

Internal distribution code:

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

**Datasheet for the decision
of 19 January 2010**

Case Number: T 0679/07 - 3.4.03

Application Number: 99303641.7

Publication Number: 0959501

IPC: H01L 27/118

Language of the proceedings: EN

Title of invention:

System and method of manufacturing semicustom integrated circuits using reticle primitives and interconnect reticles

Applicant:

LUCENT TECHNOLOGIES INC.

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 123(2)

Relevant legal provisions (EPC 1973):

-

Keyword:

"Added subject-matter (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0679/07 - 3.4.03

D E C I S I O N
of the Technical Board of Appeal 3.4.03
of 19 January 2010

Appellant: LUCENT TECHNOLOGIES INC.
600 Mountain Avenue
Murray Hill NJ 07974-0636 (US)

Representative: Williams, David John
Page White & Farrer
Bedford House
John Street
London WC1N 2BF (GB)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 21 December 2006
refusing European application No. 99303641.7
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: G. Eliasson
Members: R. Q. Bekkering
T. Bokor

Summary of Facts and Submissions

I. This is an appeal against the refusal of application 99 303 641 for added subject-matter, Article 123(2) EPC 1973 and lack of inventive step, Article 56 EPC 1973, over

D1: US 5 652 163 A.

II. The appellant applicant requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 8 submitted with the notice and grounds of appeal.

III. Oral proceedings were held before the board in the absence of the appellant proprietor as forewarned.

IV. Claim 1 reads as follows:

*"A system for manufacturing an integrated circuit (IC) 440, CHARACTERIZED BY:
a library of reticle primitives 410, at least two of said reticle primitives containing patterns configured to create a portion of a circuit module 525 and 535 to be contained in said IC;
an interconnect reticle 420 containing patterns corresponding to interconnecting conductors 550 for electrically coupling said circuit modules and coupling said circuit modules to bond pads 520 for said circuit modules, wherein said interconnect reticle does not contain patterns corresponding to bond pads for the circuit module; and
lithographic equipment 430 that employs said at least two of said reticle primitives and said interconnect*

reticle to create a lithograph of said circuit modules and said interconnecting conductors".

Independent claims 7 and 8 are directed at a corresponding method and process of manufacturing an integrated circuit.

V. The appellant in substance provided the following arguments:

The Examining Division rejected claim 1, asserting it introduced subject matter extending beyond the application as filed contrary to Article 123(2) EPC and that the same applied mutatis mutandis to method claim 7 and process claim 8. While disagreeing with the Examining Division, claims 1, 7, and 8 were amended to alleviate this perceived issue. Specifically, the interconnect reticle was described to contain patterns corresponding to interconnecting conductors which electrically coupled circuit modules to one another and to couple a circuit module to bond pads, but the interconnect reticle patterns did not contain patterns for the bond pads.

Furthermore, since D1 did not teach or suggest using reticle primitives to create a portion of individual function blocks or circuit modules, it would not be obvious to a person skilled in the art to select at least two reticle primitives containing patterns configured to create a portion of a circuit module to be contained in an integrated circuit, as recited in independent claims 1, 7, and 8. Accordingly, the presence of an inventive step had to be recognised.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 Claim 1 as amended defines that the system is characterised by "*a library of reticle primitives 410, at least two of said reticle primitives containing patterns configured to create a portion of a circuit module 525 and 535 to be contained in said IC*".

However, according to the application as originally filed a "*reticle primitive*", ie a set of reticles, is used for the formation of a circuit module and not merely for a portion thereof as is now claimed (cf original description, page 3, lines 11 to 22).

2.2 Furthermore, claim 1 has been amended by adding "*wherein said interconnect reticle does not contain patterns corresponding to bond pads for the circuit module*".

In the decision under appeal it is in substance argued that according to the application as originally filed the interconnect reticle in fact does contain patterns with **positions** corresponding to the bond pads, as this would be necessary for providing a contact between the conductive traces and the bond pads. The amendment, thus, extended beyond the content of the application as originally filed (Article 123(2) EPC).

The board concurs with this finding. The expression "*patterns corresponding to bond pads*" encompasses a positional correspondence between the patterns and the bond pads which is given according to the application as originally filed. In particular, it is clear from figures 5A to 5D and corresponding description of the application as filed that the interconnects extend to the bond pads and are connected therewith.

The appellant has argued, and the board would agree, that there is support in the application as originally filed for the interconnect reticle not containing patterns **for** the bond pads. This is, however, not what is defined in claim 1.

Accordingly, claim 1 as amended contains subject-matter which extends beyond the content of the application as filed, contrary to Article 123(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

Registrar

Chair

S. Sánchez Chiquero

G. Eliasson