

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,

Petitioner,

v.

UMBRA TECHNOLOGIES LTD.

Patent Owner.

Case No. IPR2024-00344

U.S. Patent No. 11,146,632

PATENT OWNER'S SUR-REPLY

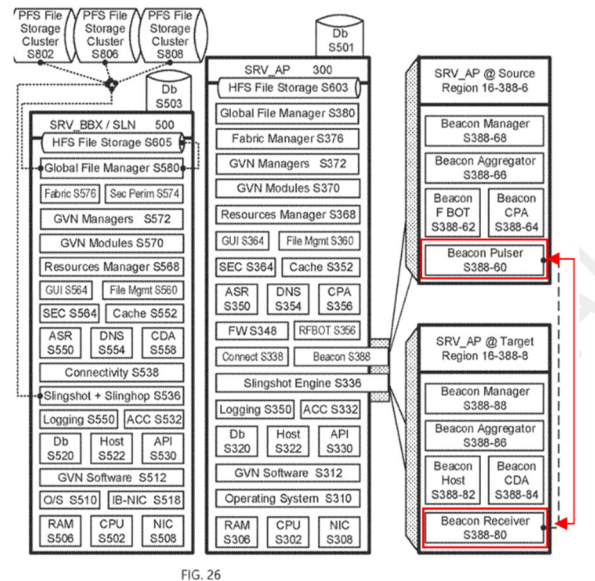
Petitioner raises three arguments in its June 17, 2024 reply (“Reply”) to Patent Owner’s Preliminary Response (“POPR”), which are addressed in turn below.

I. The Specification Makes Clear that the *Data Beacon* is the Signal Created by the *Pulser*

Petitioner complains (at 2) that “PO fails to provide any evidence that ties the term ‘*data beacon pulser*’ to the recited *data beacon*.” (emphasis added in first instance). Petitioner asserts (at 1-2) that each of the features and characteristics identified by Patent Owner in its POPR at 8-10 is associated with *data beacon pulsers* but not *data beacons*.

Petitioner’s suggestion that the terms “data beacon pulser” and “data beacon” are somehow ***not*** tied together is ludicrous. In addition to the obvious semantic connection between the terms, the ’632 patent clearly explains that the *data beacon* is the signal created by the *pulser*. Stated differently, the *pulser* is the apparatus and the *data beacon* is the signal sent by the apparatus.

Figure 26 of the '632 patent (cropped and annotated below) shows that the *data beacon pulser* is one of the “modules/components” contained within the source access point servers SRV_AP 16-388-6, 8. Ex. 1001 at 22:9-17. The source access point server SRV_AP includes the *beacon pulser* S388-60, which **communicates** with *beacon receiver* S388-80 at the target access point server SRV_P 16-388-8. *Id.*



The signal sent by the *pulser* is called a *beacon, signal, or pulse*. The specification is unambiguous in this regard:

Where ripples of various ***beacon signals*** indicate information about market movement in one region, analysis by the SCN at the intersection point can provide information to trading computers to start placing trading orders in its local market to obtain a time advantage over traders in other locations. *Id.* at 10:7-12 (emphasis added).

FIG. 18 illustrates a series of data beacon pulses. This example illustrates the data beacon ***pulser mechanism*** in pulsing mode producing a ***series of pulses*** at either a set frequency or variable durations of time.... ***Beacon pulses are transmitted from origin like ripples of information to targets.*** *Id.* at 17:50-56 (emphasis added).

FIG. 19 illustrates simultaneous ***data beacon pulses***. This example illustrates the simultaneous ***sending of multiple duplicate Beacon pulses*** multi-cast to various targets at different distances. Like UDP/IP multi-cast it is sending streams of information, but where it differs is

that this mechanism is more reliable and more efficient running at close to wire-speed regardless of distance or data size being transmitted. *Id.* at 17:66-18:6 (emphasis added).

Accordingly, the specification shows that *data beacon pulsers* create *data beacons* (signals). The terms are closely linked by the specification in the same manner consistent with Patent Owner's argument in its POPR.

II. Nothing in the Body of the Claim Requires One-Way Casting and Thus the Body of the Claim Does Not Fully Define the Structure of a *Data Beacon* as Alleged by Petitioner

Petitioner next argues (at 2-3) that the preamble is not limiting because the body of the claim describes the structure of a data beacon. However, there is no recitation in the body of the claim that requires one-way casting or multi-casting. As explained in the POPR at 8-11, one-way casting or multi-casting is a one-way broadcast that does not require an acknowledgement or response from the recipient. Because the body of the independent claim does not recite such one-way broadcasting, the body of the claim does not “fully and intrinsically set[] forth all of the limitations of the claim,” as Petitioner argues (at 2-3).

Petitioner also argues (at 3-4) that the Notice of Allowance did not rely on the preamble recitation of “data beacon.” This argument is flatly contradicted by the record. The Notice of Allowance explained that claims were being allowed because they were a novel implementation of a *data beacon system* and not just a network system:

Although independent Claim 1 appears at first to be somewhat non-complex subject matter, it was found to be novel in the art. Examiner was unable to find any prior art references that teach the subject matter, which recites as follows: [entire claim *including preamble*]. EX-1002 at 9-10.

In addition, a search for the term “*data beacon pulser,*” *which is disclosed in the specification as the technology upon which the invention is based, was not found in any prior art* other than that of the inventor. *A broader search for “data beacon” in the same paragraph as variations of the term “pulse” yielded the reference,* Crinon et al. (US 20120196646 A1) and related references by the same inventors. However, those references deal with mobile networks, and do not disclose any information about read queues, write queues, or parallel file systems. Examiner also reviewed the prior art references provided as being relevant in the PCT International Search Report, but did not find that the references teach the claimed subject matter with the required level of specificity. *Id.* at 10 (emphasis added).

Thus, the Notice of Allowance plainly relied upon the *data beacon* term in finding that the claims distinguished over the prior art.

III. The Alleged General Similarity Between the Architectures of Agarwala and the ‘632 Patent Is Not a Reason to Avoid Interpreting the Term *Data Beacon*

Petitioner lastly argues (at 4) that the term data beacon need not be construed because Agarwala addressed the “same problem and provided the same solution as the ’632 Patent, the only difference being that Agarwala uses different words to described [sic] the identical concepts described and claimed in the ’632 Patent.”

This argument is irrelevant to the issue at hand. What Agarwala teaches has no bearing on how or whether claim 1 is construed.

This argument appears to be (at 4-5) but a *non sequitur* lead-in to a final critique that, essentially, Patent Owner should be held here to an inference that Petitioner wishes to draw from the initial claim chart submitted as part of an initial notice pleading with Patent Owner's *district court* complaint, namely, that Patent Owner did not consider the preamble to be limiting. That argument makes no sense procedurally, in the context of litigation that involves later infringement contentions and claim construction positions months after an initial complaint. Indeed, consistent with Patent Owner's litigation positions, that claim chart has been amended to make clear that the preamble is in fact considered limiting and that position has been made part of the file history of the '632 patent by virtue of its inclusion in the POPR. Any alleged prejudice on the part of Petitioner has been eliminated by the on-the-record clarification set forth in the amended claim chart and the opportunity given Petitioner to reply to the POPR (to which Patent Owner did not object).

For the foregoing reasons, Patent Owner respectfully submits that the Board should reject the arguments presented in Petitioner's Reply and decline to institute *inter partes* review in this proceeding.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing PATENT OWNER'S SUR-
REPLY was served in its entirety by filing this document through the Patent Trial
and Appeal Case Tracking System (P-TACTS) as well as providing a courtesy
copy via e-mail to the following attorneys of record for the Petitioner listed below:

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