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**D E C I S I O N**  
of 1 April 1997

**Case Number:** T 0750/94 - 3.4.1

**Application Number:** 88309251.2

**Publication Number:** 0312237

**IPC:** H01L 29/80

**Language of the proceedings:** EN

**Title of invention:**

Interface charge enhancement in delta-doped heterostructure

**Applicant:**

AT&T Corp.

**Opponent:**

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**Headword:**

AT&T/Proof of prior publication

**Relevant legal provisions:**

EPC Art. 54, 56, 113

EPC R. 67

**Keyword:**

"'Nominal publication date' of journal"

"Available on demand from publishers (not proved)"

"Sent by mail to subscribers"

"Received by at least one subscriber before filing date (not proved)"

"Made available to the public (not proved)"

**Decisions cited:**

**Headnote:**

- I. When an issue of fact is being examined and decided by the EPO on the balance of probabilities, the more serious the issue the more convincing must the evidence be to support it. If a decision upon such an issue may result in refusal or revocation of a European patent, for example in a case concerning alleged prior publication or prior use, the available evidence in relation to that issue must be very critically and strictly examined. A European patent should not be refused or revoked unless the grounds for refusal or revocation (that is, the legal and factual reasons) are fully and properly proved.
  
- II. In accordance with the principle of "free evaluation of evidence" (see Decision T 482/89, OJ EPO 1992, 646) items of evidence relevant to a matter in issue must be given an appropriate weight in order to reliably establish what is likely to have occurred. An unsigned statement by an unknown and unnamed person should in principle be given minimal weight.

**Case Number:** T 0750/94 - 3.4.1

**D E C I S I O N**  
**of the Technical Board of Appeal 3.4.1**  
**of 1 April 1997**

**Appellant:** AT&T Corp.  
32 Avenue of the Americas  
New York, NY 10013-2412 (US)

**Representative:** Watts, Christopher Malcolm Kelway, Dr.  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 6 May 1994 refusing  
European patent application No. 88 309 251.2  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** G. D. Paterson  
**Members:** H. J. Reich  
R. K. Shukla



## Summary of Facts and Submissions

I. Following the filing of this European patent application, the Examining Division issued a communication which raised objections to the grant of a patent on the basis of lack of novelty and lack of inventive step, especially having regard to the prior publication of:

D1: Applied Physics Letters, vol. 51, No. 15,  
12 October 1987, pages 1170 to 1172 (a publication  
of the American Institute of Physics ("AIP")).

In a reply dated 26 March 1993, the applicant contested the objections raised by the Examining Division, only on the basis that D1 had not been made available to the public before 13 October 1987, the priority date of the application. The applicant pointed out that although D1 had a nominal publication date of 12 October 1987 (this date being printed on the front cover of the relevant issue of the journal), such a nominal publication date was only prima facie evidence that the document had in fact been made available to the public on that day. The applicant enclosed photocopies of the front pages of the relevant issue of the journal, as received at libraries at Murray Hill and Holmdel in the United States, showing that both copies of the journal had in fact been received at those libraries on 15 October 1987, and submitted that this evidence displaced the prima facie evidence of the nominal publication date, and that the journal had therefore not been published before the priority date.

II. The Examining Division then issued a further communication dated 24 June 1993 which enclosed a copy of a letter dated 13 May 1993 sent by fax by the EPO Library to AIP in New York, which read in typescript as follows:

"Dear Sir/Madam,

Regarding our fax, dated 08.04.93 we did inquire about the publication date (day, month, year) for the following publication:

(D1)

Up to now we have received neither reply nor notification from you. Kindly check immediately your records and please supply us as quick as possible with the correct dates. We urgently need this piece of information."

The following had been written by hand on this letter:

"Issue October 12th - mailed 10/6/87."

The communication stated that D1 "was mailed on Tuesday 6th October 1987 as declared by its publisher, the American Institute of Physics (see enclosed response). Considering that mailing date, and taking into account a standard delivery time of 2 days, it appears that most of the addressees must have received D1 before the priority date...13th October 1987, ie one week after the mailing of D1...the contents of D1 were thus in

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fact made available to the public before that priority date."

In reply, the applicant stated (following further inquiries) that D1 was sent by second class postage, and that the relevant US postal authority had stated that "delivery of second class postage materials would have occurred from four to seven days of the mail date" as estimated for the year 1987. The applicant also enclosed a photocopy of the front cover of a further issue of the D1 journal, showing that such issue had been received at a library in New Jersey, USA, on 13 October 1987.

The applicant essentially submitted that two days is a very optimistic delivery time for the relevant postal tariff, and the evidence of actual delivery dates indicates that seven days was the best delivery time. Evidence of actual receipt is preferable to mere estimates of delivery times, because such estimates may be inaccurate for a particular mailing. Furthermore records of mailing dates are not always reliable. Thus according to the weight of the evidence D1 did not form part of the state of the art.

III. In its decision dated 6 May 1994 the Examining Division rejected the application on the grounds of lack of novelty and lack of inventive step of the claimed subject-matter, on the basis that D1 had been made available to the public before the priority date of the application, essentially because:

(a) the Examining Division "has no reason to cast doubt on the fact that D1 was available on demand at the American Institute of Physics, on the nominal publication date", namely 12 October 1987;

and

(b) such finding is confirmed by the fact that the issue D1 was mailed on 6 October 1987, six days before the nominal publication date, and considering the estimated delivery time of four to seven days from the mailing date, "is likely to have been made available to the public" on 12 October 1987, by delivery to subscribers.

IV. The applicant duly filed an appeal. In the statement of grounds of appeal the applicant referred to the submissions and evidence filed before the Examining Division, and essentially submitted that "there is enough evidence to overcome the prima facie assumption that (D1) was actually published on its nominal publication date."

### **Reasons for the Decision**

1. The only issue in this appeal is whether D1 was made available to the public before 13 October 1987, having regard to the available evidence.
2. In Decision T 381/87 (OJ EPO 1990, 213), in a case which concerned the question whether a document which

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was a particular issue of a journal had been published before the relevant priority date, the Board of Appeal itself conducted an inquiry into the facts by writing a letter to the librarian of a particular library in the United Kingdom. The replies from the librarian were crucial to the making of the decision in that case.

Since the issue of Decision T 381/87, in Decision G 10/93 (OJ EPO 1995, 172), in the context of deciding that in an ex parte appeal a Board may introduce new grounds for rejecting an application into the appeal proceedings, the Enlarged Board of Appeal nevertheless stated that "The power to include new grounds in ex parte proceedings does not however mean that Boards of Appeal carry out a full examination of the application as to patentability requirements. This is the task of the Examining Division. Proceedings before the Board of Appeal in ex parte cases are primarily concerned with examining the contested decision."

3. In the present case, the decision under appeal was based upon the result of investigation and inquiries which appear to have been made by the EPO Library on behalf of the Examining Division, as well as upon the evidence filed by the applicant. As to such inquiries, if these are made by or on behalf of an Examining Division in connection with a particular case, such inquiries should always form part of the written file record of the case, and should be sent to the parties to the proceedings. In the present case, the letter dated 13 May 1993 identified and quoted in paragraph II above, which was sent to AIP in New York, refers to an

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earlier fax dated 8 April 1993, which does not appear in the file and apparently was not sent to the applicant. In the present case the failure to put a copy of the fax dated 8 April 1993 in the file, and the failure to send a copy of such fax to the applicant, was an insubstantial procedural violation, but in another case such a failure could easily constitute a substantial procedural violation.

4. In Decision T 381/87 it was held that "In relation to an issue of fact such as ...when a document was first made available to the public, the EPO... must decide what happened having regard to the available evidence, on the balance of probabilities: ie it must decide what is "more likely than not to have happened". This is the normal standard of proof in proceedings of this nature."

When an issue of fact is being examined and decided by the EPO on the balance of probabilities, the more serious the issue the more convincing must the evidence be to support it. If the decision upon an issue under examination may result in refusal or revocation of a European patent, for example in a case concerning alleged prior publication or prior use, this means that the available evidence must be very critically and strictly examined, for example in order to ascertain whether or not something happened (the alleged prior publication or prior use) before the relevant filing or priority date. In any such case, a finding that a publication or use forms part of the state of the art for the purpose of Article 54(2) EPC should only be

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made if the available evidence, when subjected to a strict and careful evaluation, **establishes** that a prior publication or use is likely to have occurred. A European patent should not be refused or revoked unless the grounds for refusal or revocation are fully and properly proved: that is it must be proved "up to the hilt" - see Decision T 472/92 (to be published in OJ EPO).

5. The decision under appeal was based primarily upon the finding of fact that D1 was available to the public on demand at AIP, on 12 October 1987 (see paragraph III(a) above), because such date was said to be its "nominal publication date" by the publishers AIP, such date being printed on the front cover of the journal D1. This finding of fact, and the reasoning which led to it, formed part of the chain of reasoning, and thus part of the "essential legal and factual reasoning" which led to the decision to refuse the application, because without such a finding of fact (that D1 had been made available to the public on demand on 12 October 1987) there could be no basis for the consequential finding that the claimed subject-matter lacked novelty and inventive step having regard to the prior publication of D1, and that the application should therefore be refused.

This "ground" for refusing the application (in the sense of Article 113(1) EPC as interpreted in Decision T 951/92, OJ EPO 1996, 53, namely "the essential reasoning, both legal and factual, which leads to the refusal of the application") was not communicated to

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the applicant before the decision under appeal was issued, however. The only grounds for refusing the application which were communicated to the applicant prior to the issue of the decision included the factual reasoning which is set out in the communication dated 24 June 1993, and which is quoted in paragraph II above, to the effect that most of the subscribers to the journal D1 (the "addressees") "must have received D1 before the priority date". Such communication contained no indication of the factual reasoning to support a finding that D1 would have been "available on demand" from the publisher before the priority date, and such factual reasoning was the first link in the chain of legal and factual reasoning which is set out in the decision under appeal by which the application was refused.

Consequently, during the proceedings before the Examining Division the applicant did not have an opportunity to present comments upon this "ground" for refusing the application, as required by Article 113(1) EPC, and a substantial procedural violation therefore occurred.

However, since the application was also refused upon a ground on which the applicant did have an opportunity to comment, namely the ground set out in paragraph III(b) above and to be discussed below, in the Board's view it would not be equitable to refund the appeal fee pursuant to Rule 67 EPC in these circumstances. In any event the applicant did not either complain of this procedural violation or request refund of the appeal fee.

6. The applicant did comment upon this ground of refusal in the statement of grounds of appeal, as follows:

"...the Examining Division appear to suggest that document D1 might have been available on demand at the offices of (AIP) at the nominal publication date. There is no evidence to give any substance to this suggestion".

The Board does not accept that the fact that the particular issue of the journal D1 is printed with the date 12 October 1985 by itself constitutes more than prima facie evidence that such issue was "made available to the public" within the meaning of Article 54(2) EPC on that date. By "prima facie evidence" is meant evidence which, **if not** challenged, may be regarded as sufficient to establish the matter in issue. In the present case, the applicant did challenge this prima facie evidence by letter dated 26 March 1993, and also submitted evidence to displace such prima facie evidence.

In the Board's view, such a "nominal" date may have nothing to do with the publication date in the sense of Article 54(2) EPC. For example, such a printed date may simply refer to the date on which the contents of the journal were finalised within the publishers' office.

The Board accepts that this printed date on the relevant issue of the journal D1 **could** be an **indication** that the journal was available on demand from the publisher AIP on 12 October 1987, such as to justify further investigation at AIP as whether evidence is available to establish prior publication. As set out in paragraph II above, the EPO Library did send a fax to AIP, inquiring "about the publication date (day, month, year)" for D1. If D1 had in fact been available on demand from AIP on 12 October 1987, AIP could have been expected to say so in reply to this inquiry. Instead, AIP simply stated a mailing date.

The Board therefore agrees with the applicant that there is essentially no evidence to support the finding of the Examining Division that the document D1 was available on demand on 12 October 1987, and thus to establish a ground for refusing the application.

7. As indicated in paragraph III(b) above, the decision under appeal also relied upon a further ground for refusing the application, namely that the journal D1 would have been received by subscribers through the mail before the priority date, and thus made available to the public. The decision refers to this means of publication as "confirming" that D1 was available on

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demand from AIP on 12 October 1987, but in reality these two possible means of publication are not related to one another. The journal D1 may (or may not) have been available on demand from AIP on 12 October 1987, and it may (or may not) have been received by at least one subscriber by mail on or before 12 October 1987. Such two possible means of publication have to be considered separately from one another, having regard to the available evidence in relation to each such means.

8. As to this second possible means of publication of D1, the question to be decided is whether the available evidence establishes that, on the balance of probabilities, at least one subscriber to the journal D1 actually received a copy of D1 by mail before the priority date of 13 October 1987.

Thus the evidence which points in favour of this means of prior publication must be weighed and assessed. If, when considered by itself, such evidence is considered to be sufficiently strong to make it sufficiently probable that prior publication occurred so as to justify refusal or revocation of a patent, it is then necessary to consider whether other available evidence points sufficiently strongly against the likelihood of prior publication, so that the evidence in favour of prior publication is balanced out, with the overall result that it is not sufficiently probable that prior publication occurred.

As stated in Decision T 482/89, OJ EPO 1992, 646, the available evidence has to be evaluated in accordance with the principle of "free evaluation of evidence". This means in particular that each item of evidence which is relevant to the question under consideration must be given an appropriate weight. In a case where the relevant evidence includes an oral or written statement as to what happened at some date in the past, application of the above principle does not mean that the truth of such a statement must be accepted unless it is directly contradicted by another such statement. The likelihood of the statement being true must be evaluated in accordance with all the relevant surrounding circumstances, including whether the statement is corroborated by other independent evidence: for example, contemporaneous written records. If the statement relates to an event which is supposed to have occurred a number of years ago, it need not necessarily be accepted by itself as establishing the fact of such event, especially in the absence of independent corroborating evidence.

Whenever a factual question arises in proceedings before the EPO as to whether something in the past happened (for example before a particular date) or not (for example, prior publication or prior use), the evidence which is available to prove that it happened may consist of contemporaneous written records, or it may consist of statements based upon the memory of one or more persons with personal knowledge of what happened, or it may consist of a mixture of both types of evidence. In any such case, a first question which

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must always be considered is the reliability of the source of evidence, and thus its probative value: for written records, for example, how reliable are such records as a source of information? - and for personal statements, how reliable is the person making the statement? - how reliable is the memory of the person making the statement?

If a reliable personal statement based on memory is corroborated by a reliable contemporaneous written record, such evidence may be given a high weighting. On the other hand, absence of reliability and absence of corroboration will reduce the weight of the evidence accordingly.

9. In the present case, the only evidence which points in favour of at least one subscriber having received a copy of D1 on or before 12 October 1987 is as follows:

(i) The copy fax letter dated 13 May 1993 which is identified in paragraph II above was returned by AIP to the EPO, having been marked by hand with the words "mailed 10/6/87".

(ii) The relevant postal authority had estimated that in 1987, second class mail was delivered within four to seven days.

As to the evidence identified in paragraph (i) above, while the handwritten words indicate that the journal D1 may have been mailed by AIP to subscribers on 6 October 1987, nevertheless the copy fax does not

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indicate who within AIP made such handwritten statement, and therefore the authority and credibility of the person who made such statement. There is no indication of the basis on which the statement was made - for example, that the mailing date was derived from records kept by AIP. Thus such statement may be a mere guess by an unknown employee of AIP as to what may have happened six years previously. In the Board's judgement, such evidence is intrinsically of minimal weight, and should not in any circumstances form a basis for refusing a European patent application.

In the Board's view, in accordance with the principle of free evaluation of evidence, an unsigned statement by an unknown and unnamed person should in principle be given minimal weight, in proceedings before the EPO. In the present case such evidence was the only available evidence which could establish an essential link in a chain of factual reasoning which could lead to a finding of prior publication. As a matter of principle, such evidence by itself cannot properly lead to a finding of fact which results in refusal or revocation of a European patent.

In any event, as pointed out by the applicant, exactly what was meant by the statement "mailed 10/6/87" is open to question. The statement may have meant that the issues were mailed to a distribution centre for subsequent mailing to individual subscribers.

As to the evidence identified in paragraph (ii) above, such an estimated delivery time by a postal authority

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of course has no relevance unless the mailing date is known to a strong probability, which is not the situation in the present case. In any event, such an estimate by a postal authority as to delivery times throughout a whole year (1987) six years previously over an unknown geographic area is again intrinsically of very little value as evidence upon which to refuse a patent application.

Thus in the Board's judgment, the combined evidence of (i) and (ii) above is clearly of insufficient weight to establish a ground for refusing the present application.

10. Furthermore, if contrary to the Board's judgment, the evidence of (i) and (ii) by itself was considered to establish a degree of probability that a subscriber would have received a copy of D1 before 13 October 1987, nevertheless the evidence of these **actual** dates of receipt of D1 by subscribers which the applicant has filed (two copies received on 15 October 1987, one copy received on 13 October 1987) has to be balanced against the evidence of (i) and (ii)(see paragraph 7 above).

11. In the Board's judgement, having regard to all the available evidence (including the evidence of actual dates of receipt), it is certainly **possible** that at least one subscriber received D1 before 13 October 1987, but it is equally possible that no subscriber received D1 before such priority date. The available evidence does not establish a sufficient **probability** that a subscriber received D1 before the priority date, as a ground for refusing the application.
  
12. The available evidence in Decision T 381/87 (which led to a finding of prior publication in that case) may be compared with the available evidence in the present case.

In Decision T 381/87, the Librarian of the Royal Society of Chemistry in London wrote and signed a first letter dated 25 March 1988, stating that document (A) "was placed on the shelves of the Society's Library on 26 November 1981". In reply to an inquiry on behalf of the applicant, the librarian wrote and signed a further letter enclosing a copy of a contemporaneous library record showing that document (A) was received and processed by the library on 26 November 1981, and in accordance with normal practice would have been placed on the shelves of the library on that day.

In the present case, the only evidence of the mailing date is an unsigned statement by an unidentified person, and is not corroborated by reference to any written contemporaneous record, or any other corroborating evidence.

13. It is also possible that further investigations would establish either that D1 was available to the public on demand from AIP on 12 October 1987 (see paragraphs 4 and 5 above) or that at least one subscriber received a copy of D1 by mail on or before 12 October 1987.

However, as the Enlarged Board of Appeal stated in Decision G 10/93 (see paragraph 2 above), a Board of Appeal is "primarily concerned with examining the contested decision". While the Board could remit the case to the Examining Division in order that such further investigations should be attempted, it seems unlikely that further reliable evidence relating to the events surrounding this particular publication about ten years ago could be obtained by the Examining Division.

Consequently, the Board has decided to allow this appeal.

It is of course always open to an opponent after grant to establish that D1 was in fact made available to the public before the priority date.

14. The case is therefore remitted to the Examining Division for further examination as to whether the application meets the requirements of the EPC, on the basis that document D1 does **not** form part of the state of the art.

**Order**

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

1. The decision of the Examining Division is set aside.
2. The case is remitted to the first instance for further prosecution.

The Registrar: The Chairman:

M. Beer

G. D. Paterson