

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Inter IKEA Systems B.V.,

Petitioner,

v.

Pointwise Ventures, LLC,

Patent Owner.

Case No. IPR2025-00798

U.S. Patent No. 8,471,812

**PATENT OWNER'S PRELIMINARY RESPONSE
PURSUANT TO 37 C.F.R. § 42.107(a)**

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I. INTRODUCTION

U.S. Patent No. 8,471,812 (the “’812 Patent”) represents a significant technological advancement in object identification systems. Unlike prior art systems that performed simple unambiguous matching, the ’812 Patent discloses and claims an innovative method that automatically identifies multiple likely pointed-to objects from a digital image and presents them to users as a selectable list. This breakthrough allows users to make informed selections from among several possibilities rather than being constrained to accept a single, potentially incorrect automated determination.

The claimed invention addresses a fundamental problem that plagued earlier object identification systems: the inability to handle ambiguous situations where multiple objects might reasonably match the user’s intent. By providing users with a curated list of likely pointed-to objects derived from analysis of the digital image itself, the ’812 Patent enables more accurate and flexible object identification across a wide range of real-world scenarios.

Petitioner’s challenge fundamentally misunderstands both the claimed invention and the cited prior art. In particular, Petitioner relies chiefly on Darrell, a reference that teaches an entirely different approach to image analysis. Where the ’812 Patent identifies multiple likely objects within a digital image for user selection, Darrell merely performs image-to-image matching to find similar photographs or

web pages.

Petitioner's attempt to combine with Darrell with old, previously rejected prior art—Boncyk—is similarly unavailing. During examination, the USPTO initially attempted similar combinations of prior art references, including the very same Boncyk reference that forms the backbone of Petitioner's obviousness arguments. However, after careful consideration and analysis, the Examiner ultimately recognized that the claimed invention represented a “nonobvious improvement” over the prior art, specifically in its innovative approach to “automatically identifying a list of likely pointed-to objects from the digital image and returning the list of likely pointed-to objects to the user to select one of the likely pointed-to objects as the identified objects.” (Ex-1002 at 15.)

Petitioner's attempts to resurrect these previously considered and ultimately unsuccessful theories cannot overcome the fundamental gap between what the prior art actually teaches and what the claims require. The present Petition suffers from the same analytical flaws that led to the withdrawal of similar rejections during prosecution.

Accordingly, as argued herein, the Petition should be denied and the Board should decline to institute inter partes review.

II. LEGAL PRINCIPLES

The burden in inter partes review proceedings rests squarely on the petitioner,

who “has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden encompasses not only identifying allegedly relevant prior art but also demonstrating with specificity how that art discloses each and every element of the challenged claims. The burden never shifts to the Patent Owner, who bears no obligation to prove patentability.

The statutory framework requires that the petition “identify, in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(3). Moreover, the Board may institute review only upon determining “that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). These requirements demand more than conclusory assertions or superficial mappings of prior art elements to claim limitations.

For anticipation under 35 U.S.C. § 102, the law requires that a single prior art reference disclose each and every element of the claimed invention, arranged or combined in the same way as in the claim. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). This standard demands actual disclosure, not speculation about what might be derivable through hindsight analysis or creative interpretation.

Similarly, obviousness determinations under 35 U.S.C. § 103 require careful analysis of the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the pertinent art, all while avoiding the trap of hindsight bias. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). The mere fact that individual elements might be found scattered across multiple references does not establish obviousness without proper motivation to combine and reasonable expectation of success.

III. ARGUMENT

A. Ground 1: Darrell Fails to Anticipate Claims 1, 3, and 10-12

1. Darrell’s Image-Matching Approach Does Not Disclose Identifying Likely Pointed-To Objects

The fundamental flaw in Petitioner's anticipation argument lies in a basic mischaracterization of what Darrell actually teaches. Petitioner attempts to map Darrell’s image-matching capabilities onto the ’812 Patent’s object identification functionality, but these represent different technological approaches that cannot be conflated.

Claim 1 requires “automatically identifying a list of likely pointed-to objects from the digital image at the different location to return the list of likely pointed-to objects” and “returning the list of likely pointed-to objects to the user to select one of the likely pointed-to objects.” These limitations require the capability to analyze

a digital image to identify multiple discrete objects within the image that the user pointed to, and present those objects to the user as selectable options. Darrell discloses neither.

By contrast, Darrell teaches a system where “a search engine looks for a set of images most similar to the query image.” Ex-1004 [0025]. This approach focuses entirely on finding other images that visually resemble the submitted query image as a whole, rather than identifying specific objects within the original image.

Darrell’s methodology is exemplified by its described “typical scenario,” The scenario describes a user who “is visiting campus for the first time ever” and “is supposed to meet a friend at a location known as ‘Killian Court.’” When uncertain whether “the building in front of her is the ‘Killian Court,’” the user “takes an image of the building and sends it to the Server 24.” Crucially, Darrell explains that “[t]his image is then used to search the web for pages that also contain images of this building” and “[t]he server 24 returns the most relevant web pages.” The user then browses these web pages until “she finds the name ‘Killian Court’ and concludes that this is the right place.” Ex-1004 [0027].

This scenario demonstrates that Darrell performs image-to-image matching to locate web content containing visually similar images, fundamentally different from the claimed invention’s approach of identifying multiple likely pointed-to objects within a single image for user selection. Darrell merely seeks to confirm the identity

of a photographed subject by finding other images of the same subject, not to identify multiple potential objects the user pointed to within a digital image.

The distinction becomes even clearer when considering the practical limitations of Darrell's approach. Because Darrell relies on finding similar images as complete entities, it cannot address scenarios where the same object appears in different contexts, orientations, or visual presentations across different images. For example, if a user photographed a scene containing both a building and a statue, Darrell could potentially find other images of the same scene or similar buildings, but it could not identify and differentiate between the building and statue as separate selectable objects within the original image. This limitation fundamentally distinguishes Darrell's capabilities from the claimed invention's object identification functionality.

2. Darrell's Approach Mirrors Previously Rejected Unambiguous Matching Systems

The deficiencies in Darrell's disclosure parallel those that led to the rejection of Boncyk during prosecution, demonstrating that Darrell suffers from the same fundamental limitations that the USPTO ultimately determined were overcome by the claimed invention. During prosecution, the applicant effectively distinguished Boncyk by noting that "the CD or DVD is unambiguously identified. The menu of options simply gives options for what to do with that unambiguously identified CD

or DVD, namely, to listen to or watch streaming samples or to buy it. A list of possible identifications of the object, as recited in the present claims, is not taught or even remotely suggested.” Ex-1002 at 46.

Darrell exhibits the same “unambiguous identification” approach that characterized Boncyk. In the “Killian Court” scenario, Darrell seeks to definitively confirm that the photographed building is indeed Killian Court by finding matching images and associated web content. The system does not identify multiple possible objects within the image that the user might have intended to point to; instead, it attempts to unambiguously verify the identity of the image through external image matching.

Even when Darrell “displays the result by arranging candidate images into a thumbnail mosaic” (Ex-1004 [0025]), these thumbnails represent candidate images showing what Darrell believes to be the same subject as the query image, not a list of different objects identified within the original digital image. The thumbnail mosaic serves as a presentation method for search results, analogous to how a web search engine might display multiple web pages relevant to a query, rather than representing multiple identified objects from which the user can select their intended target. Darrell’s “mosaic” is not a “list” of likely pointed-to objects, as required by Claim 1.

3. Darrell Cannot Return a List of Identified Objects for User Selection

The failure to disclose object identification within images necessarily means that Darrell cannot satisfy the claim requirement for “returning the list of likely pointed-to objects to the user to select one of the likely pointed-to objects.” Because Darrell does not identify multiple objects within the digital image, it has no list of identified objects to return to the user.

Instead, Darrell returns search results consisting of web pages or images that contain content similar to the query image. The user interaction in Darrell involves browsing through these search results to find confirmatory information about the photographed subject, as demonstrated in the Killian Court example where the user “browsing these pages” until “she finds the name ‘Killian Court.’” This browsing and confirmation process differs fundamentally from selecting among pre-identified objects as contemplated by the claims.

The claimed invention envisions a system that performs the analytical work of identifying potential objects and presents those objects as organized options for user selection. This approach reduces the cognitive burden on users and provides a more direct path to accurate object identification. Darrell, by contrast, shifts the analytical burden to the user, who must manually review search results and draw conclusions about the identity of the photographed subject.

Furthermore, the claimed invention’s approach enables object identification even in scenarios where exact image matches might not exist in external databases.

By analyzing the content of the digital image itself to identify multiple potential objects, the claimed system can function independently of external image repositories. Darrell's dependence on finding similar images in external sources represents a further difference that limits its applicability and distinguishes it from the claimed invention.

In the end, Darrell fails to identify likely pointed-to objects *within* a digital image, instead employing a search engine for image-to-image matching. Moreover, rather than returning a list of likely pointed-to objects within a digital image, Darrell merely displays a "mosaic" of "similar" candidate images. Neither of these functions teaches or suggests the limitations of Claim 1.

4. Dependent Claims 3, 10-12 Also Fail for the Same Fundamental Reasons

Since Darrell fails to anticipate the core limitations of independent claim 1, it necessarily fails to anticipate dependent claims 3 and 10-12, which incorporate these same deficient limitations. The dependent claims add additional specificity regarding the nature of the objects being identified, but they cannot overcome Darrell's fundamental failure to disclose any form of object identification within digital images.

Claim 3, for example, adds requirements for "receiving a selection by the user of said one of the likely pointed-to objects as the object and an instruction from the

user to obtain information on the object.” Since Darrell does not provide a list of identified objects for selection, it cannot enable the user selection process described in claim 3. The web browsing and information gathering described in Darrell represents a fundamentally different user interaction model that does not satisfy the claim requirements.

Similarly, claims 10-12 specify particular types of objects (objects in space, subareas of surfaces, etc.) but these specifications cannot cure Darrell's failure to disclose object identification in the first instance. Without the foundational capability to identify multiple objects within a digital image, the specific categories of objects become irrelevant to the anticipation analysis.

C. Ground 2: The Combination of Boncyk and Darrell Fails to Render Claims 1-12 Obvious

1. Combining Deficient References Does Not Render the Claims Obvious

Petitioner's Ground 2 attempts to remedy Darrell's deficiencies by combining it with Boncyk, but this approach fails because the combination cannot supply what neither reference individually discloses. The critical limitations of “automatically identifying a list of likely pointed-to objects from the digital image” and “returning the list of likely pointed-to objects to the user to select one of the likely pointed-to objects” are not taught by either reference, and combining two references that both perform unambiguous identification cannot yield a system that provides multiple

object candidates for user selection.

Petitioner implicitly acknowledges this problem by failing to argue that Boncyk teaches the critical object identification and list-returning limitations. Instead, Petitioner relies entirely on Darrell to supply these elements, but as demonstrated above, Darrell's image-matching approach does not disclose the claimed object identification functionality. Of course, when the supposedly curative reference itself lacks the essential disclosure, no combination can remedy the deficiency.

The logical flaw in Petitioner's approach becomes apparent when examining the actual functionality that would result from combining Boncyk and Darrell. Boncyk provides "unambiguous" identification capabilities, while Darrell provides image-matching capabilities for finding similar images. Neither component contributes the ability to identify multiple object candidates within a digital image and present them as a selectable list. The combination might result in a system with enhanced identification capabilities for certain object types and improved image matching, but it would not produce the claimed invention.

2. Petitioner Has Failed to Establish a Motivation to Combine

Even if the individual references contained all necessary elements, Petitioner has failed to establish that a person of ordinary skill in the art would have been motivated to combine Boncyk and Darrell in the manner suggested. The motivation

offered by Petitioner echoes the same flawed reasoning that the Examiner initially pursued but ultimately abandoned during prosecution.

Petitioner argues that Darrell and Boncyk should be combined because “Darrell’s teaching of ‘identifying’ to return a likely list to the user to Boncyk, so that the user can resolve statistical equivalent matches or determine which of the similar objects are the detected object. Darrell’s teaching avoids the likelihood of errors.” Pet. at 59. This rationale directly parallels the Examiner’s initial attempt during prosecution to combine Boncyk another prior art reference, where the Examiner argued that “[t]he suggestion/motivation would have been to improve accuracy or reduce computational load by allowing the user to resolve ambiguity between hypotheses.” Ex-1002 at 86-87.

Ultimately, after the applicant pointed out that the proposed combination “would have been pointless” (Ex-1002 at 71), the Examiner later withdrew this combination. Withdrawing the proposed combination of Boncyk with other prior art, the Examiner concluded that the claims were “directed to a nonobvious improvement over the invention patented in Pat. No. 7,477,780” specifically identified the improvement as “automatically identifying a list of likely pointed-to objects from the digital image and returning the list of likely pointed-to objects to the user to select one of the likely pointed-to objects as the identified objects.” Ex. 1002 at 15.

Accordingly, the combination of Darrell and Boncyk does not teach or suggest Claims 1-12.

D. Grounds 3 and 4: Additional References Fail to Cure the Deficiencies

1. Ground 3: Ordinary Skill Cannot Supply Missing Claim Elements

Petitioner's Ground 3 attempts to rely on the level of ordinary skill in the art to render obvious claims 5-9 based on Boncyk and Darrell. However, this approach fails because general knowledge in the art cannot supply claim elements that are entirely missing from the cited references. The principle that missing claim elements cannot be supplied through recourse to common knowledge is well-established and prevents petitioners from using hindsight to patch obvious gaps in their prior art analysis.

The fundamental limitation that neither Boncyk nor Darrell teaches the claimed object identification and list-returning functionality cannot be overcome through appeals to ordinary skill. These are not minor implementation details that a skilled artisan would naturally supply; they represent core inventive concepts that define the claimed invention's advancement over the prior art. No amount of ordinary skill can bridge the conceptual gap between image matching (Darrell) or unambiguous identification (Boncyk) and the claimed invention's approach of identifying multiple likely pointed-to objects from within a digital image for user selection.

Moreover, if the claimed functionality were merely a matter of ordinary skill, one would expect to find clear disclosure or at least suggestion of such capabilities in the contemporaneous prior art. The absence of such disclosure across the references cited by Petitioner suggests that the claimed approach was not obvious to skilled artisans at the relevant time.

2. Ground 4: Fukuda Adds Superficial Elements Without Addressing Core Deficiencies

Petitioner's Ground 4 introduces Fukuda merely to address potential arguments regarding reticle disclosures, but Fukuda cannot cure the fundamental failures of the primary references to teach the claimed invention. Adding peripheral functionality to a deficient obviousness analysis cannot transform an inadequate combination into a successful one.

Fukuda discloses user interface elements such as rectangular areas and pointers that can be manipulated within camera viewfinders. While these elements might be relevant to certain aspects of pointing and identification devices, they do not address the concept of identifying multiple objects within digital images and presenting them as selectable lists. The reticle functionality described in Fukuda represents a different class of user interface enhancement that operates at the image capture stage rather than the image analysis and object identification stage.

The three-reference combination proposed in Ground 4 suffers from the same

fundamental flaws as the two-reference combination in Ground 2, with the additional complexity of requiring motivation to combine three disparate references. Petitioner has not adequately explained why a person of ordinary skill would combine Boncyk's unambiguous identification approach with Darrell's image matching capabilities and Fukuda's viewfinder interface elements to arrive at the claimed invention.

E. The Board Should Exercise Its Discretion to Deny Institution

1. Cumulative Nature of the Cited Art Under 35 U.S.C. § 325(d)

The Board should decline to institute this proceeding under 35 U.S.C. § 325(d) because Petitioner's challenge relies heavily on prior art that was extensively considered during prosecution and ultimately overcome. The factors established in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (Dec. 15, 2017), strongly support denial in this case.

The cumulative nature of Petitioner's challenge becomes apparent when examining the central role of Boncyk across multiple grounds. While Ground 1 relies solely on Darrell, Grounds 2, 3, and 4 all incorporate Boncyk as a primary reference. This heavy reliance on previously considered art is precisely the type of redundant challenge that § 325(d) is designed to prevent. The Examiner devoted substantial effort to analyzing Boncyk during prosecution, initially rejecting claims over Boncyk and combinations including Boncyk, but ultimately allowing the claims

after recognizing the patent's patentable distinctions.

The extent of the Examiner's evaluation demonstrates thorough consideration of the prior art. The prosecution record reflects multiple rounds of examination involving Boncyk and related references, with the Examiner carefully considering various combination theories before concluding that the claimed invention represented a nonobvious advancement. This thorough examination process provides exactly the type of substantive prior evaluation that § 325(d) seeks to respect and preserve.

Petitioner's arguments closely parallel those initially advanced by the Examiner during prosecution, particularly regarding the motivation to combine references to improve accuracy and reduce errors. (*See, e.g.*, Ex-1002 at 86-87.) The fact that the Examiner ultimately rejected similar proposed combinations after careful analysis weighs heavily against instituting a proceeding based on substantially similar arguments. (Ex-1002 at 15.) The Board should not expend its limited resources re-examining theories that have already received thorough consideration and been determined inadequate.

IV. CONCLUSION

For the foregoing reasons, Patent Owner respectfully submits that the Board should deny the Petition and decline to institute inter partes review of the '812 Patent.

Respectfully Submitted,

Dated: July 1, 2025

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