

Internal distribution code:

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

**Datasheet for the decision
of 18 July 2014**

Case Number: T 2019/10 - 3.5.03

Application Number: 07023333.3

Publication Number: 1988678

IPC: H04L29/06, H04Q7/38

Language of the proceedings: EN

Title of invention:

Communication apparatus and method for dual-mode mobile terminal

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Dual-mode mobile terminal/SAMSUNG

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 2019/10 - 3.5.03

**D E C I S I O N
of Technical Board of Appeal 3.5.03
of 18 July 2014**

Appellant: Samsung Electronics Co., Ltd.
(Applicant) 129, Samsung-ro
Yeongtong-gu
Suwon-si, Gyeonggi-do, 443-742 (KR)

Representative: Jenkins, Richard Gavin
HGF Limited
Saviour House
9 St Saviourgate
York YO1 8NQ (GB)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 4 May 2010
refusing European patent application
No.07023333.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman F. van der Voort
Members: B. Noll
M.-B. Tardo-Dino

Summary of Facts and Submissions

- I. This appeal is against the decision of the examining division refusing European patent application No. 07023333.3 (publication number EP 1988678 A2). The refusal was based on the ground that the subject-matter of claims 1 of a main request and an auxiliary request lacked an inventive step (Article 56 EPC).
- II. The following documents were cited in the impugned decision:

D1: US 2006/0258358 A1; and

D2: J. So et al, "Multi-Channel MAC for Ad Hoc Networks: Handling Multi-Channel Hidden Terminals Using A Single Transceiver", MobiHoc '04, May 24-26, 2004, Roppongi, Japan, pages 222-233.
- III. With the statement of grounds of appeal a single set of claims was filed to replace the existing requests on file. Oral proceedings were conditionally requested.
- IV. In a communication accompanying a summons to oral proceedings, the board gave a preliminary opinion, in particular concerning lack of clarity (Article 84 EPC) and added subject-matter (Article 123(2) EPC).
- V. With a letter dated 19 June 2014 the appellant filed, by way of replacement, sets of claims of a main request and two auxiliary requests.
- VI. Oral proceedings before the board were held on 18 July 2014.

In the course of the oral proceedings, after having discussed the main request and the auxiliary requests, the appellant replaced all requests on file by a single new request with claims 1 to 20.

The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 20 of the request as filed during the oral proceedings.

At the end of the oral proceedings, after deliberation, the chairman announced the board's decision.

VII. Claim 1 reads as follows:

"A communication apparatus for a dual-mode mobile terminal (105), comprising:

 a first communication unit (110) adapted to support a first mode of communication with a wireless local area network (10) including an Access Point (11, 12) and an Instant Message Service server (14);

 a second communication unit (120) adapted to support a second mode of communication with a cellular network (20) accessible to the Instant Message Service server (14) in the wireless local area network (10);
and

 a control unit (130) adapted to control the first communication unit (110) to retrieve a preferred channel among a plurality of channels provided by the Access Point (11,12) in the wireless local area network (10) while controlling the second communication unit (120) to access the Instant Message Service server (14) through the cellular network (20) and set up a media session with another terminal via the Instant Message Service server (14), and to control the first communication unit (110) to communicate with the

another terminal through the preferred channel after the media session is established."

Claim 11 reads as follows:

"A communication method for a dual-mode mobile terminal (105) having a first communication unit (110) adapted to support a first mode of communication with a wireless local area network (10) including an Access Point (11, 12) and an Instant Message Service server (14), and a second communication unit (120) adapted to support a second mode of communication with a cellular network (20);

the method comprising:

using the first communication [sic] (110) to retrieve, as a preferred channel, one of the available channels provided by the Access Point (11,12) of the wireless local area network (10) while using the second communication unit (120) to access the Instant Message Service server (14) through the cellular network (20) and establish a media session with another terminal via the Instant Message Service server (14); and

communicating, after the media session is established, by way of the first communication unit (110) with the another terminal through the preferred channel."

Reasons for the Decision

1. *Basis for amendments (Article 123(2) EPC)*
- 1.1 Claim 1 is based on claims 1, 2, 11 and 17 as originally filed and column 12, lines 29 to 36 of the description (reference is made to the application as published). Claim 11 relates to a method having corresponding steps.

1.2 Hence, claims 1 and 11 as amended meet the requirements of Article 123(2) EPC.

2. *Claim 1 - inventive step (Article 56 EPC)*

2.1 Document D1 relates to performing an inter-system handover of a communication session in which a mobile station 200 is used (D1, Fig. 2). The mobile station 200 is configured as a dual-system device, i.e. it is capable of communicating over a wireless local area network operating in an unlicensed frequency band and over a cellular mobile network operating in a licensed frequency band. Further, the mobile station 200 is configured to perform a handover from the unlicensed to the licensed frequency band (cf. the second and third sentences in paragraph [0053]). Hence, it is implicit that the mobile station 200 includes a communication apparatus having first and second communication units adapted to support first and second modes of communication with a wireless local area network via an access point and with a cellular network, respectively, and a control unit which is adapted to exercise control over the first and second communication units.

The communication session is originally initiated between the mobile station 200 and the wireless local area network, see paragraph [0056]. Therefore, it is implicit that the mobile station 200 is adapted to control the first communication unit, at the time of initiating a communication with the wireless local area network, such that the first communication unit retrieves a preferred channel among the plurality of channels provided by the access point (base transceiver station 102) of the wireless local area network. It is further implicit that the control unit of the mobile

station 200 is adapted to control the first communication unit to communicate with another terminal (remote station 402, see Figs. 4A and 4B) via the base transceiver station 102 through the preferred channel 480 (cf. Fig. 4A and paragraph [0060]) once a communication session has been established between the mobile station 200 and the remote station 402.

Further, in the context of the handover procedure as described in D1, a new connection is established from the mobile station 200 to the remote station 402 via the cellular mobile network. The communication session established via the wireless local area network is subsequently handed over to the newly established connection. More specifically, the control unit of the mobile station 200 is adapted to control the second communication unit to access a mobile switching center server 452 (cf. step 520 in Fig. 5B) and establish a communication between the mobile station 200 and the IP access network 410 via the cellular network 456 (see Fig. 4B).

The above analysis as regards the disclosure of D1 was not disputed by the appellant.

- 2.2 D1 does not disclose that the control unit is adapted to perform control tasks in the temporal relationship as specified in the last paragraph of claim 1, i.e. controlling the first communication unit to retrieve the preferred channel while controlling the second communication unit to access the server through the cellular network and set up a session with another terminal via the server, and controlling the first communication unit to communicate with the another terminal through the preferred channel after the media session is established.

For the sake of argument, even if the establishment of a new connection over the cellular network for the purpose of a handover in D1 is considered as being analogous to the setting up of a new connection for a new media session as in claim 1, D1 does not disclose the above-mentioned temporal relationship, since in D1 radio channels of the cellular network have already been listened to while the communication session is ongoing, i.e. before setting up a new connection to the cellular network, for the purpose of a possible handover of the existing communication (D1, page 7, left-hand column, lines 4 to 11).

Accordingly, the subject-matter of claim 1 differs from the mobile station 200 disclosed in D1 at least by the features as specified in the last paragraph of claim 1.

Controlling the first communication unit to retrieve a preferred channel while controlling the second communication unit to set up a session serves the purpose of setting up a new communication session over the wireless local area network, whilst the corresponding signalling information is not communicated over the wireless local area network but over the cellular network.

The distinguishing features contribute to enabling a dual-mode mobile station to set up a wireless local area network connection without reducing the radio bandwidth available in the wireless local area network caused by a transmission of corresponding signalling information. These measures thus reduce congestion in a wireless local area network even when an increased number of mobile stations is present. The objective technical problem to be solved starting out from D1 may

therefore be seen in reducing congestion in the wireless local area network using a dual-mode mobile terminal.

- 2.3 The skilled person seeking a solution for this problem would not be led by D1 itself to the claimed apparatus. D1 is about implementing an inter-system handover and is not concerned with the setting up of a new communication session over a wireless local area network. As indicated above (cf. point 2.2) the timing of control for setting up such a new connection is different from the timing for setting up a new connection in a handover scenario.

The skilled person would also not be led to the claimed apparatus by taking into account the teaching of document D2. In D2, both the communication information and the corresponding signalling information are transmitted over the radio bandwidth provided by the same wireless local area network (D2, page 222, Introduction). Even if, as suggested in D2 on page 223, right-hand column, first paragraph, two separate transceivers are provided so that the mobile station can listen on the control channel and the data channel simultaneously, the second transceiver still operates in the frequency bandwidth provided by the same wireless local area network.

- 2.4 The board concludes that the apparatus according to claim 1 is not rendered obvious having regard either to D1 or D2, or a combination of D1 and D2. The subject-matter of claim 1 therefore involves an inventive step having regard to D1 and D2 (Article 56 EPC).

3. For the same reasons, the method of claim 11 involves an inventive step having regard to D1 and D2.

4. *Remittal*

The board notes that the decision to refuse the application was based solely on the ground that the subject-matter of the independent claims lacked an inventive step having regard to D1 and D2. Since, for the reasons given above, the reasons given by the examining division do not apply to the claims filed during the oral proceedings before the board, the decision under appeal is to be set aside.

Exercising its discretion pursuant to Article 111(1) EPC, the board remits the case to the department of first instance for further prosecution.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the department of first instance for further prosecution on the basis of claims 1 to 20 of the request as filed during the oral proceedings.

The Registrar:

The Chairman:



G. Rauh

F. van der Voort

Decision electronically authenticated