

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte WALTER H. SCHROEN

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Appeal No. 2004-0700  
Application No. 09/531,671

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ON BRIEF

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Before GARRIS, PAK, and KRATZ, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the non-final rejection of claims 14-22 and 24-39 which are all of the claims remaining in the application.

The subject matter on appeal relates to a method of packaging integrated circuits comprising the steps of (1) providing a plurality of integrated circuit chips, each chip

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having a surface and a periphery, and a sheet of lead frames and  
(ii) encapsulating the integrated circuits and at least a portion  
of each lead frame, each encapsulated integrated circuit and  
opposing lead frame forming a discrete integrated circuit  
package. Further details of this appealed subject matter are set  
forth in representative independent claim 14 which reads as  
follows:

14. A method of packaging integrated circuits, comprising  
the steps of:

providing a plurality of integrated circuit chips, each chip  
having a surface and a periphery, and a sheet of lead frames;

disposing said sheet of lead frames opposite said plurality  
of integrated circuit chips, each integrated circuit chip  
disposed opposite one of said lead frames, each integrated  
circuit chip including an integrated circuit therein, each lead  
frame including leads, the entire lead frame and leads disposed  
within said periphery of said opposing integrated circuit chip;

electrically coupling the leads of each lead frame to the  
opposing integrated circuit chip; and

encapsulating the integrated circuits and at least a portion  
of each lead frame, each encapsulated integrated circuit and  
opposing lead frame forming a discrete integrated circuit  
package.

The references set forth below are relied upon by the  
examiner in the section 102 and section 103 rejections before us:

Olla et al. (Olla)	4,743,956	May 10, 1988
Sato et al. (Sato)	5,519,251	May 21, 1996
Khandros et al. (Khandros)	5,685,885	Nov. 11, 1997
		(filed Oct. 7, 1994)

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Nishizawa et al. (Nishizawa) 5,910,010 Jun. 8, 1999  
(PCT filed Apr. 5, 1995)

Claims 14, 15, 17, 18, 21, 25, 26 and 31-33 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Khandros.

Claims 16, 22, 27-29, 34 and 35 as well as claims 37 and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Khandros in view of Sato.

The remaining claims on appeal stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Khandros in various combinations with the other references listed above.

As indicated on page 4 of the brief (i.e., the supplemental appeal brief filed May 5, 2003, as Paper No. 22), certain of the appealed claims have been separately grouped by the appellant. In our disposition of this appeal, we have individually considered these separately grouped claims to the extent that they also have been separately argued. See Ex parte Schier, 21 USPQ2d 1016, 1018 (Bd. Pat. App. & Int. 1991). Also see 37 CFR § 1.192(c)(7)(2002).

Rather than reiterate the respective positions advocated by the appellant and by the examiner, we refer to the aforementioned brief and to the answer for a complete exposition thereof.

OPINION

For the reasons which follow, we will sustain each of the rejections advanced by the examiner on this appeal.

We share the examiner's finding that appealed independent claim 14 is anticipated by the Figure 32 disclosure of Khandros. According to the appellant, Khandros fails to disclose the here claimed encapsulating step. The appellant describes his position on this matter in the paragraph bridging pages 4 and 5 of the brief with the language set forth below:

Khandros does not disclose such a feature [i.e., the encapsulating step of claim 14]. See Figure 2, column 11, lines 14-18 of Khandros where the encapsulant 60 covers only the junctures of the leads 50 with the contacts 40. See also Figure 32, column 17, line 3 where only the leads are mentioned as being encapsulated. The encapsulant therefore does not encase or enclose the integrated circuit and leadframe.

The appellant's position is not well taken. Khandros's step of encapsulating his leads (see Figure 32 and the paragraph bridging columns 16 and 17 in comparison with Figure 2 and the disclosure relating thereto) would necessarily and inherently also encapsulate or cover at least a portion of the integrated circuits to which these leads are connected. It may be the appellant considers appealed claim 14 to require that the entire, rather than at least a portion, of the integrated circuit be encapsulated or covered as shown in Figures 1D and 1E of his

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drawing. However, neither claim 14 nor any of the other argued claims on appeal contains any such requirement.

We here emphasize that, during examination proceedings, claims are to be given their broadest reasonable interpretation consistent with the specification. In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Similarly, while claims are to be interpreted in light of the specification, limitations from the specification are not to be read into the claims. Comack Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186, 48 USPQ2d 1001, 1005 (Fed. Cir. 1998).

Here, it is indisputable that appealed claim 14 does not expressly require encapsulating the entire exposed surfaces of the integrated circuits as shown, for example, in the appellant's drawing. Moreover, the fact that claim 14 explicitly recites "encapsulating . . . at least a portion of each lead frame" (emphasis added) evinces that it is proper to interpret the here claimed encapsulating step as encompassing embodiments wherein only a portion of the feature in question is encapsulated or covered. A more narrow interpretation would involve the impermissible practice of reading limitations from the appellant's specification and drawing disclosure into the appealed claim. Id.

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Under these circumstances, we, like the examiner, find that claim 14 is anticipated by Khandros (i.e., patentee's express as well as inherent disclosure) wherein at least a portion of the integrated circuits and lead frames are encapsulated or covered.

We also share the examiner's finding that appealed dependent claim 15 is anticipated by Khandros wherein patentee's sheet of lead frames comprises a composite of metal and interposer material. In the appellant's view, "anything in Khandros that can reasonably be called a 'lead frame' is not a unitary sheet of material, but is rather a composite of metal on a sheetlike dielectric [i.e., the interposer of Khandros]" (brief, page 5). As correctly explained by the examiner in the paragraph bridging pages 13 and 14 of the answer, the appellant's claimed unitary sheet of material is not limited to only a single type of material such as metal. Thus, for reasons analogous to those discussed above, it is appropriate to interpret claim 15 as encompassing a unitary sheet of composite material such as the metal/interposer composite of Khandros. See In re Hyatt, 211 F.3d at 1772, 54 USPQ2d at 1667 and Comack Communications, Inc. v. Harris Corp., 156 F.3d at 1186, 48 USPQ2d at 1005.

Finally, like the examiner, we also reach a finding of anticipation with respect to argued claims 21, 25 and 31-33. The

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features of these claims correspond to those previously considered, and the appellant's arguments with respect thereto are unpersuasive for reasons analogous to those previously explained.

In light of the foregoing, we hereby sustain the examiner's section 102 rejection of claims 14, 15, 17, 18, 21, 25, 26 and 31-33 as being anticipated by Khandros.

The only other arguments advanced by the appellant on this appeal concern the section 103 rejection of claims 27, 37 and 38 as being unpatentable over Khandros in view of Sato. As explained by the examiner on pages 14 and 15 of the answer,<sup>1</sup> these arguments are not relevant to the examiner's proposed combination of Khandros and Sato. Furthermore, we consider the examiner to have established a prima facie case of obviousness with respect to this proposed combination. It is our ultimate determination, therefore, that the examiner has established a prima facie case of obviousness with respect to the claims under review which the appellant has failed to successfully rebut with argument and/or evidence of nonobviousness. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

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<sup>1</sup> Significantly, the appellant has not filed a reply brief in response to this answer and thus has not disagreed on the record before us with the examiner's explanation.

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It follows that we also hereby sustain the examiner's section 103 rejection of claims 16, 22, 27-29, 34, 35, 37 and 38 as being unpatentable over Khandros in view of Sato.

The other section 103 rejections advanced by the examiner have not been separately contested by the appellant on this appeal. See In re Dance, 160 F.3d 1339, 1340, n.2, 48 USPQ2d 1635, 1636, n.2 (Fed. Cir. 1998) and In re Nielson, 816 F.2d 1567, 1571, 2 USPQ2d 1525, 1528; compare In re McDaniel, 293 F.3d 1379, 1382-85, 63 USPQ2d 1462, 1464-66 (Fed. Cir. 2002). Thus, we likewise hereby sustain these section 103 rejections for reasons which correspond to those earlier stated.

The decision of the examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Bradley R. Garris	)	
Administrative Patent Judge	)	
	)	
	)	
Chung K. Pak	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
Peter F. Kratz	)	
Administrative Patent Judge	)	

BRG:tdl

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