

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,

Petitioner,

v.

ADVANCED CODING TECHNOLOGIES LLC,

Patent Owner.

Patent No. 7,804,891

Filing Date: March 30, 2005

Issue Date: September 28, 2010

Inventor: Taichi Majima

Title: DEVICE AND METHOD FOR JUDGING COMMUNICATION  
QUALITY AND PROGRAM USED FOR THE JUDGMENT

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**PATENT OWNER'S PRELIMINARY RESPONSE**

Case No. IPR2025-01161

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**LIST OF EXHIBITS**

<b>Exhibit No.</b>	<b>Description of Document</b>
2001	Google LLC'S Second Amended Invalidity and Subject Matter Eligibility Contentions in <i>Advanced Coding Techs. LLC v. Google LLC</i> , Case No. 2:24-cv-00353-JRG (E.D. Tex.), dated April 11, 2025
2002	Advanced Coding Technologies LLC's Fourth Amended Disclosure of Asserted Claims and Infringement Contentions in <i>Advanced Coding Techs. LLC v. Google LLC</i> , Case No. 2:24-cv-00353-JRG (E.D. Tex.), dated December 20, 2024
2003	Advanced Coding Technologies LLC's Disclosure of Asserted Claims and Infringement Contentions in <i>Advanced Coding Techs. LLC v. Google LLC</i> , Case No. 2:24-cv-00353-JRG (E.D. Tex.), dated July 5, 2024
2004	Joint Claim Construction and Prehearing Statement, Dkt. 78, <i>Advanced Coding Techs. LLC v. Google LLC</i> , Case No. 2:24-cv-00353-JRG (E.D. Tex.), filed September 9, 2025

## I. INTRODUCTION

On June 17, 2025, Google LLC (“Petitioner” or “Google”) submitted a Petition (Paper 2, “Petition” or “Pet.”) to institute *inter partes* review (“IPR”) of U.S. Patent No. 7,804,891 (Ex. 1001, the “’891 Patent”), challenging Claims 1-9 (the “Challenged Claims”). The Petition asserts that (i) the Challenged Claims are rendered obvious over EIA/TIA Interim Standard – Cellular System Dual-Mode Mobile Station – Base Station Compatibility Standard, IS-54-B, April 1992 (“IS-54-B” or “Ex. 1004”), U.S. Patent No. 5,555,257 to Paul W. Dent (“Dent”) (“Dent” or “Ex. 1007”), Ernest Nanjung Yeh, “Advanced Vocoder Idle Slot Exploitation for TIA IS-136 Standard,” Massachusetts Institute of Technology, May 1998 (“Yeh” or “Ex. 1006”), and U.S. Patent No. 6,519,740 to Jan Martensson (“Martensson” or “Ex. 1005”); and (ii) the Challenged Claims are rendered obvious over IS-54-B, Dent, and U.S. Patent No. 5,255,343 to Huan-yu Su (“Su” or “Ex. 1008”). Pet. at 1. The Board should deny the Petition for at least the reasons described briefly below.

Petitioner fails to show that any combination of IS-54-B, Dent, Yeh, Martensson or Su discloses at least “a data changing means for, if the communication quality judged by the communication quality judging means does not satisfy a predetermined condition, making a predetermined change to the data to be transmitted represented by the symbol use in the judgment.”

First, the Petition is deficient because the Petition's Grounds 1 and 2 rely on IS-54-B's bad frame masking process, while failing to show IS-54-B's disclosure of whether such frames are "to be transmitted" in their changed form (*i.e.*, after the predetermined change occurs), in contravention of Claims [1c], [8c], and [9c].

Second, the Petition is deficient because both Yeh (in Petition's Ground 1) and Su (in Petition's Ground 2) describe a threshold to determine whether certain bits are corrupted and rejecting bits/frames or further processing that same data based on whether that threshold is exceeded. Nowhere does the Petition explain whether such data (*e.g.*, bits or frames) are "to be transmitted" in their changed form (*i.e.*, after the predetermined change occurs), in contravention of Claims [1c], [8c], and [9c].

Third, the Petition is deficient because neither Martensson (Ground 1) nor Su (Ground 2) even mention "symbol" in their entire specifications. Even if Petitioner properly identified a disclosure of "data to be transmitted" in IS-54-B, Yeh, or Su, the Petition is silent regarding Claims 1, 8, and 9's recited data "represented by the symbol used in the judgment" as it pertains to the use of Martensson and Su in the relied-upon combinations.

Accordingly, the Board should deny institution of the Petition.

## **II. CLAIM CONSTRUCTION**

In *Advanced Coding Techs. LLC v. Google LLC*, Case No. 2:24-cv-00353-JRG (E.D. Tex.) (the “District Court Litigation”), both parties proposed constructions. *See* Ex. 2004, at 199-207. However, for the purposes of this Preliminary Response only, Patent Owner believes that no formal constructions are presently necessary.

## **III. LEVEL OF ORDINARY SKILL IN THE ART**

For the purposes of this Preliminary Response only, Patent Owner utilizes Petitioner’s proposed level of skill in the art: “at least a bachelor’s degree in electrical engineering or computer engineering, and two years of work experience in the field of wireless communications. Lack of work experience can be remedied by additional education, and vice versa.” Pet. at 6.

## **IV. PETITIONER HAS NOT DEMONSTRATED A REASONABLE LIKELIHOOD OF SUCCESS FOR THE GROUNDS ADVANCED IN THE PETITION, AND THE PETITION SHOULD BE DENIED**

The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) so-called secondary considerations where in evidence. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question is not whether the differences

themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983).

The Board has held that a failure to identify the differences between the claimed subject matter and the prior art is fatal to an obviousness challenge. *See, Apple, Inc. v. Contentguard Holdings, Inc.*, IPR2015-00355, Decision Denying Institution of *Inter Partes* Review, Paper 9 at 9-10 (P.T.A.B. June 26, 2015) (denying institution for failure to identify the differences between the claimed subject matter and the prior art).

In arriving at an obviousness determination, the Board must sufficiently explain and support the conclusions that the prior art references disclose all the elements recited in the Challenged Claims and a relevant, skilled artisan not only could have made, but would have been motivated to combine all the prior art references in the way the patent claims and reasonably expected success. *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017). That is, even if all the claim elements are found across a number of references, an obviousness determination must consider whether a person of ordinary skill in the art would have the motivation to combine those references. *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1368 (Fed. Cir. 2016); *Los Angeles Biomedical Rsch. Inst. at Harbor-UCLA Med. Ctr. v. Eli Lilly & Co.*, 849 F.3d 1049, 1067 (Fed.

Cir. 2017) (vacating and remanding an obviousness determination, in part, because the Board did not make factual finding as to whether there was an apparent reason to combine all three prior art references to achieve the claimed invention and whether a person of skill in the art would have had a reasonable expectation of success from such a combination). This combinability determination, as supported by an articulated motivation to combine, requires a plausible rationale as to why those prior art references would have worked together. *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1335 (Fed. Cir. 2013). Absent some articulated rationale, a “common sense” finding is no different than the conclusory statement “would have been obvious.” *In re Van Os*, 844 F.3d 1359, 1361 (Fed. Cir. 2017). Of additional importance, “knowledge of a problem and motivation to solve it are entirely different from motivation to combine particular references . . . .” *Innogenetics, N.V. v. Abbott Lab’ys.*, 512 F.3d 1363, 1373 (Fed. Cir. 2008).

**A. Claims 1, 8, and 9 Are Not Obvious Over Any of Petitioner’s Grounds**

- 1. The Petition Does Not Show that the Combination of IS-54-B, Yeh, Dent, and Martensson Discloses “*if the communication quality judged by the communication quality judging means does not satisfy a predetermined condition, making a predetermined change to the data to be transmitted represented by the symbol used in the judgment,*” as Required by Claims [1c], [8c], and [9c]**

Claims 1, 8, and 9 of the ’891 Patent require “if the communication quality judged by the communication quality judging means does not satisfy a

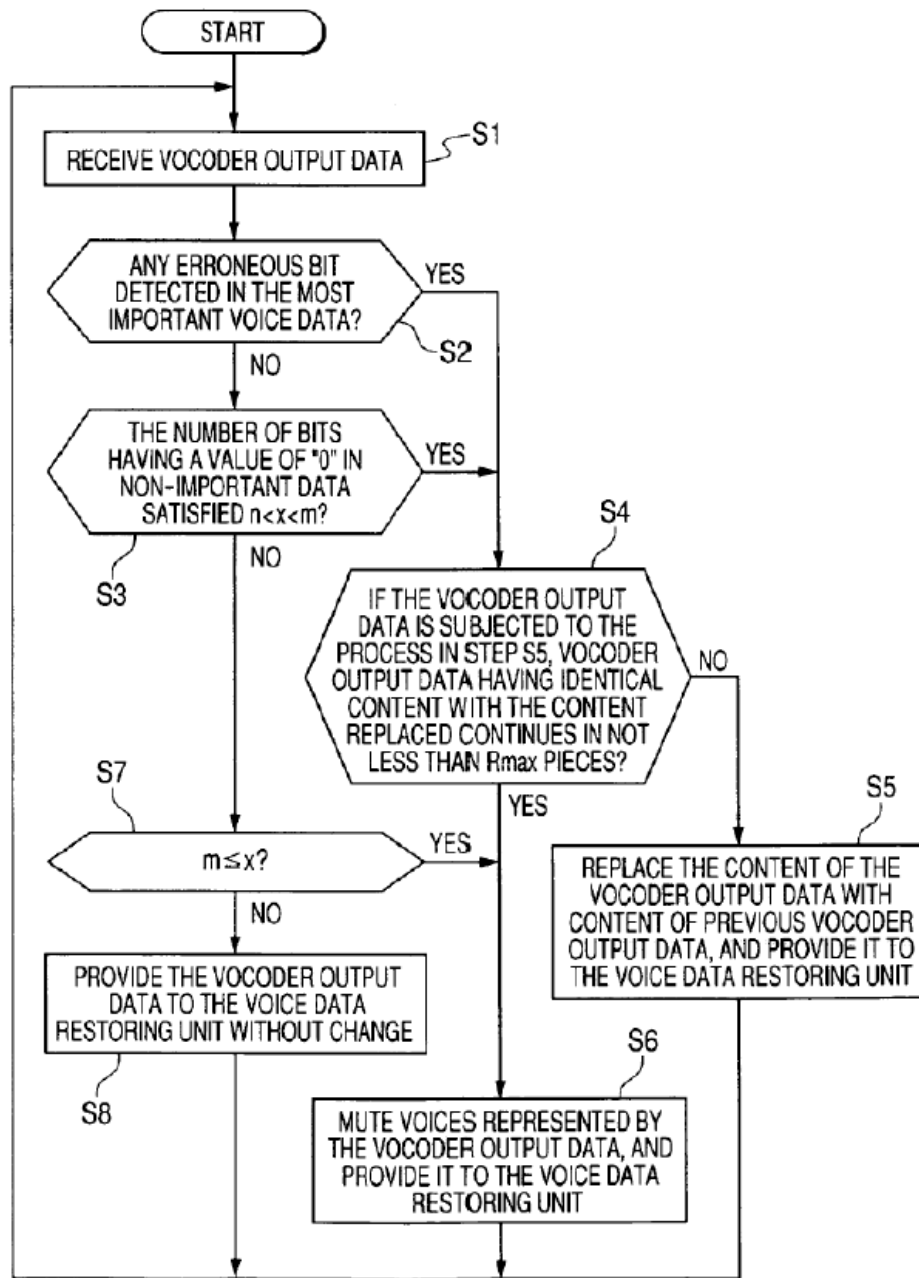
predetermined condition, making a predetermined change to the data to be transmitted represented by the symbol used in the judgment.”

The Petition is deficient because Petitioner’s Ground 1 fails to properly address two aspects of this claim limitation: (i) “mak[ing] a predetermined change to the data to be transmitted . . . used in the judgment;” and (ii) “the data to be transmitted represented by the symbol used in the judgment.” Notably, Petitioner only relies on IS-54-B and Yeh within the purported IS-54-B-Yeh-Dent-Martensson combination to disclose this claim limitation. Pet. at 27-29.

First, the Petition fails to show how IS-54-B discloses “making a predetermined *change to the data to be transmitted . . . used in the judgment.*” The Petition merely describes IS-54-B’s disclosure of a “bad frame masking system” depending on a frame’s “state.” Pet. at 27-28 (citing Ex.1004, at 74-75). Nowhere does the Petition explain whether such frames are “to be transmitted” in their changed form (*i.e.*, after the predetermined change occurs). *See generally id.*

As described in Claims 1[c], 8[c], and 9[c], “to be transmitted” is not transmitted data as Petitioner improperly ignores. In fact, as the ’891 Patent discloses, the data to be transmitted is fed back into the communication quality judging means.

FIG. 8



'891 Patent, FIG. 8 (feeding the output of S5 (replacing data to be transmitted) or S6 (muting voice data to be transmitted) back to S1 for communication quality judging.

Because Petitioner ignores a claim limitation (“data to be transmitted”), the Petition is deficient.

Second, the Petition’s reliance on Yeh does not remedy the deficiency of IS-54-B because the Petition merely relies on Yeh to disclose a “comparison of [a] Hamming distance to a threshold to determine how to further proceed.” Pet. at 28-29. This disclosure does not address whether there is a “change to the data to be transmitted.” In fact, Petitioner admits that Yeh’s threshold is used “to determine how to further process data.” *Id.* at 28; *see also id.* at 29 (“determine how to further proceed”). As a result, the Petition is deficient for failing to show how Yeh discloses “making a predetermined *change to the data to be transmitted . . . used in the judgment.*”

Third, Martensson does not even mention “symbol” in its entire specification. Therefore, even if information signals were “data to be transmitted” (per IS-54-B) (they are not), the Petition fails to address how such data would be “*represented by the symbol* used in the judgment” with respect to this claim limitation in the context of Ground 1’s combination involving Martensson.

Because of these deficiencies, institution should be denied.

**2. The Petition Does Not Show that the Combination of IS-54-B, Dent, and Su Discloses “*if the communication quality judged by the communication quality judging means does not satisfy a predetermined condition, making a predetermined change to the data to be transmitted represented by the symbol used in the judgment,*” as Required by Claims [1c], [8c], and [9c]**

Claims 1, 8, and 9 of the '891 Patent require “if the communication quality judged by the communication quality judging means does not satisfy a predetermined condition, making a predetermined change to the data to be transmitted represented by the symbol used in the judgment.”

The Petition is deficient because Petitioner’s Ground 2, which merely replaces Yeh and Martensson with Su to Petitioner’s purported combination of Ground 1, fails to properly address two aspects of this claim limitation: (i) “making a predetermined change to the data to be transmitted;” and (ii) “the data to be transmitted represented by the symbol used in the judgment.” Thus, the addition of Su in Ground 2 fails to remedy the deficiency of Ground 1.

First, to the extent that Petitioner relies on the same arguments/references as its Ground 1 (Pet. at 55 (citing to Section IV.D.4, which is its argument for Ground 1)), the Petition is deficient for the same reasons noted above. *See supra* § IV.A.1.

Second, the Petition fails to show how Su discloses “making a predetermined *change to the data to be transmitted.*” As with Yeh, the Petition describes a threshold to determine whether certain bits are corrupted and rejecting bits/frames

based on whether that threshold is exceeded. Pet. at 55-57 (citing Ex.1008, 5:9-6:6, Figs. 3a, 3b). Nowhere does the Petition explain whether such data (*e.g.*, bits or frames) are “to be transmitted” in their changed form (*i.e.*, after the predetermined change occurs). *See generally id.* at 60-63. Therefore, the Petition is deficient.

Third, Su does not even mention “symbol” in its entire specification. Therefore, even if bad frames were “data to be transmitted” per IS-54-B (the Petition fails to show how they are), the Petition fails to address how such frames would be “*represented by the symbol* used in the judgment” with respect to this claim limitation.

Because of these deficiencies, institution should be denied.

**B. Claims 2-7 Are Not Obvious Over Petitioner’s Grounds**

Claims 2-7 depend upon Claim 1, and for at least the same reasons as Claim 1, Petitioner’s Grounds fail to render obvious Claims 2-7. ’891 Patent, Claims 2-7.

**V. CONCLUSION**

For the foregoing reasons, Patent Owner respectfully requests that the Board deny institution of the Petition in its entirety.

Respectfully submitted,

Dated: October 8, 2025

By: /Peter Lambrianakos /  
Peter Lambrianakos (Reg. No. 58,279)  
Email: plambrianakos@fabricantllp.com  
Lead Counsel for Patent Owner  
Vincent J. Rubino, III (Reg. No. 68,594)  
Email: vrubino@fabricantllp.com

Back-Up Counsel for Patent Owner  
Joseph M. Mercadante (Reg. No. 64,077)  
Email: [jmercadante@fabricantllp.com](mailto:jmercadante@fabricantllp.com)  
Back-Up Counsel for Patent Owner  
FABRICANT LLP  
411 Theodore Fremd Avenue  
Suite 206 South  
Rye, New York 10580  
Tel. 212-257-5797  
Fax. 212-257-5796

**CERTIFICATE OF WORD COUNT**

The undersigned hereby certifies that the portions of the above-captioned PATENT OWNER'S PRELIMINARY RESPONSE specified in 37 C.F.R. § 42.24 has 2,012 words in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft Word for Office 365.

Respectfully submitted,

October 8, 2025

By: /Peter Lambrianakos /  
Peter Lambrianakos (Reg. No. 58,279)  
Lead Counsel for Patent Owner  
FABRICANT LLP  
411 Theodore Fremd Avenue  
Suite 206 South  
Rye, New York 10580  
Tel. 212-257-5797  
Fax. 212-257-5796  
Email: plambrianakos@fabricantllp.com

**CERTIFICATE OF SERVICE**

A copy of the foregoing Patent Owner's Preliminary Response and Exhibit  
2004 have been served on Petitioner's counsel of record as follows:

Raghav Bajaj  
Email: raghav.bajaj@lw.com  
**LATHAM & WATKINS LLP**  
300 Colorado Avenue, Suite 2400  
Austin, Texas 78701

Linfong Tzeng  
Email: linfong.tzeng@lw.com  
**LATHAM & WATKINS LLP**  
140 Scott Drive  
Menlo Park, California 94025

Patricia Young  
Email: patricia.young@lw.com  
**LATHAM & WATKINS LLP**  
1271 Avenue of the Americas  
New York, New York 10020

*Attorneys for Google LLC*

October 8, 2025

By: /Peter Lambrianakos /  
Peter Lambrianakos (Reg. No. 58,279)  
Lead Counsel for Patent Owner