

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 40

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte WAI-FAN YAU, DAVID CHEUNG, SHIN-PUU JENG,  
KUOWEI LIU, and YUNG-CHENG YU

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Appeal No. 2004-1888  
Application No. 09/477,126

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ON BRIEF

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Before GARRIS, KRATZ, and JEFFREY T. SMITH, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

ON REQUEST FOR REHEARING

This is in response to a request, filed November 17, 2004, for rehearing of our decision, mailed September 16, 2004, wherein we sustained the examiner's section 103 rejection of all appealed claims as being unpatentable over Sugahara in view of Chiang.

In their request, the appellants argue:

The Board errs in affirming the rejection of claims 68-73 since the Decision by the Board is based

on the finding that the combined teachings of *Chiang, et al.* and *Sugahara* provide a reasonable expectation of success for using silicon carbide as an etch stop layer adjacent spin-on glass dielectric layers generally as taught by *Chiang, et al.* including the particular spin-on glass dielectric layer of *Sugahara* [Request, page 2].

More specifically, it is the appellants' contention that:

The Board errs in finding that *Chiang, et al.* suggests that each etch stop layer is suitable for each dielectric layer. *Chiang et al.* does not suggest which etch stop layers are suitable for spin-on glass layers. The only specific combination of dielectric and etch stop layers that is taught by *Chiang, et al.* is the combination of silicon dioxide and silicon nitride as claimed by *Chiang, et al.* Aside from *Chiang, et al.*'s teaching of adjacent silicon dioxide and silicon nitride layers, *Chiang, et al.* does not provide any guidance as to which etch stop layers are suitable for specific dielectric layers [Request, page 2].

This contention is not well taken. Initially, it is appropriate to clarify that we do not consider *Chiang* to suggest that each and everyone of the etch stop layers disclosed therein is suitable for each and everyone of the dielectric layers disclosed therein, as indicated in the first sentence of the appellants' aforequoted contention. Instead, we simply find that *Chiang* teaches using an etch stop layer adjacent a dielectric layer wherein the etch stop layer comprises a variety of materials including the silicon nitride layer used by *Sugahara* as well as the silicon carbide layer claimed by the appellants (see the paragraph bridging columns 14 and 15 of *Chiang*) and wherein

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the dielectric layer also comprises a variety of materials including any suitable spin-on glass dielectric layer (see lines 26-35 in column 13 of Chiang). Because the dielectric layer of Sugahara also is a spin-on glass dielectric layer (see lines 7-10 in column 1 and lines 25-43 in column 3), we concluded that the combined teachings of these references would have suggested replacing Sugahara's silicon nitride etch stop layer with a silicon carbide etch stop layer of the type taught by Chiang based on a reasonable expectation that the silicon carbide would function successfully as an etch stop layer adjacent spin-on glass dielectric layers including the particular spin-on glass dielectric layer of Sugahara.

In this last mentioned regard, it is the appellants' contention that:

*Chiang, et al.'s* listing of a wide variety of both dielectric layers and etch stop layers is not sufficient to provide a reasonable expectation of success that a particular one of the named etch stop layers, *i.e.*, silicon carbide, would function successfully with a particular one of the named dielectric layers, *i.e.*, any suitable spin-on glass [Request, page 2].

Significantly, the appellants proffer no support for this position. On the other hand, Chiang's disclosure of a wide variety of both dielectric layers and etch stop layers, itself, evinces that those having an ordinary level of skill in this art

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would be capable of associating a specific dielectric layer material with a specific etch stop layer material based upon a reasonable expectation of success.

In an attempt to support their contrary view, the appellants point out that Chiang's listings of etch stop layers and dielectric layers include materials such as silicon nitride which are common to each. To the extent the appellants believe their view is supported by the absurd combination of a silicon nitride etch stop layer adjacent a silicon nitride dielectric layer, we point out that an artisan would not have made such a combination because it is skill, not stupidity, which is presumed in the art. In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985). Viewed from this perspective, the previously mentioned commonality militates for our position vis-à-vis a reasonable expectation of success and against the appellants' opposing view. See In re O'Farrell, 853 F.2d 894, 904, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988) (obviousness under section 103 requires only a reasonable, not an absolute, expectation of success).

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The subject request for rehearing is denied.

REHEARING-DENIED

Bradley R. Garris	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
Peter F. Kratz	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
Jeffrey T. Smith	)	
Administrative Patent Judge	)	

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