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**D E C I S I O N**  
**of 9 December 1999**

**Case Number:** T 0169/98 - 3.4.3

**Application Number:** 92305051.2

**Publication Number:** 0518544

**IPC:** H01L 21/316

**Language of the proceedings:** EN

**Title of invention:**

Anisotropic deposition of dielectrics

**Applicant:**

AT&T Corp.

**Opponent:**

-

**Headword:**

Anisotropic deposition/AT&T

**Relevant legal provisions:**

EPC Art. 108

**Keyword:**

"Form of appeal - admissible (yes)"

**Decisions cited:**

G 0010/93, T 0069/96

**Catchword:**

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Boards of Appeal

Chambres de recours

**Case Number:** T 0169/98 - 3.4.3

**D E C I S I O N**  
**of the Technical Board of Appeal 3.4.3**  
**of 9 December 1999**

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

**Representative:** Johnston, Kenneth Graham  
Lucent Technologies (UK) Ltd  
5 Mornington Road  
Woodford Green  
Essex, IG8 OTU (GB)

**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 9 October 1997  
refusing European patent application  
No. 92 305 051.2 pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** R. K. Shukla  
**Members:** G. L. Eliasson  
W. Moser

## Summary of Facts and Submissions

I. European patent application No. 92 305 051.2 was refused by the decision of the examining division dated 9 October 1997. The ground for the refusal was that the subject-matter of claim 1 filed with the letter of 1 August 1996, received by the EPO on 1 August 1996, lacked an inventive step in view of the prior art document

D1: Solid State Technology, vol. 33, no. 4, pages 139 to 144 (1990).

According to the decision, however, an independent claim formulated with one or both of the features of claims 5 and 6 would appear to be inventive. The applicant had also been invited in the official communication dated 30 January 1996 to file such a claim but had instead chosen to pursue the subject matter as originally claimed.

II. The appellant (applicant) lodged an appeal on 28 November 1997, payed the appeal fee on 27 November 1997, and filed new claims 1 to 9 on 3 February 1998 and stated in the accompanying letter that "We have been advised that the revision of the claims is in alignment with the claims suggested by the Examiner and that such revision will answer all of the objections raised."

III. In response to communications by the Board, the appellant filed new claims 1 to 5 together with amended pages 1a and 2 of the description on 6 September 1999, and filed a new claim 2 on 17 November 1999. The

appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the following documents:

**Claims:** No. 1 and 3 to 5 with the letter dated and filed on 6 September 1999  
No. 2 with the letter dated and filed on 17 November 1999

**Description:** pages 1 and 5 of the application as filed  
pages 2a, 3, and 4 with the letter dated and filed on 3 October 1995  
pages 1a and 2 with the letter dated and filed on 6 September 1999

**Drawings:** Sheet 1/1 with the letter dated and filed on 1 August 1996

IV. Claim 1 of the above request reads as follows:

"A method of semiconductor integrated circuit fabrication comprising:  
depositing a dielectric (119) upon a substrate (111) in a plasma reactor (11) from a gas mixture comprising a precursor gas (19) and oxygen (23), said mixture flowing in said reactor (11) and being capable of depositing said dielectric (119) conformally, AND CHARACTERIZED BY maintaining the total pressure of said gas mixture to less than the total pressure required for conformal deposition and by maintaining the oxygen/precursor gas flow ratio at 1/3 or less than the flow ratio required for conformal deposition, thereby anisotropically forming a dielectric (119), and in

which  
said substrate (e.g., 17) has an edge and is supported  
by a susceptor (15) which has an edge extending beyond  
the said edge of said substrate."

## **Reasons for the Decision**

### 1. *Admissibility*

The appeal complies with Articles 106 to 108 and  
Rule 64 EPC, and is therefore admissible.

In particular, the Board is satisfied that the  
statement in the letter dated and filed on 3 February  
1998, referred to in section II above, contains  
sufficient matter to be regarded as a statement of  
grounds of the appeal in accordance with Article 108,  
third sentence EPC. Thus, it is clear that the  
appellant no longer wishes a patent to be granted based  
on the claim refused in the decision under appeal, but  
requests the grant of a patent based on claims  
containing subject matter which was considered by the  
examining division to be inventive. Thus, the appellant  
has requested that the examination of the application  
should be continued on the basis of a new text of the  
claims which is intended to meet the objections of the  
examining division (cf. T 69/96, unpublished, Reasons,  
point 1.2).

### 2. *Amendments (Article 123(2) EPC)*

Claim 1 contains the subject matter of claims 1, 3, and

6 of the application as filed. Dependent claims 2 to 5 are based on claims 2, 4, 10, and 11 of the application as filed, respectively.

Although claims 2 and 6 of the application as filed both directly refer to claim 1, it is evident from page 5, lines 7 to 13 of the application as filed that no new subject-matter is introduced by the combination of the features of these claims as in claim 1 of the appellant's request.

The application therefore meets the requirements of Article 123(2) EPC.

3. *Clarity (Article 84 EPC)*

There were no objections raised under Article 84 EPC against claim 1 in the decision under appeal. The objection against claims 7 and 8 in the decision under appeal that these claims are not supported by the description (Article 84 EPC) have been overcome by the deletion of these claims. The Board is also satisfied that the present claims meet the requirements of Article 84 EPC.

4. *Novelty and inventive step (Articles 54 and 56 EPC)*

According to point 2.0 of the decision under appeal, the feature of claim 6 of the set of claims forming the basis of the contested decision ("in which said substrate has an edge and is supported by a susceptor which has an edge extending beyond the said edge of said substrate") was not disclosed in the prior art and an independent claim incorporating this feature could

have been considered to be inventive.

With respect to claim 1 forming the basis of the decision under appeal, present claim 1 in addition has not only the feature of former claim 6 mentioned above, but also that of claim 2 of the set of the claims. In other words, present claim 1 contains subject matter which was regarded by the examining division as involving an inventive step having regard to the cited prior art. As the above-mentioned feature in question is neither disclosed in document D1 nor in any of the other documents cited in the search report, and the objections under Article 84 EPC in the decision under appeal having been met by the present set of claims, the Board has no reason to question or reexamine on its own motion the examining division's finding that the present set of claims would meet the requirements of Article 52(1) EPC (cf. G 10/93, OJ EPO 1995, 172, Reasons, item 4).

**Order**

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

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of the following documents:

**Claims:** No. 1 and 3 to 5 with the letter dated and filed on 6 September 1999  
No. 2 with the letter dated and filed on 17 November 1999

**Description:** pages 1 and 5 of the application as filed  
pages 2a, 3, and 4 with the letter dated and filed on 3 October 1995  
pages 1a and 2 with the letter dated and filed on 6 September 1999

**Drawings:** Sheet 1/1 with the letter dated and filed on 1 August 1996

The Registrar:

The Chairman:

D. Spigarelli

R. K. Shukla