

PETITIONER'S TRIAL HEARING DEMONSTRATIVES

CISCO SYSTEMS, INC.
Petitioner,
v.
UMBRA TECHNOLOGIES LTD
Patent Owner.

Inter Partes Review No.: IPR2024-00344
U.S. Patent No. 11,146,632

TRIAL HEARING
APRIL 22, 2025

DUANE MORRIS LLP

Overview of Grounds

Ground	Basis	Cited Art	'632 Claims
1	103	Agarwala*	1-7

* “Together the '421 Patent and the incorporated '685 Provisional are referred to herein as ‘Agarwala’.” Pet. 18.

Overview of Disputes

Dispute	Basis	Claims
1	Agarwala discloses limitation [1.4]	1
2	<i>data beacons</i>	1
3	Agarwala: The '685 Provisional application is included in the '421 Patent	1-7
4	The <i>Dynamic Drinkware</i> analysis is not required for AIA patents.	1-7

Overview of Ground 1 Agarwala

Claim 1

1. A network system for providing data beacons, comprising:
 - a **first node** comprising a **first read queue**, a **first write queue**, and a **first parallel file system**;
 - a **second node** comprising a **second read queue**, a **second write queue**, and a **second parallel file system**;
 - wherein the first node writes first data from the first write queue to the second parallel file system [**blue arrow**]; and
 - wherein the second node reads the first data from the second parallel file system and places the first data in the second read queue [**red arrow**].

Overview of '632 Patent

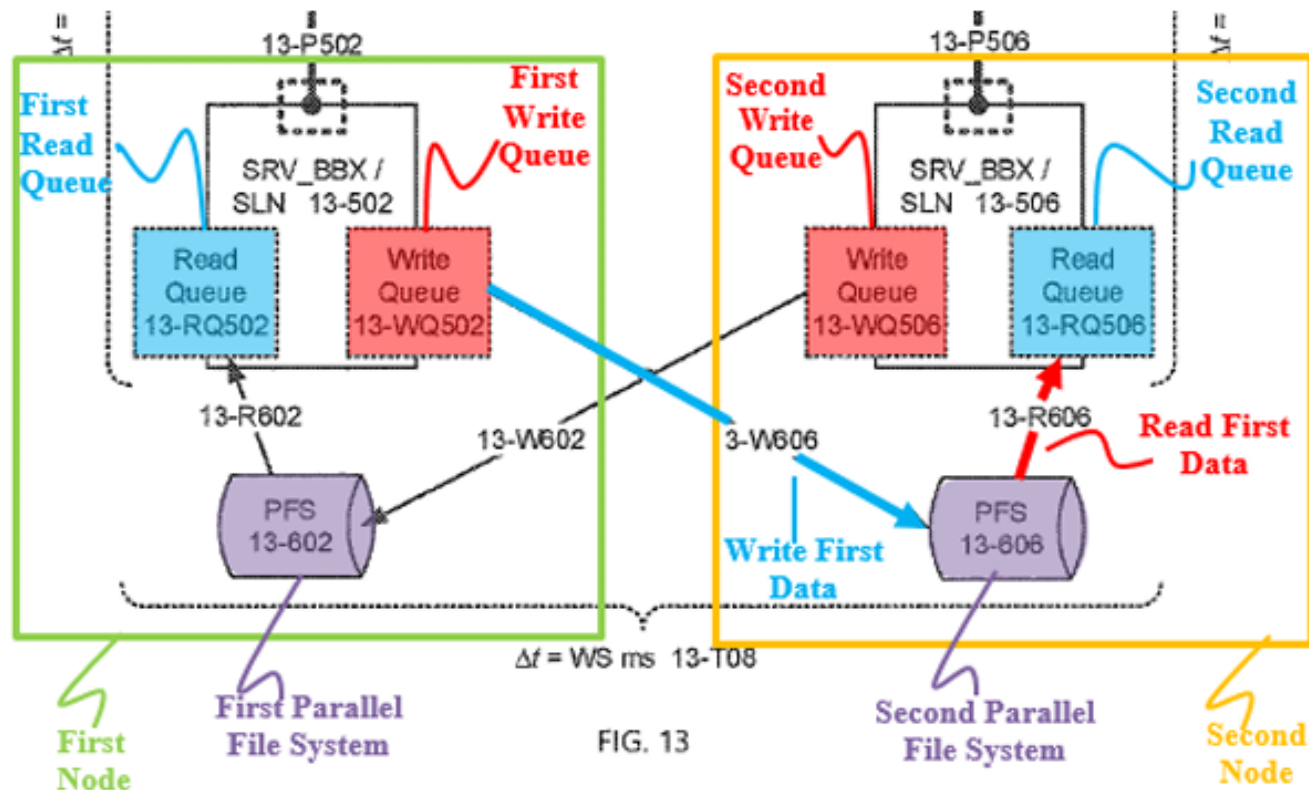


FIG. 13

EX-1001 FIG 13.

Overview of Agarwala

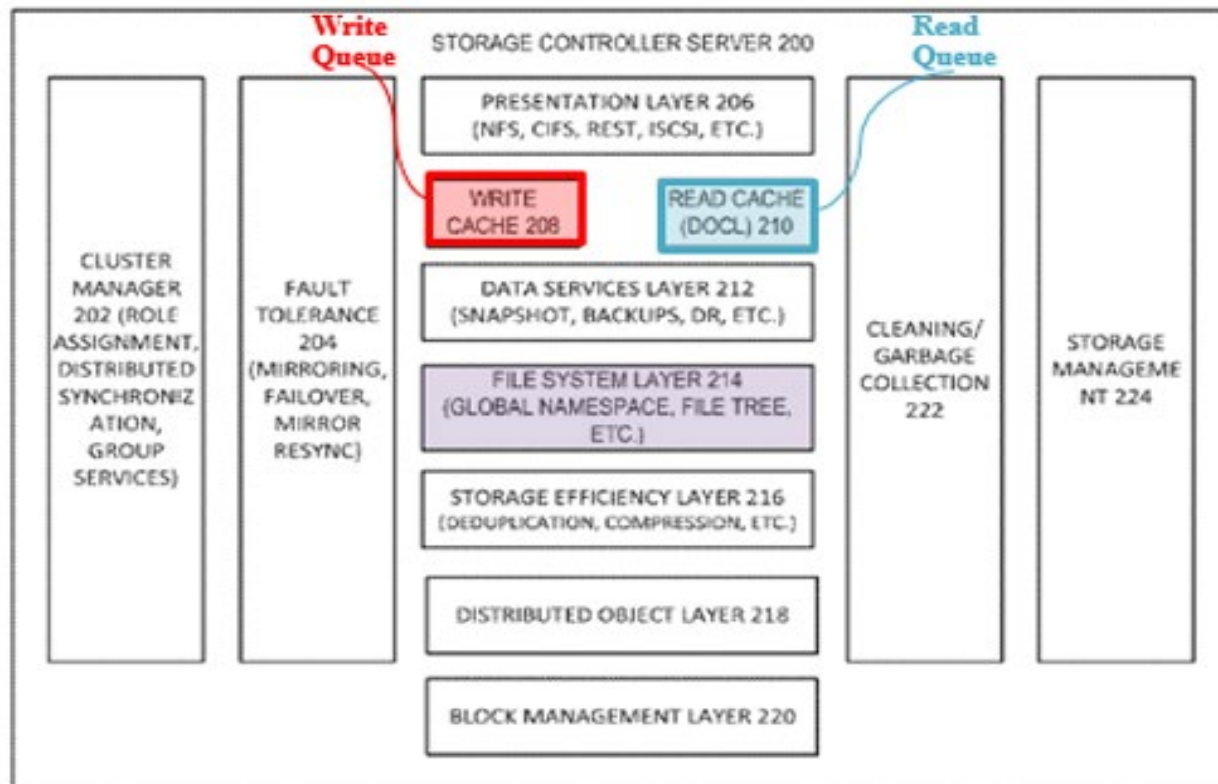


FIGURE 2

EX-1005 FIG. 2; *EX-1004* FIG. 2.

Overview of Agarwala

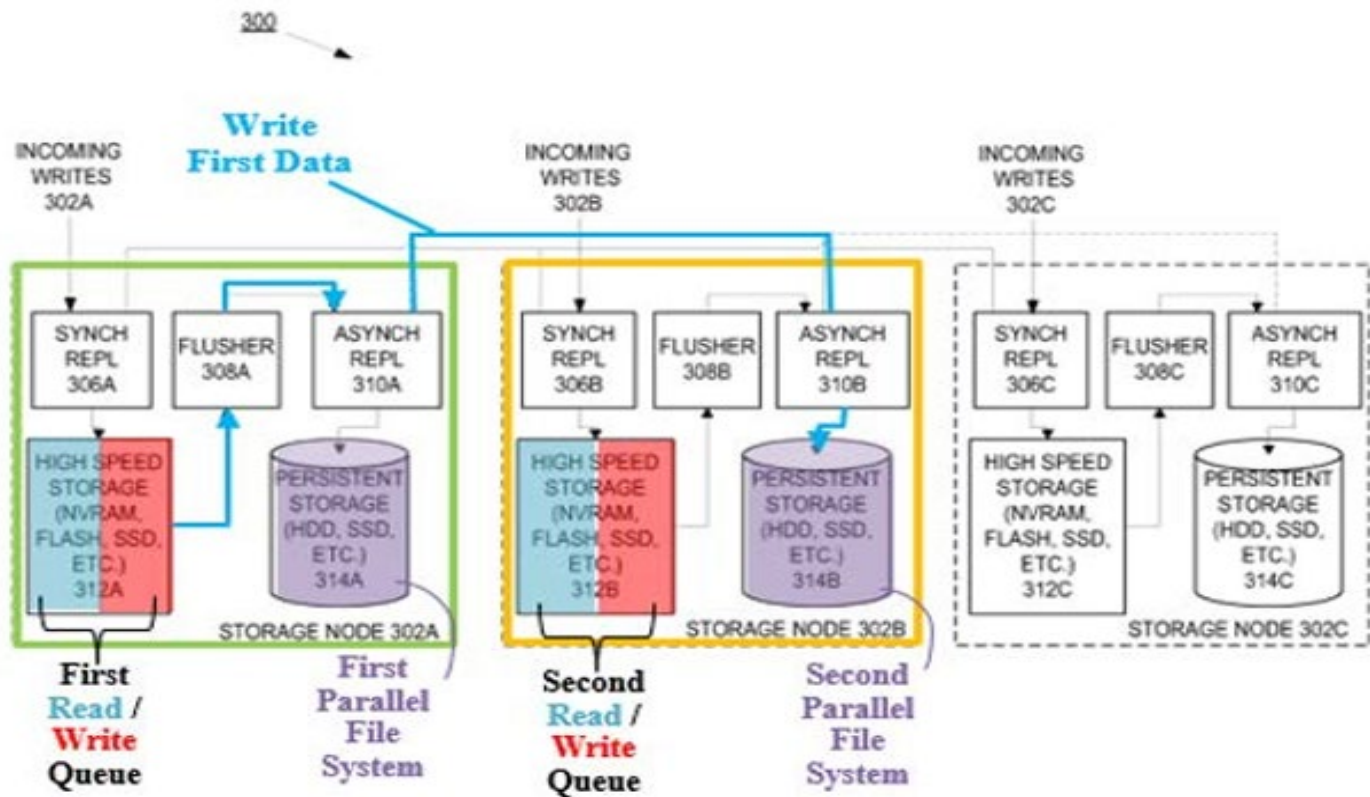


FIGURE 3

EX-1004 FIG. 3.

Dispute 1: Agarwala discloses limitation [1.4]

Claim 1

[1.0] A network system for providing data beacons ,
comprising:

[1.1] a first node comprising a first read queue, a first write queue, and a first parallel file system;

[1.2] a second node comprising a second read queue, a second write queue, and a second parallel file system;

[1.3] wherein the first node writes first data from the first write queue to the second parallel file system; and

[1.4] wherein the second node reads the first data from the second parallel file system and places the first data in the second read queue.

Overview of Agarwala

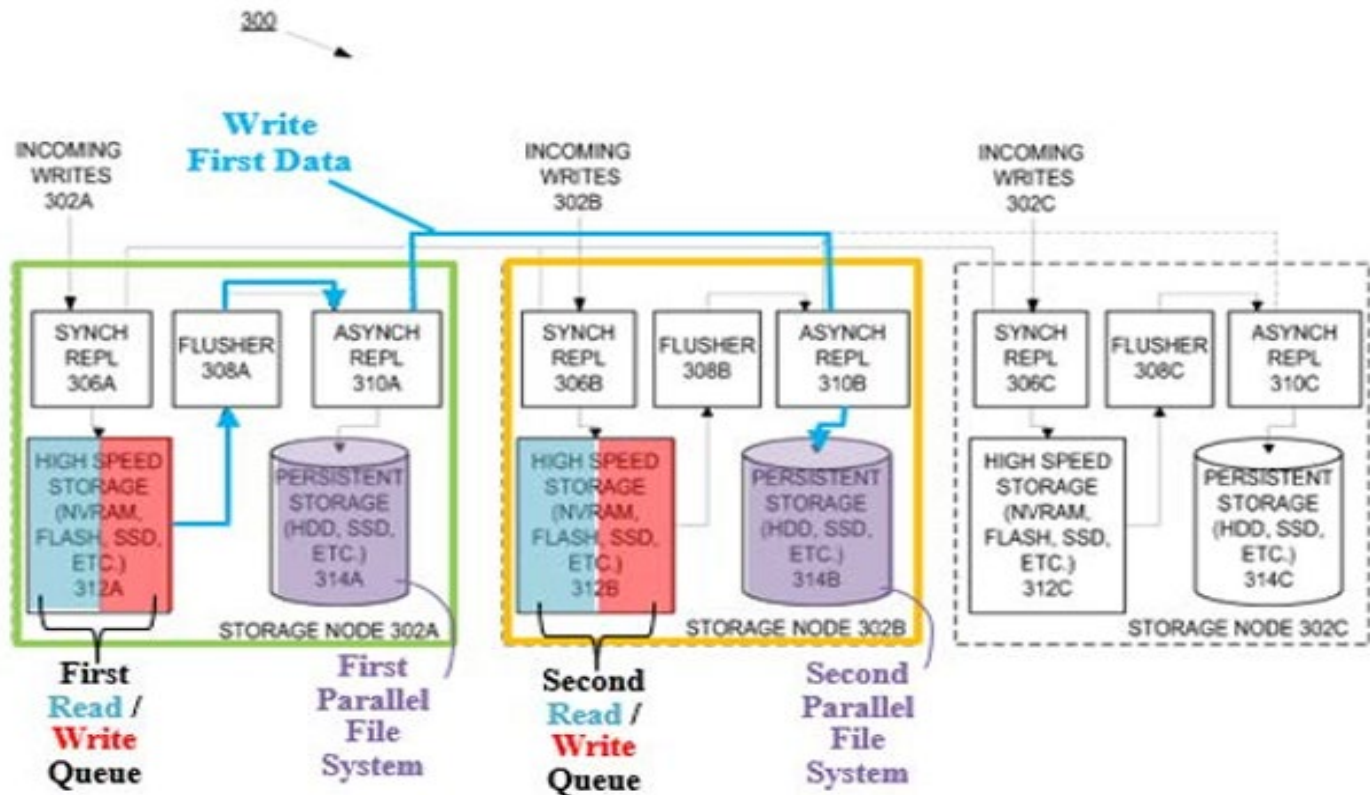


FIGURE 3

EX-1004 FIG. 3.

wherein the second node reads the first data from the second parallel file system and places the first data in the second read queue

Agarwala also describes intra-nodal reads of objects from persistent storage (parallel file system) to the read cache (read queue) where they are held for reading:

- “In one embodiment, an object is initially read from the SSD-412 or the HDD 410 and added to the L1 cache 402.” EX-1005 8:27-29.

Pet. 21; Pet. Reply 9

wherein the second node reads the first data from the second parallel file system and places the first data in the second read queue

“In one embodiment, the L2 cache works as follows: On L1 cache miss, the object is looked in the L2 cache. If there is hit, the object is read and promoted to the MFU list in the L1 cache. If there is a miss the object is read from StorFS persistent store and promoted to the MRU list in the L1 cache.” EX-1005 10:44-51.

Pet. 48; Pet. Reply 9-10

Dispute 2: *data beacons*

Preamble Is Not Limiting

- Body of Claim 1 defines a structurally complete invention:
 - Body does not rely on or derive antecedent basis on “*data beacon*” from the preamble
 - Preamble on its face recites a purpose of the network system – “*for providing data beacons*”

POR Arguments

- POR largely duplicate POPR arguments on “data beacon”:
 - “*data beacon* refers to a signal delivered via one-way casting or one-way multicasting.” POPR 8; POR 20
 - The “*data beacon*” limitation “was relied upon during prosecution to distinguish over the prior art.” POPR 1; POR 22
 - “The specification repeatedly and consistently underscores the importance of data beacons to the disclosed invention.” POPR 2; POR 22, 26;

Specification Does Not Support PO's Arguments

- The term “data beacon” appears in the '632 Patent apart from the term “pulse(r)”, only twice outside of claim 1:
 - “Systems and methods for providing data beacons are disclosed.” Ex. 1001, Abstract
 - “Systems and methods for providing data beacons are disclosed” Ex. 1001, 7:30–31.

The Specification's Description of "Slingshot" Technology Is Not Claimed

- The Specification of the '632 Patent describes "data beacon pulsers (DBP)" powered by a technology the patent calls "Information Slingshot." EX-1001 1:41-46.
- "DBP offers fast, efficient, and dependable one-way casting/multicasting of information globally." EX-1001 1:31-33
- "Slingshot one-way sending (U.S. Provisional Application Patent No. 62/266,060 referenced herein) offers certain advantages to the reliable movement of data at near wire-speed." EX-1001 3:36-38.
- "It provides advantages over the current state of the art such as UDP one-way multi-casting vs DBP utilizing slingshot." EX-1001 5:42-44.

POR 20-21

Specification Does Not Support PO's Arguments

- However, the POR fails to provide any evidence that ties the benefits of a **data beacon pulser powered by Slingshot technology** to the recited “data beacon”.
- The Board addressed these same arguments finding that “none of these features are recited in any of the Challenged Claims.” ID 20.

Pet Rep. 11-12

Prosecution Does Not Support PO Arguments

- First Action allowance
- In the Notice of Allowance, examiner states:
 - “However, those references deal with mobile networks, and do not disclose any information about **read queues, write queues, or parallel file systems.**” EX-1002 p. 10 (emphasis added).
- This statement clearly demonstrates that the Examiner was distinguishing the prior art based on limitations recited in the body of Claim 1 and not the preamble as asserted in the POR.

**Dispute 3: The '685 Provisional Application Is
Included In The '421 Patent As If Fully Written
Therein As Of The Filing Date Of The '421
Patent**

The '685 Provisional Application Is Part Of The '421 Patent

1

DISTRIBUTED MULTI-LEVEL CACHING FOR STORAGE APPLIANCES

RELATED APPLICATIONS

Applicant claims the benefit of priority of prior, provisional application Ser. No. 61/739,685, filed Dec. 19, 2012, the entirety of which is incorporated by reference.

Pet. 18; Pet. Rep. 4.

The Law is Clear

- **MPEP (8th Ed) §2163.07(b)** (“The information incorporated is as much a part of the application as filed as if the text was repeated in the application, and should be treated as part of the text of the application as filed.”)
- ***Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc.*, 127 F.3d 1065, 1069 (Fed. Cir. 1997)** (rejecting Plaintiff’s argument that an anticipatory reference “sa[id] nothing” about pertinent portions of an incorporated reference because “the entire contents” were incorporated).
- ***Apple Inc. v. Koss Corporation*, IPR2021-00255, Paper 54 (Final Written Decision) (May 31, 2022), at 25-30** (holding claims obvious over Brown + Scherzer, relying on material from two provisional applications incorporated in their entirety in Scherzer)

POR Arguments Are Not Relevant

- Whether the '685 Provisional Application is prior art itself is not relevant because it is part of the '421 Patent, which is prior art based on its own filing date (by 2.5 years) under §102(a)(2)(AIA)
- No disclosure was canceled from the provisional application; instead it was incorporated in its entirety in the '421 Patent.
- No more specificity is required than incorporating '685 Provisional Application in its entirety. *Ultradent Prods.*, 127 F.3d at 1069.

Pet Rep. 5-7.

Dispute 4: *Dynamic Drinkware*

The '632 Patent is an AIA Patent and Thus *Dynamic Drinkware* Does not Apply

- The earliest priority date of the '632 Patent is April 26, 2016 (AIA Patent)
- ***Penumbra, Inc. v. RapidPulse, Inc.*, IPR2021-01466 Paper 34, at 29-30 (PTAB Mar. 10, 2023) (precedential as to (§ II.E.3)), designated: November 15, 2023** (“[U]nder AIA §§ 102(a)(2) and 102(d), there is no need to evaluate whether any claim of a reference patent document is actually entitled to priority when applying such a reference.”)
- ***Apple Inc. v. Telefonaktiebolaget LM Ericsson*, IPR2022-00341, Paper 10, at 14–22 (PTAB Sept. 14, 2022)** (*Dynamic Drinkware* analysis not needed, based on evaluating statutory language of AIA §§ 102(a)(2) and 102(d), legislative history, USPTO Guidance on *Dynamic Drinkware*, and the MPEP).

Background

Claim 2

2. The network system of claim 1,
 - wherein the second node writes second data from the second write queue to the first parallel file system; and
 - wherein the first node reads the second data from the first parallel file system and places the second data in the first read queue.

Claim 3

3. The network system of claim 1, wherein the first data is a carrier file comprising a header, a body, and a footer.

Claim 4

4. The network system of claim 3, wherein the first nodes subsequently writes additional data to the first parallel file system.

Claim 5

5. The network system of claim 4, wherein the additional data is written at a set frequency.

Claim 6

6. The network system of claim 4, wherein the additional data only contains information that has changed since the first data was written.

Claim 7

7. The network system of claim 1, further comprising
a third node comprising a third read queue,
a third write queue, and
a third parallel file system;

wherein the first node writes first data from the
first write queue to the second and third parallel file
systems at the same time; and

wherein the third node reads the first data from
the third parallel file system and places the first data in
the third read queue.