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Datasheet for the decision of 19 November 2019

Case Number: T 1249/16 - 3.5.05

Application Number: 06817845.8

Publication Number: 2003821

IPC: H04L12/723

Language of the proceedings: EN

Title of invention:
A STRATEGIC ROUTING DEVICE AND METHOD

Patent Proprietor:
Huawei Technologies Co., Ltd.

Opponent:
James Poole Limited

Headword:
MPLS network routing policy/HUAWEI

Relevant legal provisions:
EPC Art. 54, 56, 123(2)
RPBA Art. 12(4)

Keyword:
Novelty - (yes)
Inventive step - (yes)
Amendments - allowable (yes)
Late-filed evidence - admitted (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

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Case Number: T 1249/16 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 19 November 2019

Appellant: (Opponent)	James Poole Limited One Southampton Row London WC1B 5HA (GB)
Representative:	Brunner, John Michael Owen Carpmaels & Ransford LLP One Southampton Row London WC1B 5HA (GB)
Respondent: (Patent Proprietor)	Huawei Technologies Co., Ltd. Huawei Administration Building Bantian Longgang District Shenzhen, Guangdong 518129 (CN)
Representative:	Thun, Clemens Mitscherlich PartmbB Patent- und Rechtsanwälte Sonnenstraße 33 80331 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 10 March 2016 concerning maintenance of the European Patent No. 2003821 in amended form.**

Composition of the Board:

Chair	A. Ritzka
Members:	P. Cretaine
	G. Weiss

Summary of Facts and Submissions

I. This appeal is against the interlocutory decision of the opposition division, despatched on 10 March 2016, to maintain European patent No. 2 003 821 in amended form according to an auxiliary request 2 filed during the oral proceedings before the opposition division on 4 February 2016. The opposition was based on the grounds of
Article 100(a), (b) and (c) EPC.

The opposition division decided that the opposed patent fulfilled the requirements of Article 83 EPC and that the subject-matter of the claims according to auxiliary request 2 were clear (Article 84 EPC), met the requirements of Article 123(2) EPC, were novel (Article 54 EPC) and involved an inventive step (Article 56 EPC) having regard to the prior art disclosed in:

E1: WO 2005/101730 (of which an English translation was provided as document E1b and the corresponding European Patent Application EP 1708408 is referred to as E1a) and

E3: US 2002/0071390.

II. The opponent's notice of appeal was received on 19 May 2016 and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 19 July 2016. The opponent (appellant) requested that the decision be set aside and that the patent be revoked in its entirety. The appellant objected that the claims as amended during the opposition proceedings did not meet the requirements of Article 123(2) EPC and that the subject-matter of claim

1 was not novel (Article 54 EPC) with regard to E1 and did not involve an inventive step (Article 56 EPC) having regard to E1 in combination with

E5: Computer Networks, A Systems Approach, 3rd Edition, by Larry L. Peterson and Bruce S. Davie, 2003, or

E6: US 6 778 496, or

E10: G. Malkin: "RIP Version 2", IETF RFC 2453, November 1998.

The appellant also requested that document

E13: US 2004/0151181

be admitted into the proceedings and objected that claim 1 did not meet the requirements of Article 56 EPC having regard to E13 in combination with E5, E6 or E10. Oral proceedings were requested on an auxiliary basis.

III. By letter dated 1 December 2016, the proprietor (respondent) responded to the opponent's statement setting out the grounds of appeal. The respondent requested that the opponent's appeal be dismissed and that the patent be maintained according to the claims of auxiliary request 2 on which the decision was based, renamed as the main request. The respondent also submitted new sets of claims according to auxiliary requests 1, 2, 2a, 3, 3a, 4, 4a, 5, 5a, 6 and 6a and requested that E13 not be admitted into the proceedings. Oral proceedings were requested in case the main request was not allowed.

IV. A summons to oral proceedings was issued on 11 June 2019.

V. By letter dated 19 September 2019, the appellant informed the board that it would not be represented at the scheduled oral proceedings and withdrew its request for oral proceedings.

VI. In a communication pursuant to Article 15(1) RPBA sent on 7 October 2019, the board gave its provisional opinion that the main request met the requirements of Article 123(2) EPC and that the subject-matter of claim 1 appeared to be novel (Article 54 EPC) with regard to E1. The board further indicated the reasons why it was inclined not to admit E13 into the proceedings. The board further pointed to the aspects which would be discussed in respect of the main request during the oral proceedings, namely the requirements of Article 56 EPC with regard to E1 or E13 (if admitted) as the closest prior art. With respect to the auxiliary requests, the board indicated that their admissibility under Article 12(4) RPBA should be discussed first.

VII. Oral proceedings were held on 19 November 2019 in the absence of the appellant. The appellant requested in writing that the decision under appeal be set aside and that the European patent be revoked. The respondent requested that the appeal be dismissed (main request) or that the decision under appeal be set aside and the patent be maintained in amended form according to one of the auxiliary requests 1, 2, 2a, 3, 3a, 4, 4a, 5, 5a, 6 and 6a filed with the letter dated 1 December 2016.

At the end of the proceedings, the decision of the board was pronounced.

VIII. Claim 1 of the main request (filed as

auxiliary request 2 during oral proceedings before the opposition division) reads as follows:

"An ingress provider edge router configured for policy routing in a Multi-Protocol Label Switching, MPLS, network, comprising:
a label switching path managing unit (11), adapted to save first forwarding information of a label switching path;
a configuring unit (13), connected to the label switching path managing unit (11), adapted to transmit configuration parameters to the label switching path managing unit (11), obtain the first forwarding information of the label switching path from the label switching path managing unit (11), and save the obtained first forwarding information in the ingress provider edge router;
a forwarding information maintenance unit (14), connected to the label switching path managing unit (11), and adapted to refresh the first forwarding information of the label switching path saved in the ingress provider edge router in a timer trigger mode or in an label [*sic*] switching path unit trigger mode; and
a packet forwarding unit (15), together with the forwarding information maintenance unit (14), adapted to forward a packet."

Due to the outcome of the appeal procedure, there is no need to give details about the claims according to the auxiliary requests.

Reasons for the Decision

1. Admissibility of the appeal

The opponent's appeal complies with the provisions of Articles 106 to 108 EPC (cf. point II above) and is therefore admissible.

2. Claim features

The following feature numbering ((1a) to (1e)) of claim 1 according to the main request was used in the appeal proceedings:

(1a) An ingress provider edge router configured for policy routing in a Multi-Protocol Label Switching, MPLS, network, comprising:
(1b) a label switching path managing unit (11), adapted to save first forwarding information of a label switching path;
(1c) a configuring unit (13), connected to the label switching path managing unit (11), adapted to transmit configuration parameters to the label switching path managing unit (11), obtain the first forwarding information of the label switching path from the label switching path managing unit (11), and save the obtained first forwarding information in the ingress provider edge router;
(1d) a forwarding information maintenance unit (14), connected to the label switching path managing unit (11), and adapted to refresh the first forwarding information of the label switching path saved in the ingress provider edge router in a timer trigger mode or in a label switching path unit trigger mode; and
(1e) a packet forwarding unit (15), together with the forwarding information maintenance unit (14), adapted to forward a packet.

3. Main request - Article 123(2) EPC

3.1 Claim 1 was amended in the opposition proceedings to recite an ingress provider edge router. The appellant argued that this amendment contravened Article 123(2) EPC since the apparatus for policy routing, originally claimed in claim 9 and shown in Figure 1, was not originally described as being an ingress provider edge router as shown in Figure 2. In particular, the appellant contended that the originally filed application documents did not unambiguously disclose that:
- all the functional units defined in claim 1 were part of the same apparatus for policy routing,
- configuring took place solely at, or on, the ingress provider edge router, and
- the ingress edge router contained all the functional units of claim 1.

The board, however, agrees with the respondent that the apparatus for policy routing described in paragraph [0027] of the originally filed description in relation to Figure 1 includes all the functional units of claim 1 and is employed by the network systems shown in Figure 2 (see paragraph [0029]) or Figure 6 (see paragraph [0050]). The common understanding is that these units form a self-contained apparatus and that the transmissions between these units represent intra-apparatus communications, which is not contradicted by any other information in the description. Furthermore, the fact that the apparatus shown in Figure 1 also comprises a packet forwarding unit which forwards a packet from the ingress provider edge router (see paragraphs [0046] and [0066]) means that the apparatus is actually embodied as a router of the network. In respect of the place where configuring, i.e. policy routing, takes place, paragraphs [0030] to [0033] in relation to Figure 3, and paragraphs [0051] to [0054]

explicitly teach that all the steps are performed at the ingress provider edge router, which thus contains all the functional units listed in claim 1.

For these reasons the board agrees with the respondent that the change from "A apparatus [*sic*] for policy routing" to "An ingress provider edge router configured for policy routing" in the preamble of claim 1 does not contravene the requirements of Article 123(2) EPC.

3.2 The appellant further argued that the feature of claim 1 whereby the forwarding information maintaining unit was adapted to refresh any first forwarding information of the label switching path saved in the ingress provider edge router added subject-matter beyond the application as filed. It based its argument on the assumption that the first forwarding information of a label switching path was saved twice in the ingress provider edge router, firstly by the label switching path managing unit (feature (1b)), and secondly by the configuring unit (feature (1c)). According to the appellant, since feature (1d) did not distinguish between both instances of saved information, it added subject-matter to the application as originally filed, in which only information obtained by the label switching path managing unit was updated.

In that respect, the board agrees with the respondent that claim 1 clearly specifies that the first forwarding information refreshed is the one which has been saved in the ingress provider edge router, i.e. information which has been obtained by the configuring unit, and not information saved by the label switching path managing unit, for which no specific saving location is defined in the claim. This understanding

of claim 1 in that respect is further supported by paragraph [0027], which discloses that the forwarding information maintaining unit is adapted to maintain, i.e. refresh, the first forwarding information saved in the node of policy, i.e. in the ingress provider edge router. Furthermore, paragraph [0038] discloses that the forwarding information maintaining unit updates the first forwarding information saved in the ingress provider edge router.

For these reasons the board agrees with the respondent that feature (1d) does not contravene Article 123(2) EPC.

3.3 The board thus maintains that claim 1 meets the requirements of Article 123(2) EPC.

4. Main request - Novelty

The appellant objected in writing that features (1c) and (1d), which were considered as novel in the decision, were actually already disclosed in E1.

Regarding feature (1c), the appellant argued that the VPN-ID transmitted from the VPN-CRC to the ingress edge router in E1 represented configuration parameters within the meaning of claim 1, transmitted from a configuring unit to a label switching path managing unit. The board, however, concurs with the respondent that the configuration parameters have to be interpreted on the basis of the description, which defines these parameters precisely as being an address of the egress provider edge router, an address of the intermediate provider router, and a parameter indicating whether the backup LSP is used or not. Therefore, the VPN-ID disclosed in E1 cannot be equated

with the configuration parameters. Moreover, the board agrees with the respondent that the configuration parameters of claim 1 are transmitted between two entities internal to the ingress provider edge router, whereas the VPN-ID in E1 is received from an entity, the VPN-CRC, which is clearly external to the ingress provider edge router and which actually manages the updating of the forwarding information of the label switching path in each of the edge routers PE.

As for feature (1d), the appellant argued that the alternative of refreshing the first forwarding information in a label switching path trigger mode was disclosed in E1. According to the appellant, it is implicit from E1 that a router detecting a change in connectivity at its site will, in addition to sending an update message to the VPN-CRC as disclosed in E1a, column 18, lines 53 to 57, update its own routing table and thus refresh the forwarding information on the basis of internal data only. The board, however, agrees with the respondent that in E1 it is the VPN-CRC which distributes the route to the routers, and so the refresh at the router can only be done with outside intervention from the VPN-CRC. In that respect, the board disagrees with the appellant that the refreshing operation in the router of claim 1 could be interpreted as mere receipt and storage of information received from outside the router.

For these reasons, the board maintains that features (1c) and (1d) are not disclosed in E1 and that claim 1 meets the requirements of Article 54 EPC having regard to E1.

5. Main request - Inventive step

5.1 E1 as the closest prior art

The appellant argued in writing that claim 1 was incapable of providing an inventive step because, if it was the first forwarding information saved by the label switching path managing unit that was refreshed, which was not excluded by claim 1, and not the first forwarding information saved by the configuring unit, the packets would be forwarded on the basis of out-dated forwarding information saved by the configuring unit. In that respect, the board already mentioned in point 3.2 above that it does not share this interpretation of claim 1.

The appellant further argued that, notwithstanding this objection, the technical problem solved by distinguishing feature (1d), in the alternative of a timer trigger mode, was how to provide an alternative refresh mechanism and that the skilled person would arrive at the subject-matter of claim 1 by combining E1 with one of E5, E6 or E10 since these three documents disclose timer trigger modes of refreshing an MPLS routing policy.

The board first disagrees that feature (1c) and feature (1d) in the alternative label switching path unit trigger mode are both known from E1, as detailed in point 4 above. Therefore the board agrees with the respondent that the technical effect of distinguishing features (1c) and (1d) is, as stated in the decision in Reasons 24, reduced signalling traffic in the network and hence economy of network resources, as well as faster processing due to the functional units being comprised in one and the same node at the ingress provider edge router. Moreover the respondent plausibly argued that the whole network should not be redesigned,

as in E1, when ingress provider edge routers have to be exchanged. The objective technical problem can thus be formulated as how to dynamically configure an MPLS network for policy routing with reduced signalling traffic and faster processing, as proposed by the respondent.

The skilled person finds no hint in E1 itself to implement a refreshing operation of a forwarding information of a label switching path in the ingress provider edge router. The approach of E1 is based on separate traffic and control planes, namely the VPN logical bearer network and the VPN bearer control network shown in Figure 4, in which the configuring functionality is distributed among the VPN-CRC nodes and the PE nodes belonging to the two planes.

The appellant relied on E5, E6 or E10 solely for their disclosure of timer trigger modes for updating the routing policy at nodes. The board, however, agrees with the respondent that none of these documents discloses that configuring should take place at the ingress provider edge router, without involvement of nodes from a control plane. A combination of E1 with anyone of E5, E6 or E10 would thus not lead to the subject-matter of claim 1.

For these reasons, the board holds that claim 1 meets the requirements of Article 56 EPC, having regard to E1 in combination with any of E5, E6 or E10. Claims 2 and 3 are dependent claims and thus also meet the requirements of Article 56 EPC.

5.2 E13 - Admissibility

E13 was filed by the appellant with the statement setting out the grounds of appeal.

Firstly, and contrary to what the appellant argued in writing, the board does not consider the filing of E13 to be a direct reaction to the finding in the decision under appeal that the "configuration parameters" in claim 1 are not only values to be searched for in a look-up table, such as the VPN-IDs in E1. The board notes that the opposition division did not give its interpretation of the "configuration parameters" before the oral proceedings, so the appellant should have anticipated any interpretation during the course of the opposition proceedings. Secondly, the board agrees with the respondent that E13 is not *prima facie* relevant for the patentability of the claimed subject-matter. In that respect, the board notes that the appellant uses E13 for an inventive-step objection and not for a novelty objection as with E1. Furthermore, it would appear from paragraph [0031] of E13 that each of the interconnected nodes 135 does not update forwarding information of a label switching path on its own but rather communicates with the other nodes to maintain a spanning tree that establishes the label switching paths within the network. Thus, E13 appears to be unable to anticipate at least feature (1d) of claim 1, which is the feature upon which the inventive step acknowledged in the decision principally relies.

For these reasons, the board decided during the oral proceedings not to admit E13 into the proceedings, under the provisions of Article 12(4) RPBA.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Götz-Wein A. Ritzka

Decision electronically authenticated