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D E C I S I O N
of 31 March 2005

Case Number: T 0259/99 - 3.5.3

Application Number: 89302592.4

Publication Number: 0334549

IPC: H04L 27/00

Language of the proceedings: EN

Title of invention:

Method and apparatus for wideband transmission of digital signals between a telephone central office and customer premises

Patentee:

AT&T Corp.

Opponent:

ALCATEL N.V.

Headword:

Wideband transmission of digital signals/AT&T

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

"Amendments - added subject-matter (no) "

Decisions cited:

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Catchword:

-



Case Number: T 0259/99 - 3.5.3

D E C I S I O N
of the Technical Board of Appeal 3.5.3
of 31 March 2005

Appellant: AT&T Corp.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 19 January 1999
revoking European patent No. 0334549 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: A. S. Clelland
Members: D. H. Rees
R. Moufang

Summary of Facts and Submissions

- I. This is an appeal by the proprietor of European Patent No. 0 334 549 against the decision of the opposition division to revoke the patent.

- II. The opponent (respondent) had requested revocation of the patent in its entirety on the grounds that the subject-matter of the claims as granted did not involve an inventive step. Detailed arguments to support this objection were submitted with respect to the subject-matter of the granted independent claims. The opponent's submissions included a conditional request for oral proceedings.

- III. In the course of the opposition proceedings the proprietor (appellant) submitted amended claims, the final set being claims 1 to 10 submitted with a letter dated 14 May and received on 17 May 1997.

The independent claims of this set included the feature:
"at least one of said inbound or outbound bit streams having ... at least 6 bits per symbol."

- IV. The opposition division issued a communication giving its provisional view that the newly submitted claims contained subject-matter which extended beyond the application as filed, since in the original application the said bit streams had only been disclosed as having exactly six bits per symbol. However the provisional opinion was also given that the claimed subject-matter satisfied the requirements of Articles 52(1) and 56 EPC (i.e. involved an inventive step). It is not clear from the communication whether this opinion related to the

claimed subject-matter as it stood, or to a hypothetical claimed subject-matter without the feature objected to.

V. The proprietor submitted further arguments but no amendments and on 19 January 1999 the opposition decision issued a decision revoking the patent on the grounds that the newly claimed subject-matter extended beyond the contents of the application as filed and thus violated Article 123(2) EPC. The decision contained no comments on the question of inventive step.

VI. Notice of appeal, with the appropriate fee, was filed by the proprietor in a letter dated 5 March and received 8 March 1999. A statement of grounds of appeal, dated 26 April 1999, was received on 28 April 1999. It was implicit in the argumentation of the grounds of appeal that the request for grant of a patent was based on the set of claims rejected by the opposition division.

The respondent (opponent) did not make any submissions either in response to the statement of grounds of appeal or subsequently.

VII. The board issued a communication indicating that it found the reasoning of the opposition division convincing and that the counter-arguments submitted by the appellant did not appear to overcome the objection. The communication noted that if amendments overcoming the objection under Article 123(2) EPC were to be submitted, the case would probably be remitted to the opposition division for further consideration.

- VIII. A new set of claims was submitted on 5 May 2004, together with a request that the case be remitted to the opposition division.
- IX. In the annex to an invitation to oral proceedings, the board pointed out that the newly submitted claims corresponded substantially to a set submitted with a letter dated 20 February and received on 24 February 1996, on which the opposition division had already given a provisional negative opinion concerning the issue of whether an inventive step was involved. The board found the reasoning of this provisional opinion convincing, and considered that it was not appropriate under the circumstances to remit the case.
- X. The appellant submitted further amended claims according to a main and auxiliary request in preparation for the oral proceedings.

The independent claims of the main request read as follows:

"1. A method of communicating data over a two-wire telephone local loop (52) which connects apparatus (2, 12, 32) at one end thereof to a local central office (90) in the public telephone network, including the steps of, at the local central office, generating an outbound passband signal representing a stream of outbound data bits, applying said outbound passband signal to said two-wire telephone local loop, receiving over said telephone local loop an inbound passband signal representing a stream of inbound data

bits, said inbound passband signal including echoes of said outbound passband signal, generating a replica of said echoes, subtracting said replica from said inbound passband signal to generate an echo-compensated signal, and recovering said inbound data bits from said echo-compensated signal, characterised in that: said inbound and outbound signals are coded with a trellis code or other code that provides coding gain and said step of recovering said data bits includes Viterbi decoding; and at least one of said inbound or outbound bit streams has a rate of at least 160 kilobits per second.

7. A network termination (72) disposed in a telephone central office (90) including: transmitter means (321) for generating an outbound passband signal representing a stream of channel symbols selected from a predetermined signal constellation, means (326) for applying said outbound passband signal to a two-wire telephone local loop (52), means (326) for receiving an inbound passband signal representing a stream of inbound channel symbols selected from said predetermined signal constellation, said channel symbols having been selected as a function of a trellis coded version of a stream of inbound data bits, said inbound passband signal including echoes of said outbound passband signal, means (750) for generating an adaptively equalized version of said inbound passband signal from which a replica of said echoes has been subtracted, and

means (762) for recovering said inbound data bits from the inbound channel symbols,

characterized in that:

said channel symbols in said inbound and outbound signals are selected as a function of trellis coded versions of streams of inbound and outbound data bits respectively;

said network termination further includes means (755) for recovering said stream of inbound channel symbols by Viterbi decoding the resulting equalized signal; and at least one of said inbound or outbound streams of data bits has a rate of at least 160 kilobits per second."

According to the auxiliary set, the claimed subject-matter is further characterised by the passband signals being "carrierless amplitude-and-phase modulated signals."

- XI. In response the board cancelled the oral proceedings and issued a communication indicating that the newly claimed subject-matter appeared not to extend the subject-matter of the application as filed. On the other hand the respondent had had no opportunity in the opposition proceedings to present views on the issues of novelty and inventive step as they related to the newly claimed subject-matter. Remittal therefore appeared to be the most appropriate action. The parties were invited to submit any comments within a time limit of two months. Neither party replied within this period.
- XII. The appellant requests that the case be remitted to the opposition division for further consideration of novelty and inventive step (submission of 5 May 2004).

By implication the basis for this further consideration is claims 1 to 10 of the "main set" (main request) or claims 1 to 8 of the "auxiliary set" (auxiliary request), both submitted 3 November 2004, with the description and figures as published in the granted patent.

The respondent has made no requests.

Reasons for the Decision

1. During the opposition proceedings and in the appealed decision, only one feature of the appellant's final request was identified as extending the subject-matter beyond the content of the application as filed. This was, "at least one of said inbound or outbound bit streams having ... at least 6 bits per symbol." The presently claimed subject-matter no longer includes this feature since it no longer specifies the number of bits per symbol at all, as was the case in the independent claims both as originally filed and as granted. The board agrees that the other amendments made did not extend the subject-matter of the application as filed.
2. As to the current claims of the "main set", independent apparatus claim 7 corresponds substantively to claim 8 of the application as filed, except for the addition of the termination being "disposed in a telephone central office". This feature is clearly disclosed in Figure 1. Otherwise the claimed features have merely been rearranged and/or repeated. Thus the subject-matter of claim 7 does not extend beyond the content of the

application as filed. Further, the features previously specified in the independent apparatus claim but not in method claim 1 (a two-wire telephone local loop, echo-compensation, trellis coding and Viterbi decoding) have been added *mutatis mutandis* to claim 1, with the exception that rather than specifying a trellis code, claim 1 specifies "a trellis code or other code that provides coding gain". This generalisation of the usable code in claim 1 is explicitly disclosed at column 4, lines 42 to 47, of the published application. Hence the subject-matter of claim 1 does not extend beyond the content of the application as filed either. Thus the present independent claims of the main request do not violate Article 123(2) EPC.

3. Otherwise the text on which the main request is based corresponds to the patent as granted. The board therefore comes to the conclusion that this text satisfies the requirements of Article 123(2) EPC, and thus overcomes the sole reason for revocation of the patent given in the decision of the opposition division.
4. Moreover, the auxiliary set of claims merely adds the feature specified in granted dependent claims 4 and 9 to the independent method and apparatus claims respectively, so that its subject-matter does not violate Article 123(2) EPC.
5. The board notes that the implicit repetition of features, sometimes in slightly different terms, in dependent claim 6, raises doubts as to its clarity.
6. As to the question of whether the claimed subject-matter involves an inventive step, the board notes that

the respondent's arguments in the notice of opposition could be taken to apply to claim 7 of the main request. The opposition division gave an opinion in its communication of 28 January 1997 that the subject-matter of both then-valid claims 1 and 7 lacked an inventive step; it has not given its opinion on any equivalent of the subject-matter of present claim 1, since the generalised coding option has been newly introduced to the claimed subject-matter. The opposition division has not therefore had the opportunity to consider the currently claimed subject-matter. Moreover, the respondent has not had the opportunity to address this point. Finally, the subject-matter claimed in the auxiliary request, including in essence granted dependent apparatus claim 9 and an equivalent method, has not been discussed at all beyond the respondent's simple assertion in the notice of opposition that dependent claims 9 to 11 related only to implementation details, not having any particular technical effect and not implying any inventive activity.

7. Therefore the board considers, in accordance with its preliminary opinion expressed in the communication dated 16 November 2004, that it is appropriate to remit the case to the opposition division for further consideration.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:

D. Magliano

A. S. Clelland