a packet handler over a pre-established uni-directional VC connection, the claim defines the step of sending the set-reverse-VC message in more general terms than in the above passage. Since the above-mentioned feature was not part of the single claim as originally filed, present claim 1 thus attempts to define an intermediate generalisation on the basis of the embodiment described with reference to Figure 17.

1.7 The board notes that in the description there is also a passage relating to a "set\_reverse\_VC OA&M cell", which might arguably be associated with the set-reverse-VC message in the OA&M cell as referred to above. This passage, see col. 41, lines 50 to 54, reads as follows:

*"If resources are available along the entire route, then the hand-off request can be accepted, and the downlink VC identifiers established as the set\_reverse\_VC OA&M cell traverses the pre-established uplink VCC."*

From this passage it merely follows that the set-reverse-VC message in the OA&M cell is sent via a pre-established uplink VCC (i.e. a virtual circuit connection; see col. 5, lines 4 and 5), which is in

accordance with the passage quoted at point 1.3. Hence, it does not provide a basis for the omission of the features referred to above either.

The board also notes that the statement at the end of the description at col. 43, lines 15 to 19 ("*It is understood that the above described embodiments are merely illustrative of the application of principles of the invention and that other arrangements may be devised without departing from the spirit and scope of the invention.*") is too vague and too general in order to qualify as an adequate basis for a generalisation of the embodiment of Fig. 17 in terms of the particular intermediate generalisation as defined by present claim 1.

- 1.8 The appellant argued that in the summary of the invention at col. 2, lines 3 to 8, there was a statement which was consistent with the language of present claim 1 and did not include the omitted features referred to at point 1.6 above. Further, the appellant argued that the description at column 41 concerned a particular embodiment and that the scope of present claim 1 was not improperly broader than that particular embodiment, since there was no need for the claim to be limited to every detail of a description, otherwise claims would have become redundant to the description. Further, it was not necessary for every word from the above-quoted passage of the description to appear in the claim in order for the claim to be clear and supported by the description. Claim 1 in its present form was supported by the description and it was clear to the skilled person what was being covered by the claim. The appellant further argued that no



clarity issue was presented by not having the word "pre-established" in the claim, since it was obvious to the reader on reading claim 1 that the uplink virtual circuit must already have been established (one way or another) prior to the transmitting step of claim 1. If it were not, the transmitting step would not have been possible.

- 1.9 The board does not find these arguments convincing for the following reasons:

The passage at col. 2, lines 3 to 8, reads as follows:

*"An illustrative embodiment establishes a virtual circuit [sic] by receiving, at a radio port, a virtual circuit identifier from a wireless terminal and attaching the virtual circuit identifier to an OA&M cell. The radio port then transmits, over a pre-established unidirectional virtual circuit [sic], the OA&M cell to a radio port manager."*

and corresponds to the wording of claim 1 as originally filed. Whether or not this passage is, as argued by the appellant, consistent with the language of the present claim is not considered the appropriate criterion for whether or not the claim meets the requirements of Article 123(2) EPC. In the board's view, the decisive question in judging whether the claimed subject-matter extends beyond the content of the application as filed is whether or not it can be directly and unambiguously derived from the application as filed.

- 1.10 In the present case, the above-quoted passage from column 2 does not refer to a set-reverse-VC message and

for this reason alone cannot provide a basis for the feature of sending a set-reverse-VC message in the OA&M cell.

1.11 Even if for the sake of argument it were assumed that the sending of the set-reverse-VC message is somehow embedded in the step of transmitting the OA&M cell from the radio port to the radio port manager, according to the passage in column 2, the transmission would be over a pre-established unidirectional virtual circuit. Present claim 1 does not however specify that the uplink virtual circuit is pre-established.

1.12 The board notes that the feature of using a pre-established unidirectional virtual circuit is not only included in claim 1 as originally filed and referred to in the corresponding summary of the invention of the application as originally filed but is also discussed in the description, in which a clear distinction is made between hand-off scenarios in which use is made of pre-established virtual circuits and those in which the virtual circuits are not pre-established. The latter scenarios require a complete connection establishment at the time of a handoff request, whereas the former do not (see col. 42, lines 50 to 58).

The advantage of using pre-established virtual circuits between the packet handler and the radio ports, namely a faster handoff, is also explicitly mentioned, see col. 37, lines 16 to 23: "*The exemplary embodiment advantageously uses the advantages of ATM technology to enable hand-offs which are truly fast. In the exemplary embodiment, this is accomplished by either completely or partly pre-establishing the VP/VCS between a given*

*Packet Handler and all of its associated radio ports (and radio port multiplexors [sic] and by only activating those resources that are actually needed at a given time.*" and col. 37, lines 37 to 40:

*"Fortunately, the exemplary embodiment enables even "slow" hand-offs to be completed relatively quickly through the use of partially pre-established VP/VCS."*. Further, three handoff scenarios are described which differ as to whether or not pre-established virtual circuits are used, see col. 41, lines 18 to 24 ("*Pre-established Unidirectional VCCs*"), col. 42, lines 21 to 28 ("*Pre-established Bi-directional VPCs*"), and col. 42, lines 47 to 58 ("*Slow Handoff: No Pre-established Virtual Connections*")).

It follows that in the context of the present application the omission of "pre-established" cannot simply be regarded as having no bearing on the definition of the claimed subject-matter as suggested by the appellant.

- 1.13 The appellant's argument that the claim is clear and supported by the description may be relevant to the requirements set out in Article 84 EPC, but is not relevant to the question of whether or not the claim contains subject-matter which extends beyond the content of the application as originally filed, Article 123(2) EPC.
- 1.14 As to the issue of intermediate generalisation, the board concurs with the appellant that an independent claim usually defines the matter for which protection is sought in terms of a generalisation of particular embodiments described in the description. Usually, the

independent claim is followed by a number of dependent claims which define certain features of these particular embodiments.

However, in the present case, the application as originally filed included a single claim and a correspondingly drafted summary of the invention only. Under these circumstances, if amendments to the claim were to be based on the description of a particular embodiment, in which only certain features of the particular embodiment are selected whilst others are omitted, the application as originally filed must, either explicitly or implicitly, provide a basis for such an intermediate generalisation so that the skilled reader would immediately recognise that the omitted features were merely optional or at least not in close functional and structural relationship with the selected features, in order for the amendment to be allowable under Article 123(2) EPC. In the board's view this is not the case here; the appellant did not refer to any other passage in the description other than those already discussed above and, for the reasons set out above, the appellant's arguments did not convince the board.

1.15 In view of the above, the board concludes that the subject-matter of claim 1 cannot be directly and unambiguously derived from the application as filed. The claim therefore contains subject-matter which extends beyond the content of the application as filed and contravenes Article 123(2) EPC.

1.16 It follows that the main request is not allowable.

2. *Article 123(2) EPC - claim 1 of the auxiliary request*

2.1 Claim 1 of the auxiliary request is directed to a *"method for establishing a downlink virtual circuit in an ATM-based network for facilitating a handoff"* and includes the feature of *"sending a set-reverse-VC message from said radio port in said OA&M cell"*. This feature differs from the one cited at point 1.1 above only by the insertion of the wording *"from said radio port"*.

2.2 The claim thereby omits at least the feature that the radio port multiplexer routes the OA&M ATM cell to a packet handler over a pre-established uni-directional VC connection. For the same reasons as set out above in respect of the omission of this feature from claim 1 of the main request, see points 1.3, 1.5 and 1.6, the claim thereby attempts to define an intermediate generalisation on the basis of the embodiment described with reference to Fig. 17. The application as originally filed does not however provide a basis for this intermediate generalisation for the same reasons as set out above at points 1.7 and 1.10 to 1.12.

2.3 Consequently, claim 1 of the auxiliary request does not comply with the requirements of Article 123(2) EPC either.

2.4 It follows that the auxiliary request is not allowable.

3. In view of the foregoing, it is not necessary to consider any of the further objections according to the preliminary opinion given by the board in the

communication accompanying the summons to oral proceedings.

4. *Procedural matters*

4.1 The board considered it to be expedient to hold oral proceedings for reasons of procedural economy (Article 116(1) EPC). Since the appellant did not give any reasons to support his request to cancel the scheduled oral proceedings and the board did not see any reason for cancelling them, the request to cancel the oral proceedings and, consequently, the request to continue in writing had to be refused and the oral proceedings were held in the absence of the appellant pursuant to Rule 71(2) EPC.

4.2 The objections at points 1 and 2 above were raised in the communication accompanying the summons, in which the appellant was informed that at the oral proceedings it would be necessary to discuss the question of whether the claims comply with the requirements of Article 123(2) EPC. In deciding not to attend the oral proceedings the appellant chose not to make use of the opportunity to comment at the oral proceedings on any of these objections but, instead, chose to rely on the arguments as set out in the written submissions, which the board duly considered above.

4.3 The board is therefore satisfied that Article 113(1) EPC has been complied with.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

D. Magliano

A. S. Clelland