

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

STINGRAY GROUP INC. and STINGRAY MUSIC USA, INC.,
Petitioner, v. EDWIN A. HERNANDEZ-MONDRAGON, Patent
Owner.

IPR2025-00349 (Patent 10,123,074 B2)

IPR2025-00350 (Patent 10,524,002 B2)

IPR2025-00351 (Patent 11,140,441 B2)

Before TERRENCE W. McMILLIN, JASON M. REPKO, and BRIAN P.
MURPHY, *Administrative Patent Judges*.

Patent Owner Oral Argument

Presented by Robert Drolet

Petitioner's Challenges

US 10,123,074

Ground	Cited Prior Art References	Basis	Claim(s) Challenged
1	Avellan	§102	1-6, 8, 9, 12-15, 17, 18, 20
2	Avellan in view of Durante	§103	5
3	Avellan in view of Ma	§103	6
4	Avellan in view of Suzuki	§103	7
5	Avellan in view of Wannamaker	§103	10, 11, 21
6	Avellan in view of Heikens	§103	16
7	Avellan in view of Matthews	§103	19
8	Avellan in view of Wilsher	§103	20
9	Avellan in view of the General Knowledge of a POSITA	§103	20

'074 contains Independent Claims 1, 12 and 17

'074 dependent claims 2-11, 13-16 and 18-21 depend on Claims 1, 12 and 17

US 10,524,002

Ground	Prior Art References	Basis	Claim(s) Challenged
1	Avellan	§103	1-6, 13
2	Avellan, Ma and Fain	§103	1-6, 13
3	Wannamaker	§102	7-9, 11-12
4	Wannamaker and Avellan	§103	10

'002 contains Independent Claims 1, 4, 7 and 13

'002 dependent claims 2-3, 5-6, and 8-12 depend on Claims 1, 4 and 7

US 11,140,441

Ground	Cited Prior Art References	Basis	Claim(s) Challenged
1	Farber	§102	1, 7
2	Farber and Vermeulen	§103	1, 2
3	Farber and Pavlovskaia	§103	3
4	Farber and Davis	§103	4, 5, 8
5	Farber and Fogel	§103	6, 9
6	Avellan and Pavlovskaia-PCT	§103	10-16 and 18-23

'441 contains Independent Claims 1, 10, 25 and 26

'441 dependent claims 2-19 and 11-24 depend on Claims 1 and 10

Ground	Cited Prior Art References	Basis	Claim(s) Challenged
7	Avellan, Pavlovskaia-PCT and Durante	§103	15
8	Avellan, Pavlovskaia-PCT and Ma	§103	16
9	Avellan, Pavlovskaia-PCT and Suzuki	§103	17
11	Avellan, Pavlovskaia-PCT and Gangadharan	§103	24
12	Avellan and Wannamaker	§103	25
12	Avellan	§102	26
13	Avellan and Wannamaker	§103	26

EACH OF THE FOLLOWING DEFEATS EVERY GROUND IN ALL THREE CASES

These three arguments operate independently and cumulatively. Each alone is sufficient to defeat all grounds in all three proceedings. Together, they are insurmountable.

[POR-349; POR-350; POR-351; Sur Reply-349; Sur Reply-350; Sur Reply-351]

THE EVIDENTIARY FOUNDATION IS TAINTED (All Grounds, All Cases):

Petitioner's expert received a draft petition before writing his declaration; he adopted Petitioner's framing wholesale without independent analysis and then materially changed sworn testimony after conferring with counsel overnight. His testimony is entitled to zero or minimal weight under Fed. R. Evid. 702(b) and *Broadcom*. Without that declaration, Petitioner is left with naked attorney argument that cannot satisfy the preponderance standard.

[EX2053, 126:17-20, 123:1-12,, 121:16-25, 122:1-11; Broadcom Ltd. v. Invensas Corp., IPR2017-00424; Fed. R. Evid. 702(b); POR-349 pp. 10-11; POR-350 pp. 7-8; POR-351 pp. 12-13]

'CONTENT PROVIDER' = CABLE/SATELLITE OPERATOR (All Independent Claim Grounds):

Three independent lines of intrinsic evidence — specification language, claim differentiation via dependent Claim 9, and internal claim logic — all compel the same construction. No cited reference discloses a cable/satellite operator requesting, receiving, and broadcasting a media stream. This single construction eliminates the foundational theory used across every ground in every case.

[EX1001, 1:16-23, 2:50-57, 8:15-22; EX1001, Claim 9; EX2006; POR-349 pp. 49-54; POR-350 pp. 49-53; POR-351 pp. 57-60]

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[POR-349; POR-350; POR-351; Sur Reply-349; Sur Reply-350; Sur Reply-351]

AVELLAN ONLY TRANSMITS STATIC WEBPAGE IMAGES (All Avellan-Based Grounds):

Avellan is a user-to-user screen-capture web delivery system. It does not: (a) receive requests from content providers; (b) assemble media streams; (c) provide streams for broadcast on broadcast media channels; or (d) deliver live streaming content. Petitioner's claim that Avellan discloses 'live streaming television' is a complete misreading — Avellan 8:18-21 merely lists CNN/BBC/ESPN as websites Avellan can screenshot. These four technical gaps doom all Avellan-based grounds in all three cases.

[EX1003 (Avellan), Fig. 1, 4:25-32, 5:12-22, 7:50-67, 8:18-21; EX2039 ¶¶144, 159, 221-222; POR-349 pp. 24-62; POR-350 pp. 20-24, 49-59; POR-351 pp. 31-66]

LEGAL STANDARD AND SYSTEMIC IMPACT ACROSS ALL THREE CASES

THE CONTROLLING LEGAL STANDARD:

"Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."

[Broadcom Ltd. v. Invensas Corp., IPR2017-00424, Paper No. 7, pp. 13, 17 (citing Fed. R. Evid. 702(b))

35 U.S.C. § 316(e) — Petitioner bears the burden of proving unpatentability by a preponderance of the evidence]

THE DECLARATION'S SPECIFIC DEFECTS UNDER THIS STANDARD:

The declaration is derivative of Petitioner's attorney argument, not objective expert analysis. It does not disclose the foundational fact that its framework was provided to the expert by Petitioner before he wrote a single word. Under *Broadcom* and Fed. R. Evid. 702(b), this is precisely the circumstance in which the Board should assign the testimony little or no weight.

[Broadcom Ltd. v. Invensas Corp., IPR2017-00424; Fed. R. Evid. 702(b); EX2102; POR-349 pp. 10-11; POR-350 pp. 7-8; POR-351 pp. 12-13]

SYSTEMIC IMPACT — WHY THIS DEFECT DEFEATS ALL GROUNDS:

Without the expert declaration carrying any weight, Petitioner is left with naked attorney argument — which cannot, by itself, satisfy the preponderance standard for unpatentability under 35 U.S.C. § 316(e). This is not a technical deficiency curable by other evidence. The entire evidentiary foundation of all three petitions — every ground, every claim, every mapping of prior art to claim elements — relies on this compromised declaration. Every ground in all three cases fails.

[35 U.S.C. § 316(e); POR-349 pp. 10-11; POR-350 pp. 7-8; POR-351 pp. 12-13; Sur Reply-349 p. 6-8; Sur Reply-350 pp. 7-14; Sur Reply-351 pp. 5-6]

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REQUESTED ACTION:

Patent Owner requests that the Board assign the expert testimony little or no weight across all three proceedings and all grounds, and hold that the remaining attorney argument in the petitions cannot carry Petitioner's burden by a preponderance of the evidence.

[Broadcom Ltd. v. Invensas Corp., IPR2017-00424; POR-349 pp. 10-11; POR-350 pp. 7-8; POR-351 pp. 12-13]

'CONTENT PROVIDER' CONSTRUCTION: *AT LEAST* THREE INDEPENDENT REFERENCES WITHIN INTRINSIC EVIDENCE

Patent Owner's Construction: *"A third party such as a cable television or satellite television operator, or any other multimedia outlet, that requests and receives multimedia content for playback on a broadcast media channel."*

[EX2006 (Patent Owner Expert Decl.); intrinsic record of all three challenged patents; POR-349 pp. 49; POR-350 pp. 49; POR-351 pp. 32, 57]

THE SPECIFICATION EXPRESSLY STATES IT:

'The present disclosure provides a mechanism for delivering multimedia content from a cloud-based system to cable or satellite content providers.' (EX1001, 1:16-23)

'An example computer-implemented method can receive, from a content provider such as a cable or satellite operator, a request for at least one media stream for playback on a broadcast media channel.' (EX1001, 2:50-57)

'The media stream can be provided to the content provider for broadcast on the broadcast media channel.' (EX1001, 8:15-22)

[EX1001, 1:16-23, 2:50-57, 8:15-22; POR-349 pp. 26, 49, ; POR-350 pp. 20, 49; POR-351 pp. 32,57]

DEPENDENT CLAIM 9 / CLAIM DIFFERENTIATION:

Dependent Claim 9 (all three patents) explicitly limits 'content provider' to 'a cable television operator or a satellite television operator.' Under the doctrine of claim differentiation, the independent claim must already carry the cable/satellite operator meaning — otherwise Claim 9 has no narrowing effect.

[EX1001, Claim 9 (all three patents); EX2006 ¶166; POR-349 pp. 12-13, 49; POR-350 pp. 14-15, 49, 57; POR-351 pp. 15-16, 49,57]

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INTERNAL CLAIM LOGIC REQUIRES IT:

The claims require the content provider to: (1) REQUEST a media stream; (2) RECEIVE the requested media stream; (3) BROADCAST on a broadcast media channel. It would be logically nonsensical for the content provider to request and receive something it itself creates — which is exactly what Petitioner's 'ordinary meaning' would require. Petitioner waived any competing construction by offering none in any petition.

[EX1001, 14:48-64 ('074 Claim 1); EX1001, 14:51-67 ('002 Claim 7); EX1001, 15:38-55 ('441 Claim 1); Pet.-349 p. 15; Pet.-350 p. 15; Pet.-351 p. 10; POR-349 pp. 12-13]

NO CITED REFERENCE, SINGULARLY OR IN COMBINATION, DISCLOSES A CABLE/SATELLITE OPERATOR REQUESTING A MEDIA STREAM

Reference	Element	Why It Fails the 'Content Provider' Construction	Record Cite
Avellan (EX1003)	El. 1a ('074) El. 1a ('002) El. 1a ('441)	The only 'request' in Avellan comes from user computers (104) — individual end users requesting webpages, not cable/satellite operators requesting media streams for broadcast. The direction of information flow is only one way, the invention obtains and retrieves content separate from the web page. Such content is not screenshot but a plurality of multimedia items.	EX1003, Fig. 1, 4:25-32; POR-349 pp. 43-49; POR-350 pp. 28-35; POR-351 pp. 33-44; Sur Reply-349 pp. 5-6
Wannamaker (EX1014)	El. 7a ('002)	Wannamaker's Server delivers transcoded content to devices — not cable/satellite operators. There is no 'broadcast media channel' in Wannamaker's architecture anywhere (analog). Wannamaker is a store-and-forward text delivery system of MML to a TV Navigator.	EX1014, ¶¶ 101, 103; POR-350 pp. 25-30; Sur Reply-350 pp. 8-14
Farber (EX1003-351)	El. 1a ('441) El. 7a ('441)	Farber is a broadcast playout system — there is no separate content provider making requests of Farber for a stream to broadcast. Farber cannot both be the requestor and the recipient as the claims require, and Farber is a state machine based without a caching unit.	EX1003 (Farber); POR-351 pp. 21-32; Sur Reply-351 pp. 9-15
All Combinations	All indep. claims	Adding secondary references (Wannamaker, Ma, Fain, Pavlovskaja-PCT) to a primary reference that already fails on the 'content provider' element cannot supply a missing fundamental architectural element. The content provider role is essential.	POR-349 pp. 58-62; POR-350 pp. 46-50, 59-62; POR-351 pp. 65-68; Sur Reply-349 p. 6

WHAT AVELLAN ACTUALLY IS: A WEB-BROWSING SCREENSHOT DELIVERY SYSTEM

Applicable to: ALL THREE CASES — All Avellan-Based Grounds

[EX1003 (Avellan); EX2039; POR-349 pp. 40-62; POR-350 pp. 24-62; POR-351 pp. 33-66; Sur Reply-349 pp. 3-7; Sur Reply-350 pp. 5-28; Sur Reply-351 pp. 4-28]

WHAT AVELLAN ACTUALLY IS:

Avellan discloses a gateway server (134) that captures images of webpages and delivers those images to user computers (104) via satellite. It is a web-browsing delivery system for end users — the polar opposite of a cloud-based multimedia content delivery system for cable and satellite operators. When users request webpages, Avellan's gateway screenshots those pages and transmits static images. That is all Avellan does, the patent uses the web pages as “Custom UI” and uses the multimedia content directly, hence separately retrieving it.

[EX1003, Fig. 1, 4:25-32, 5:12-22, 7:50-67; EX2039 ¶¶144, 159; POR-349 pp. 59; POR-350 pp. 59; POR-351 pp. 20]

PETITIONER'S 'LIVE STREAMING' MISREADING or MISCHARACTERIZATION

Petitioner argues Avellan discloses 'live streaming television feeds' — pointing to Avellan's disclosure at column 8:18-21. But Avellan 8:18-21 merely lists CNN, BBC, and ESPN as 'suitable sites' for capture — i.e., websites that Avellan's gateway can screenshot. Avellan captures images FROM those websites. It does not stream live television. It does not transmit any media stream. It transmits static webpage screenshots, that could show a “a live stream” if user plays “play” on the web player.

[EX1003, 8:18-21 ('CNN, BBC, ESPN' are suitable sites to screenshot — NOT live streams Avellan transmits); EX2039 ¶¶127-134, 159, 221-222; POR-349 pp. 26; Sur Reply-349 pp. 13; Sur Reply-350 pp. 13; Sur Reply-351 pp.20]

WHAT AVELLAN ACTUALLY IS: A WEB-BROWSING SCREENSHOT DELIVERY SYSTEM

Applicable to: ALL THREE CASES — All Avellan-Based Grounds

[EX1003 (Avellan); EX2039; POR-349 pp. 40-62; POR-350 pp. 24-62; POR-351 pp. 33-66; Sur Reply-349 pp. 3-7; Sur Reply-350 pp. 5-28; Sur Reply-351 pp. 4-28]

THE CRITICAL DISTINCTION:

'Capturing an image of a CNN webpage' is not the same as 'transmitting a live CNN video stream.' **A web page is NOT a media stream.** This is a categorical distinction between a static screenshot delivery system and a real-time multimedia streaming system for cable/satellite broadcast. Petitioner's expert conflates these two entirely different things. For this reason alone, the declaration is unreliable on all Avellan-based grounds.

[EX2039 ¶¶221-222; EX1003, 8:18-21; POR-349 pp. 19, 25; Sur Reply-349 p. 13]

AVELLAN'S FOUR SPECIFIC TECHNICAL FAILURES ACROSS ALL CLAIM ELEMENTS

No Request FROM a Content Provider (Element 1a/'074; El. 1a/'002; El. 1a/'441):

The only 'request' in Avellan comes from user computers (104) — not cable/satellite operators. The direction of information flow is reversed from the claims. In the patents, the cloud system receives requests FROM operators. In Avellan, end users request content FROM the gateway server, which displays it back to those same users.

[EX1003, Fig. 1, 4:25-32; EX2039 ¶¶144, 159; POR-349 pp. 43-49; POR-350 pp. 28-35; Sur Reply-349 pp. 9-10]

No 'Playback' of a 'Media Stream' (El. 1b-1e/'074; El. 7b-7c/'002):

'Playback' does not appear in Avellan's specification. Avellan transmits a sequence of static webpage images — not a temporally continuous media stream. Discrete images are not a media stream. A POSITA understands 'playback' requires temporal continuity, synchronization, and decoding — not discrete image delivery.

[EX1003 (no 'playback' in specification); EX2039 ¶¶221-222; POR-349 pp. 49-55; POR-350 pp. 53-55; Sur Reply-349 pp. 9-14]

AVELLAN'S FOUR SPECIFIC TECHNICAL FAILURES ACROSS ALL CLAIM ELEMENTS

No 'Assembling' of a Media Stream (El. 1e/'074; El. 7d/'002; El. 10f/'441):

Avellan 'compresses' a single webpage image (5:12-15, 5:20-22). Compression of images and images to a video file is not 'assembling a media stream.' (Reference to Web-to-HD Video Protocol inexistent) The claimed invention requires assembling a plurality of multimedia items of different types (audio, video, metadata) into a stream for cable/satellite broadcast. Avellan has no assembly step — one image, one compression, one delivery.

[EX1003, 5:12-15, 5:20-22; EX2039 ¶¶226-230; POR-349 pp. 55-57; POR-350 pp. 42-46; Sur Reply-349 p. 6]

No 'Broadcast on a Broadcast Media Channel' (El. 1f/'074; El. 7d/'002; El. 10g/'441):

Avellan operates in two modes: unicast (one user request, one image delivery) and broadcast (same image pushed to multiple user computers). Neither mode is a 'broadcast media channel' — neither is the delivery of a multimedia stream to a cable headend for distribution on a cable/satellite channel. These are architecturally distinct systems.

[EX1003, 4:25-32, 7:50-67; EX2039 ¶¶234-238; POR-349 pp. 58-59; POR-350 pp. 58-59; POR-351 pp. 63-66; Sur Reply-349 pp. 19, 21-23]

IPR2025-00349 ('074 PATENT) — SPECIFIC SUB-ELEMENTS

GROUND 1: Avellan § 102 Anticipation — Claims 1-9 (FAILS on four independent sub-elements):

Element 1a/1b— 'Receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel' and “Obtaining, content from a plurality of multimedia items...: Avellan's only 'request' comes from user computers (104). The request direction is the exact opposite of the claim. This alone defeats anticipation.

[EX1003, Fig. 1, 4:25-32; POR-349 pp. 27-28, 57, ; Sur Reply-349 pp. 23]

Element 1c — 'Rendering a webpage by a browser using the content': Avellan's virtual browser resides at the gateway server (EX1003, 4:55-67, 5:1-15). Avellan images and compresses the page for delivery — it does not render a webpage using the content from 1a and 1b, as 1a and 1b are separate from rendering.

[EX1003, 4:55-67, 5:1-15; POR-349 pp. 57-58; Sur Reply-349 pp. 5-6]

Element 1e — 'Assembling the at least one media stream using the temporal sequence of screen captures': Avellan compresses a single image; it does not assemble a media stream from a temporal sequence. Petitioner conflates compression with assembly — they are entirely different operations.

[EX1003, 5:12-22; EX2039 ¶¶226-230; POR-349 pp. 58-59; Sur Reply-349 pp. 8, 20]

IPR2025-00349 ('074 PATENT) — SPECIFIC SUB-ELEMENTS

GROUND 1: Avellan § 102 Anticipation — Claims 1-9 (FAILS on four independent sub-elements):

Element 1f/1h — 'Providing the at least one media stream to the content provider for broadcast on the broadcast media channel':
Avellan's 'broadcast mode' sends cached webpage images to user computers — not streams to cable operators for broadcast on a cable/satellite channel. Architecturally distinct.

[EX1003, 7:50-67; POR-349 pp. 57-60; Sur Reply-349 p. 6]

FOUNDATIONS 2-5: Avellan + Secondary Art (FAIL because independent claim survives):

Secondary references (Wannamaker, Ma, Pavlovskaja, Farber) cannot cure Avellan's foundational failures on the independent claim. If Claim 1 survives, all dependent claim challenges also fail.

[POR-349 pp. 58-62; Sur Reply-349 pp. 6-7]

IPR2025-00350 ('002 PATENT) — WANNAMAKER FAILS THE '002 INDEPENDENT CLAIMS

ELEMENT 7a — 'Receiving...a request...for broadcast on broadcast media channel':

Wannamaker's Imprint Server delivers web content to enterprise employee devices — not cable/satellite operators requesting streams for broadcast. There is no 'broadcast media channel' anywhere in the Wannamaker architecture. Wannamaker is a store-and-forward text/content delivery system serving individual employee devices.

[EX1014 (Wannamaker), ¶¶ 101, 103; POR-350 pp. 42-44; Sur Reply-350 pp. 8-14]

ELEMENTS 7b/7c — 'Media stream with plurality of multimedia items':

Wannamaker delivers content through MML (Mini Markup Language) pages and server-side transcoding — not multimedia streams comprising multiple item types (audio, video, metadata). Wannamaker is not a multimedia streaming system. It is a content adaptation system for text and simple graphics.

[EX1014 (Wannamaker), ¶¶ 23, 47-52; POR-350 pp. 30-36; Sur Reply-350 pp. 14-16]

IPR2025-00350 ('002 PATENT) — WANNAMAKER FAILS THE '002 INDEPENDENT CLAIMS

ELEMENT 7d — 'Assembling/providing to content provider for broadcast':

Wannamaker's Imprint Fetcher retrieves text files for employee devices. There is no assembly of a multimedia stream, and delivery is to individual devices — not to a content provider for broadcast on a broadcast media channel.

[EX1014 (Wannamaker), ¶¶ 101, 103; POR-350 pp. 36-42; Sur Reply-350 pp. 16-18]

WANNAMAKER AND AVELLAN CANNOT BE COMBINED — INCOMPATIBLE ARCHITECTURES:

Wannamaker operates with MML pages and server-side transcoding (a micro-browser architecture). Avellan operates with a virtual browser that compresses full HTTP-format webpage images. A POSITA would not combine them because doing so would require destroying each system's core operating principle — exactly the type of teaching-away combination the Board rejects. Petitioner's motivation-to-combine analysis is pure hindsight, derived from the challenged patent itself.

[EX1014, ¶¶ 23, 47-52; EX1003, 4:55-67, 5:12-22; POR-350 pp. 46-50, 59-62; Sur Reply-350 pp. 20-24]

IPR2025-00351 ('441 PATENT) — FARBER DOES NOT ANTICIPATE; AVELLAN+PAVLOVSKAIA ALSO FAILS

FARBER FAILS — '441 INDEPENDENT CLAIMS 1 AND 7 (Ground 1):

No request FROM a content provider: Farber is a broadcast playout system — there is no separate content provider making requests of Farber for a stream to broadcast. Farber cannot be both the requestor and the recipient simultaneously as the claims require.

[EX1003 (Farber); POR-351 pp. 21-28; Sur Reply-351 pp. 9-12]

Expert implies HTTP server not found in Farber: Petitioner's expert (EX2039 ¶104) asserts that Farber 'implies' use of an HTTP server or RESTful system — despite no such teaching in Farber's claims or specification. Implying requirements not found in a reference is not anticipation; it is hindsight.

[EX2039-00351 ¶104; POR-351 pp. 28-30; Sur Reply-351 pp. 12-13]

IPR2025-00351 ('441 PATENT) — FARBER DOES NOT ANTICIPATE; AVELLAN+PAVLOVSKAIA ALSO FAILS

FARBER FAILS — '441 INDEPENDENT CLAIMS 1 AND 7 (Ground 1):

(3) Data Carousel ≠ web-content-based stream generation: Farber discloses a Data Carousel and MPEG Encoder in a traditional broadcast playout context. This is not 'obtaining content from a website,' 'rendering a webpage by a browser,' or 'generating a temporal sequence of screen captures.' Farber's architecture is fundamentally different from the claimed cloud-based, web-sourced stream assembly system.

[EX1003 (Farber), Fig. 4; POR-351 pp. 29-32; Sur Reply-351 pp. 13-15]

AVELLAN + PAVLOVSKAIA-PCT FAILS CLAIMS 10-23 (Ground 6):

Claim 14a: Petitioner argues Avellan recaptures YouTube thumbnails. This recaptures a static webpage — not screen captures FROM a playback of a video. **Claim 15a:** Music metadata (song title, artist, genre) — Avellan has no disclosure of music metadata. Pavlovskiaia-PCT is added with no articulated motivation to combine. **Claim 16a:** Avellan's Zero Latency Cache does not use channel identifiers as defined in the '441 patent.

[EX1003 (Avellan), 8:18-21; POR-351 pp. 44-66; Sur Reply-351 pp. 15-28]

HINDSIGHT RECONSTRUCTION PERMEATES ALL COMBINATION GROUNDS ACROSS ALL THREE CASES

The Standard: Prior art must provide an independent teaching or motivation for the combination — not just a post-hoc rationalization guided by the patent itself. A person of ordinary skill must have had reason to combine with a reasonable expectation of success, without the patent as a roadmap.

[KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007); In re NuVasive, Inc., 842 F.3d 1376, 1381-82 (Fed. Cir. 2016); POR-349 pp. 58-62; POR-350 pp. 59-62; POR-351 pp. 65-68]

THE PATTERN ACROSS ALL THREE CASES:

In every combination ground, Petitioner's expert used the challenged patents as a roadmap and retroactively stitched together disparate prior art elements to mimic the claimed invention. The combinations — Avellan + Wannamaker, Avellan + Ma, Avellan + Fain, Avellan + Pavlovskaja-PCT, Farber + Vermeulen, Farber + Pavlovskaja, Farber + Davis, Farber + Fogel — share a common defect: no reference points to another without the patent as a guide.

[POR-349 pp. 58-62; POR-350 pp. 46-50, 59-62; POR-351 pp. 65-68; Sur Reply-349 p. 6; Sur Reply-350 pp. 20-24; Sur Reply-351 pp. 25-28]

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[KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007); In re NuVasive, Inc., 842 F.3d 1376, 1381-82 (Fed. Cir. 2016); POR-349 pp. 58-62; POR-350 pp. 59-62; POR-351 pp. 65-68]

THREE SPECIFIC COMBINATION FAILURES:

Avellan + Wannamaker ('002 Grounds 2-6): These systems have incompatible architectures. Wannamaker uses MML and server-side transcoding. Avellan uses a virtual HTTP browser and image compression. Combining them would destroy each system's core operating principle. The only guide for combining them is the '002 patent itself.

[EX1003; EX1014; POR-350 pp. 46-50; Sur Reply-350 pp. 20-24]

Farber + Secondary Art ('441 Grounds 2-5): Because Farber alone fails to teach the independent claim limitations (no content provider request), no secondary reference can rescue the combination grounds. All Grounds 2-5 fail by extension.

[POR-351 pp. 65-68; Sur Reply-351 pp. 25-28]

Avellan + Pavlovskaja-PCT ('441 Ground 6): Petitioner fails to articulate any motivation to combine beyond hindsight. Pavlovskaja-PCT is introduced solely to supply music metadata elements (Claims 15a, 16a) that Avellan entirely lacks — a textbook hindsight patch.

[EX1003; Pavlovskaja-PCT; POR-351 pp. 60-66; Sur Reply-351 pp. 25-28]

THE DI'S CLAIM CONSTRUCTION WAS PRELIMINARY — THE FULL RECORD COMPELS A DIFFERENT RESULT

Applicable to: ALL THREE CASES — 'Content Provider' and 'Receiving from a Content Provider' Limitation

[DI-349 at pp. 7-12; DI-350 at pp. 7-12; DI-351 at pp. 7-12; POR-349 pp. 12-15; POR-350 pp. 14-17; POR-351 pp. 15-17]

WHAT THE DI COULD NOT FULLY WEIGH:

At institution, the Board's claim construction was explicitly preliminary — made on an incomplete record, without full briefing, without depositions, and without the full specification analysis Patent Owner has now provided. The DI acknowledged it was a preliminary analysis. Trial has now produced the full intrinsic record.

[DI-349 at 2; DI-350 at 2; DI-351 at 2 ("should not be understood to be a final determination"); POR-349 pp. 12-15; Sur Reply-349 pp. 6-7]

THE SPECIFICATION AT COLUMN 2:50-53 EXPRESSLY DEFINES THE CLAIM'S ARCHITECTURE:

'An example computer-implemented method can receive, from a content provider such as a cable or satellite operator, a request for at least one media stream for playback on a broadcast media channel.'

That is not ambiguous. It is not a preferred embodiment. It is the inventor describing his invention using the exact words of the claim. The word 'such as' introduces a representative example of what a content provider is — not a limitation, and not a coincidence.

[EX1001, 2:50-53 (all three patents); EX1001, 1:16-23; EX1001, 8:15-22; EX2006 ¶¶63-68; POR-349 pp. 12-13; POR-350 pp. 14-15; POR-351 pp. 15-16]

THE DI'S CLAIM CONSTRUCTION WAS PRELIMINARY — THE FULL RECORD COMPELS A DIFFERENT RESULT

Applicable to: ALL THREE CASES — 'Content Provider' and 'Receiving from a Content Provider' Limitation

[DI-349 at pp. 7-12; DI-350 at pp. 7-12; DI-351 at pp. 7-12; POR-349 pp. 12-15; POR-350 pp. 14-17; POR-351 pp. 15-17]

DEPENDENT CLAIM 9 CONFIRMS IT THROUGH CLAIM DIFFERENTIATION:

Dependent Claim 9 (in all three patents) limits the independent claim's 'content provider' to 'a cable television operator or a satellite television operator.' Under the doctrine of claim differentiation, the independent claim already carries that meaning as its ordinary scope — otherwise Claim 9 would have no narrowing effect whatsoever. The full claim structure also shows that the content provider both originates the request AND receives the finished media stream for broadcast — something Avellan's gateway platform never does.

[EX1001, Claim 9 (all three patents); EX2006 ¶66; POR-349 pp. 12-13; POR-350 pp. 14-15; POR-351 pp. 15-16; Sur Reply-349 pp. 6-7; Sur Reply-350 pp. 7-8; Sur Reply-351 pp. 5-6]

This evidence existed but was not fully developed at the institution stage. Trial has produced it — the 'additional evidence' the DI anticipated.

[DI-349 at 2; DI-350 at 2; DI-351 at 2]

INHERENCY — THE DI WAS TENTATIVE; THE TRIAL RECORD IS NOT (IPR2025-00351 / '441)

Applicable to: IPR2025-00351 ONLY — 'Determining Sufficient Storage Space' Limitation

[DI-351 at pp. 18-22; POR-351 pp. 55-60; Sur Reply-351 pp. 15-20]

THE DI'S TENTATIVE INHERENCY FINDING:

On the 'determining sufficient storage space' limitation, the DI preliminarily agreed with Petitioner's inherency theory. But the Board explicitly noted this was a preliminary finding, and that trial could produce evidence warranting a different result at the Final Written Decision stage. Trial has now produced exactly that evidence.

[DI-351 at pp. 14-15; DI-351 at 24 ("should not be understood to be a final determination")]

THE LEGAL STANDARD FOR INHERENCY:

Under controlling Federal Circuit authority, a characteristic is inherent in a prior art reference only if it is the inevitable result of practicing the prior art — not merely possible, not merely probable, not 'advantageous.' The characteristic must occur each and every time the prior art is practiced without exception.

[In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999); In re Oelrich, 666 F.2d 578, 581 (CCPA 1981); POR-351 pp. 55-60; Sur Reply-351 pp. 15-20]

INHERENCY — THE DI WAS TENTATIVE; THE TRIAL RECORD IS NOT (IPR2025-00351 / '441)

Applicable to: IPR2025-00351 ONLY — 'Determining Sufficient Storage Space' Limitation

[DI-351 at pp. 18-22; POR-351 pp. 55-60; Sur Reply-351 pp. 15-20]

THE MOST DEVASTATING EVIDENCE — PETITIONER'S OWN PETITION:

Petitioner's own petition admits that this step is merely 'advantageous' and that 'not checking for sufficient storage space could lead to system errors.' The words 'advantageous' and 'could lead to' are the language of probability and possibility — the exact opposite of the inevitability that inherency requires.

Petitioner cannot simultaneously argue that a step is only advantageous and that it is inevitably present. That contradiction was always in the petition, but the full trial briefing has now developed it completely. Patent Owner has put this contradiction squarely before the Board in both its Patent Owner Response and Sur Reply.

[Pet.-351 (Petitioner's own language: 'advantageous'; 'could lead to'); In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999); POR-351 pp. 55-60; Sur Reply-351 pp. 15-20]

THE BURDEN STANDARD CHANGES FROM INSTITUTION TO FINAL WRITTEN DECISION

Applicable to: ALL THREE CASES — All Grounds

[35 U.S.C. § 316(e); 35 U.S.C. § 314(a); POR-349 p. 9; POR-350 p. 7; POR-351 p. 11; Sur Reply-349 p. 7; Sur Reply-350 p. 28; Sur Reply-351 p. 28]

TWO MATERIALLY DIFFERENT STANDARDS:

At institution, the standard was reasonable likelihood of prevailing — a threshold standard designed to determine whether to open trial at all. The Final Written Decision requires proof by a preponderance of the evidence. The DI itself recognized this distinction by cautioning that its preliminary findings 'should not be understood to be a final determination.'

[35 U.S.C. § 314(a) (institution standard); 35 U.S.C. § 316(e) (FWD preponderance standard); DI-349 at 2; DI-350 at 2; DI-351 at 2]

THE FOUNDATIONAL ARCHITECTURAL MISMATCH — MEASURED AGAINST THE PREPONDERANCE STANDARD:

Petitioner's entire case rests on Avellan — a reference directed to reducing internet latency for delivering web pages to desktop users on demand. The claimed inventions are directed to cloud-based software systems that receive requests from cable and satellite operators, assemble multimedia content into broadcast-ready media streams, and deliver those streams back to those operators for broadcast on a broadcast media channel. These are fundamentally different architectures, serving fundamentally different purposes, for fundamentally different customers.

[EX1003 (Avellan), Fig. 1, 4:25-32; EX1001 ('074), 1:16-23, 2:50-57; EX1001 ('002), 1:16-23; EX1001 ('441), 1:16-23; POR-349 pp. 40-62; POR-350 pp. 24-62; POR-351 pp. 33-66]

THE BURDEN STANDARD CHANGES FROM INSTITUTION TO FINAL WRITTEN DECISION

Applicable to: ALL THREE CASES — All Grounds

[35 U.S.C. § 316(e); 35 U.S.C. § 314(a); POR-349 p. 9; POR-350 p. 7; POR-351 p. 11; Sur Reply-349 p. 7; Sur Reply-350 p. 28; Sur Reply-351 p. 28]

FOUR FOUNDATIONAL ABSENCES — NOT CLOSE QUESTIONS:

On a full and developed record, Petitioner cannot meet the preponderance standard because Avellan: (1) does not disclose a content provider (cable/satellite operator); (2) does not disclose a request from a content provider; (3) does not disclose a media stream for playback on a broadcast media channel; and (4) does not disclose providing the assembled stream back to an operator for broadcast. These are not minor gaps — they are foundational, architectural absences that no secondary reference can cure.

[EX1003 (Avellan), Fig. 1, 4:25-32, 7:50-67, 8:18-21; EX2039 ¶¶144, 159, 221-222; POR-349 pp. 40-62; POR-350 pp. 24-62; POR-351 pp. 33-66; Sur Reply-349 pp. 3-7; Sur Reply-350 pp. 5-28; Sur Reply-351 pp. 4-28]

DI LEFT OPEN CLAIM CONSTRUCTION QUESTION —REQUESTED EVIDENCE

Applicable to: IPR2025-00350 — Claims 7–12 | Limitation at Issue: 'configured to maintain generation of video and audio files, even in failure cases'

[DI-350 at pp. 20-24; POR-350 pp. 17-24; Sur Reply-350 pp. 9-15]

THE DI'S EXACT LANGUAGE — THE QUESTION EXPRESSLY LEFT FOR TRIAL:

"The claim does not recite 'continuous generation of video and audio files,' as Patent Owner argues. Rather, the monitoring system need only be 'configured to maintain generation of video and audio files, even in failure cases.' We leave for trial the question of whether maintaining generation even in failure cases requires continuous generation or whether it encompasses at least some lag or pause."

[DI-350 at pp. 15 -17]

PATENT OWNER RESPONDS AND ANSWERS BOARD'S REQUEST

The Board did not decide this question. The Board expressly said trial would resolve it. Patent Owner is not asking the Board to reconsider a finding it made — Patent Owner is answering a question the Board left open and directed trial to answer. Trial has now answered it, completely and in Patent Owner's favor: 'maintain generation even in failure cases' means uninterrupted operation, not high availability with occasional gaps.

[DI-350 at pp. 15-17; POR-350 pp. 17-24; Sur Reply-350 pp. 9-15]

(Fed. Cir. 2005); 37 C.F.R. § 42.100(b)]

DI LEFT OPEN CLAIM CONSTRUCTION QUESTION — REQUESTED EVIDENCE

Applicable to: IPR2025-00350 — Claims 7–12 | Limitation at Issue: 'configured to maintain generation of video and audio files, even in failure cases'

[DI-350 at pp. 20-24; POR-350 pp. 17-24; Sur Reply-350 pp. 9-15]

PATENT OWNER PRODUCED EVIDENCE — FOUR SPECIFICATION PASSAGES:

The specification of the '002 patent discloses a very specific architecture: a parallel, active, real-time monitoring system that detects failure through ping monitoring and immediately — without interruption — switches to pre-recorded content. The Monit block 'keeps running at all times and does not stop upon failure.' The multicast-01 and multicast-02 blocks provide dedicated stream-level redundancy. The ping monitoring trigger immediately plays pre-recorded content upon failure. That is not a system tolerating any lag or pause — it is a system that never stops.

[EX1001 ('002 Patent), 8:63-66, 9:55-61, 9:66–10:4, 10:42-45; EX2039 ¶¶242, EX1001 FIG 7, 705, 8:55-60; POR-350 pp. 17-24; Sur Reply-350 pp. 9-15; Phillips v. AWH Corp., 415 F.3d 1303, 1315-17 (Fed. Cir. 2005); 37 C.F.R. § 42.100(b)]

FOUR '002 PATENT SPECIFICATION PASSAGES THAT RESOLVE THE BOARD'S OPEN CLAIM CONSTRUCTION QUESTION

Standard: Under Phillips, the specification is the primary guide to claim construction. The correct construction is the one the inventor built and described in the patent.

[Phillips v. AWH Corp., 415 F.3d 1303, 1315-17 (Fed. Cir. 2005); 37 C.F.R. § 42.100(b); POR-350 pp. 17-24; Sur Reply-350 pp. 9-12]

PASSAGE 1 — Col. 8:63-66 — The Monit Block (Figure 7): *'Monit 750 corresponds to a monitoring block that can ensure that the process running the Media Parallel encoder keeps running at all times and does not stop upon failure.'* **Patent Owner:** 'Keeps running at all times and does not stop upon failure' is not the language of occasional interruption. It is the language of continuous, uninterrupted operation.

[EX1001 ('002 Patent), 8:63-66; POR-350 pp. 18-19; Sur Reply-350 pp. 10-11]

PASSAGE 2 — Col. 9:55-61 — Multicast Blocks Recording Function: *'[T]he multicast-01 and multicast-02 blocks contain a Recording function 790, which is in charge of recording the multicasting streams and recording for later use in case of failure on the system.'* **Patent Owner:** Dedicated parallel multicast blocks with a stream-specific recording function — true stream-level redundancy, not general transaction rerouting.

[EX1001 ('002 Patent), 9:55-61; POR-350 pp. 19-20; Sur Reply-350 pp. 11-12]

PASSAGE 3 — Col. 9:66–10:4 — Streamer Fault-Tolerant Mode: *'[D]etermine if unit is working in fault-tolerant mode; playback pre-recorded audio if a failure is detected.'* **Patent Owner:** The system switches to pre-recorded content immediately and automatically upon failure detection — no gap, no lag, no interruption in the audio/video stream.

[EX1001 ('002 Patent), 9:66–10:4; POR-350 pp. 20-21; Sur Reply-350 pp. 12-13]

PASSAGE 4 — Col. 10:42-45 — Ping Monitoring Failure Trigger: *'In the case that there are no ping responses, a timeout will trigger a failure and a pre-recorded content 820 will be played or sent to the multicast address and port of record.'* **Patent Owner:** Ping monitoring detects failure; immediately triggers pre-recorded content — a seamless, uninterrupted stream continuation. No restart. No lag. No human intervention.

[EX1001 ('002 Patent), 10:42-45; POR-350 pp. 21-22; Sur Reply-350 pp. 13-14]

WANNAMAKER FAILS EVEN UNDER THE BOARD'S MORE PERMISSIVE READING — RESTART IS FATAL

Even if the Board declines to adopt Patent Owner's construction requiring uninterrupted generation, Wannamaker independently fails because its own disclosures admit its failure response terminates generation — it does not maintain it.

[EX1014 (Wannamaker), ¶¶ 103, 0320; POR-350 pp. 22-30; Sur Reply-350 pp. 15-22]

WANNAMAKER'S THREE RESTART ADMISSIONS — IN ITS OWN WORDS:

Wannamaker ¶ 0320 — Operator or Automatic Restart: *'Typically, problems are detected by monitoring the OMI for server log messages. The operator can then telnet into the system and fix the problem, or restart the system through the OMI. The system is also capable of detecting fatal faults and restarting itself without human intervention.'*

[EX1014 (Wannamaker), ¶ 0320; POR-350 pp. 45; Sur Reply-350 pp. 15-16]

Wannamaker ¶ 0103 — Component or System Restart: *'The application server monitors each software component and recovers from failure according to a specified configuration. This could include restarting the failed component, or restarting the entire system as necessary.'*

[EX1014 (Wannamaker), ¶ 0103; POR-350 pp. 23-24; Sur Reply-350 pp. 16-17]

Wannamaker ¶ 0103 — Power Outage Restart: *'Should a power outage occur, however, the system is configured to restart at power up.'*

[EX1014 (Wannamaker), ¶ 0103; POR-350 p. 24; Sur Reply-350 p. 17]

WANNAMAKER FAILS EVEN UNDER THE BOARD'S MORE PERMISSIVE READING — RESTART IS FATAL

Even if the Board declines to adopt Patent Owner's construction requiring uninterrupted generation, Wannamaker independently fails because its own disclosures admit its failure response terminates generation — it does not maintain it.

[EX1014 (Wannamaker), ¶¶ 103, 0320; POR-350 pp. 22-30; Sur Reply-350 pp. 15-22]

THE INESCAPABLE CONCLUSION FROM WANNAMAKER'S OWN DISCLOSURE:

Every failure response in Wannamaker terminates generation — either temporarily while a human operator telnets in and manually fixes the problem, or automatically while the system restarts itself. In either case, video and audio file generation stops. That is not 'maintaining generation.' That is interrupting generation and then recovering. The distinction is not semantic — it is architectural. The claimed invention is designed so that generation never stops. Wannamaker's architecture accepts that generation stops and then recovers. A POSITA would understand immediately that a manual fix or a restart will not maintain the generation of video and audio files during the failure.

[EX1014 (Wannamaker), ¶¶ 103, 0320; EX2039-0350 ¶¶[238-239, 242]; POR-350 pp. 22-30; Sur Reply-350 pp. 15-22]

THE CORE ARCHITECTURAL DISTINCTION: MAINTAINING GENERATION vs. RECOVERING FROM INTERRUPTION

Architectural Feature	'002 Patent — Claimed Invention	Wannamaker (EX1014)	Record Cite
Failure detection mechanism	Active ping monitoring detects failure in real time (col. 10:42-45). Detects if HTTP, RTSP, HTTP Live streaming can be used as alternative sources (FIG. 8)	OMI server log monitoring — operator detects problem after the fact (¶ 0320). Human intervention, or logs processing.	EX1001, 10:42-45; EX1014, ¶ 0320; POR-350 pp. 21-24
Response to detected failure	Immediate, automatic switch to pre-recorded content — stream never stops (col. 9:66–10:4, 10:42-45) as it maintains generating the multicast.	Telnet manual fix OR automatic system restart — generation stops in both cases (¶¶ 103, 0320). Telnet is Human intervention.	EX1001, 9:66–10:4, 10:42-45; EX1014, ¶¶ 103, 0320; POR-350 pp. 22-25
Redundancy architecture	Detects if a multicast unit stops to transmit. Parallel multicast-01 and multicast-02 blocks with dedicated Recording function 790 — stream-level redundancy (col. 9:55-61)	General server group transaction routing — network-level routing only (¶ 101). Routing is not detection of a failed multicast, and Wannamaker does not support generation of a multicast.	EX1001, 9:55-61; EX1014, ¶ 101; POR-350 pp. 19-20, 26-28
Encoder continuity during failure	Monit block ensures 'keeps running at all times and does not stop upon failure' (col. 8:63-66) for example:	No dedicated encoder monitoring. Recovery = restart. Encoder stops during restart.	EX1001, 8:63-66; EX1014, ¶¶ 103, 0320; POR-350 pp. 18-19, 22-25
Generation continuity result	MAINTAINED — stream continues without interruption through pre-recorded content fallback	INTERRUPTED — generation stops; system restarts; generation resumes only after restart completes	EX1001, 8:63-66, 10:42-45; EX1014, ¶¶ 103, 0320; POR-350 Conclusion p. 61

INITIALLY CONFLATED NETWORK-LEVEL REDUNDANCY WITH STREAM-LEVEL GENERATION CONTINUITY

The Board relied on Wannamaker ¶ 101's transaction routing statement and ¶ 103's 'very high availability' language as satisfying the 'maintain generation' limitation. This conflates two fundamentally different things operating at two different levels of system architecture.

[DI-350 at pp. 20-24; EX1014 (Wannamaker), ¶¶ 101, 103; POR-350 pp. 26-30; Sur Reply-350 pp. 19-22]

WHAT WANNAMAKER ¶ 101 ACTUALLY DISCLOSES — TRANSACTION ROUTING:

'[I]f a server fails, transactions are routed to another server in the server group.'

Transaction routing is a network-level mechanism. It handles the routing of client requests after a server fails. It does not address what happens to the multimedia generation pipeline — the encoding, assembly, and streaming of video and audio content — during the interval between when a server fails and when a transaction is routed to a replacement server. However, as Wannamaker fails to support multicast, it fails to teach how to maintain a multicasting generation of the media (FIG 8, Element 850)

[EX1014 (Wannamaker), ¶ 101; POR-350 pp. 26-27; Sur Reply-350 pp. 19-20]

WHAT WANNAMAKER ¶ 103 ACTUALLY DISCLOSES — GENERAL UPTIME METRICS:

Paragraph 103's language — 'very high availability,' 'maximized' performance — describes general system reliability metrics. It is aspirational language about overall uptime. It does not describe a mechanism that keeps video and audio generation running without interruption during individual server failures. High availability and continuous generation are not the same thing. A system can achieve 99.9% uptime while still experiencing interruptions in video generation every single time a server fails and transactions are being rerouted.

[EX1014 (Wannamaker), ¶ 103; POR-350 pp. 27-28; Sur Reply-350 pp. 20-21]

INITIALLY CONFLATED NETWORK-LEVEL REDUNDANCY WITH STREAM-LEVEL GENERATION CONTINUITY

The Board relied on Wannamaker ¶ 101's transaction routing statement and ¶ 103's 'very high availability' language as satisfying the 'maintain generation' limitation. This conflates two fundamentally different things operating at two different levels of system architecture.

[DI-350 at pp. 20-24; EX1014 (Wannamaker), ¶¶ 101, 103; POR-350 pp. 26-30; Sur Reply-350 pp. 19-22]

THE '002 PATENT'S MONITORING SYSTEM OPERATES AT A DIFFERENT LEVEL:

The '002 patent is not about general system availability — it is specifically about maintaining the multimedia generation pipeline without interruption. Wannamaker does not create or generate multimedia assets, hence a restart simply fixes the issues. The Monit block monitors the encoder specifically overall process. First multicasting is checked under FIG 8, 860, to maintaining generation. The recording function captures streams specifically for failure recovery. The streamer plays pre-recorded content specifically when ping monitoring detects a failure. Wannamaker has none of this stream-level redundancy. Wannamaker has general server redundancy for transaction routing and a restart-based recovery mechanism — which is precisely what the claimed monitoring system is designed to replace.

[EX1001 ('002 Patent), 8:63-66, 9:55-61, 10:42-45; EX1014 (Wannamaker), ¶¶ 101, 103, 0320; POR-350 pp. 26-30; Sur Reply-350 pp. 19-22]

PETITIONER'S EXPERT DECLARATION IS IPSE DIXIT — CANNOT CARRY PETITIONER'S BURDEN

Applicable to: IPR2025-00350 Claims 7–12 — Expert Analysis of the 'Maintain Generation' Limitation

[POR-350 p. 28 fn. 8; Sur Reply-350 pp. 21-22; Petitioner's Expert Decl. ¶¶ 183-184]

WHAT THE EXPERT DECLARATION ACTUALLY DOES — AND DOES NOT DO:

As Patent Owner showed in footnote 8 of the Patent Owner Response, the expert declaration on this limitation performs no independent analytical work. It repeats, verbatim, the same arguments as the petition at paragraph 183, then concludes at paragraph 184 that 'Wannamaker teach[es] the claimed monitoring system configured to maintain generation of video and audio files, even in failure cases' — with no further explanation or evidence demonstrating how Wannamaker's restart-based architecture discloses the specific operational continuity the claim requires.

[Petitioner's Expert Decl. ¶¶ 183-184; Petition-350 ¶ 183; POR-350 p. 28 fn. 8; Sur Reply-350 pp. 21-22]

THREE SPECIFIC ANALYTICAL FAILURES IN THE EXPERT DECLARATION:

FAILURE 1: The expert does not address Wannamaker ¶ 0320's restart disclosure — Wannamaker's own admission that its failure response terminates generation through manual or automatic restart.

[EX1014 (Wannamaker), ¶ 0320; POR-350 p. 28 fn. 8; Sur Reply-350 pp. 21-22]

FAILURE 2: The expert does not address ¶ 0103's 'could include restarting the failed component, or restarting the entire system as necessary' — Wannamaker's own admission that restart (not continuous generation) is the actual recovery mechanism.

[EX1014 (Wannamaker), ¶ 0103; POR-350 p. 28 fn. 8; Sur Reply-350 p. 22]

PETITIONER'S EXPERT DECLARATION IS IPSE DIXIT — CANNOT CARRY PETITIONER'S BURDEN

Applicable to: IPR2025-00350 Claims 7–12 — Expert Analysis of the 'Maintain Generation' Limitation

[POR-350 p. 28 fn. 8; Sur Reply-350 pp. 21-22; Petitioner's Expert Decl. ¶¶ 183-184]

FAILURE 3: The expert does not explain how transaction rerouting at the network level maintains video and audio generation at the stream level during the failure event itself. He asserts a conclusion without bridging the analytical gap.

[Petitioner's Expert Decl. ¶ 184; POR-350 p. 28 fn. 8; Sur Reply-350 pp. 21-22]

CONTROLLING LEGAL STANDARD:

Under *TQ Delta LLC v. Cisco Systems*, 942 F.3d 1352, 1362 (Fed. Cir. 2019), this is precisely the type of unsupported, conclusory expert testimony that is insufficient to establish unpatentability. On a full trial record, a bare conclusion — without addressing the reference's own contrary disclosures — cannot carry Petitioner's burden by a preponderance of the evidence.

[TQ Delta LLC v. Cisco Systems, 942 F.3d 1352, 1362 (Fed. Cir. 2019); 35 U.S.C. § 316(e); POR-350 p. 28; Sur Reply-350 pp. 21-22]

PATENT OWNER HAS ADDRESSED EVERY UNRESOLVED ISSUE THE BOARD IDENTIFIED

Patent Owner provides answers the Board where the DI left off — answering questions the Board expressly left open, rather than relitigating findings already made. Every step answers a specific question the Board identified as unresolved.

[DI-350 at pp. 20-24; POR-350 pp. 17-30; Sur Reply-350 pp. 9-22; 35 U.S.C. § 318(a)]

PATENT OWNER SUGGESTED CLOSING LANGUAGE FOR CLAIMS 7–12:

"The Board left the claim construction question open. Patent Owner has now resolved it: the specification says the encoder 'keeps running at all times and does not stop upon failure.' The ping monitoring timeout immediately triggers pre-recorded content. That is uninterrupted generation — not a system tolerating some lag or pause.

The Board said it would accept even the more permissive reading. Wannamaker still fails. Wannamaker's own paragraphs 103 and 0320 admit that its failure response terminates generation and restarts. Generation that stops and restarts is not generation that is maintained — under any reading of the claim.

PATENT OWNER HAS ADDRESSED EVERY UNRESOLVED ISSUE THE BOARD IDENTIFIED

Patent Owner provides answers the Board where the DI left off — answering questions the Board expressly left open, rather than relitigating findings already made. Every step answers a specific question the Board identified as unresolved.

[DI-350 at pp. 20-24; POR-350 pp. 17-30; Sur Reply-350 pp. 9-22; 35 U.S.C. § 318(a)]

The Board credited Wannamaker's high availability language. But transaction routing at the network level is not stream generation continuity at the multimedia pipeline level. High availability metrics are not the same as uninterrupted video and audio generation. The Board was preliminarily looking at the wrong level of Wannamaker's architecture.

And Petitioner's expert provides nothing but conclusions — never addressing Wannamaker's own restart disclosures and never bridging the gap between transaction routing and stream generation continuity.

On a full trial record, with the complete specification before the Board and Wannamaker's own failure mechanism laid bare, Petitioner has not proven by a preponderance of the evidence that Claims 7 through 12 of the '002 patent are anticipated by Wannamaker. Patent Owner respectfully requests that the Board enter a Final Written Decision confirming their patentability."

[EX1001, 8:63-66, 9:55-61, 9:66–10:4, 10:42-45; EX1014, ¶¶ 101, 103, 0320; TQ Delta, 942 F.3d 1352, 1362; 35 U.S.C. § 316(e); § 318(a); POR-350 Conclusion p. 61; Sur Reply-350 Conclusion p. 28; POR pp. 44-45, EX2039 ¶¶239-242]

PATENT OWNER ANSWERS EVERY BOARD QUESTION WITH THE TRIAL RECORD

Board Question Left Open or Preliminary Finding (DI-350)	Patent Owner's Trial Record Answer	Record Cite
Whether 'maintain generation' requires continuous generation or encompasses some lag or pause — EXPRESSLY LEFT FOR TRIAL	Spec. compels uninterrupted generation: 'keeps running at all times and does not stop upon failure' (col. 8:63-66). Ping timeout triggers immediate pre-recorded content (col. 10:42-45). No lag. No gap.	EX1001, 8:63-66, 9:55-61, 9:66–10:4, 10:42-45; Phillips v. AWH; POR-350 pp. 17-24; Sur Reply-350 pp. 9-14
Whether Wannamaker's redundancy satisfies the limitation even under permissive reading	Wannamaker ¶ 0320 and ¶ 0103 admit failure response = restart (manual or automatic). Generation stops during restart. Generation that stops and restarts is not 'maintained' under any reading.	EX1014, ¶¶ 103, 0320; POR-350 pp. 22-30; Sur Reply-350 pp. 15-22
Whether Wannamaker ¶ 101 transaction routing + ¶ 103 'very high availability' satisfies the limitation	No Multicast in use in Wannamaker. Transaction routing is network-level; claim requires stream-level generation continuity. 'Very high availability' is an uptime metric — not a mechanism for uninterrupted multimedia stream generation. Board was analyzing the wrong architectural layer.	EX1014, ¶¶ 101, 103; EX1001, 8:63-66, 9:55-61; POR-350 pp. 26-30; Sur Reply-350 pp. 19-22
Whether expert testimony establishes Wannamaker teaches the 'maintain generation' limitation	Expert ¶¶ 183-184 are ipse dixit: verbatim petition repetition, no independent analysis, no addressing of ¶ 0320 restart, no bridging of transaction routing to stream generation continuity. Wannamaker does not process a plurality of multimedia assets uses pre-recorded content.	Expert Decl. ¶¶ 183-184; TQ Delta, 942 F.3d 1352, 1362; POR-350 p. 28 fn. 8; Sur Reply-350 pp. 21-22
Preponderance standard at FWD stage — materially higher than institution threshold	With specification evidence, Wannamaker's own restart admissions, network/stream level distinction, and ipse dixit expert combined — Petitioner has not proven unpatentability by a preponderance for Claims 7–12.	35 U.S.C. § 316(e); POR-350 Conclusion p. 61; Sur Reply-350 Conclusion p. 28

PATENT OWNER RESPONDS TO DI DIRECTION (IPR2025-00350 — CLAIMS 7–12)

THE OPEN DI QUESTION:

'We leave for trial the question of whether maintaining generation even in failure cases requires continuous generation or whether it encompasses at least some lag or pause.' *[DI-350 at pp. 22-23]*

'002 PATENT — FOUR CRITICAL SPECIFICATION PASSAGES:

Col. 8:63-66 (Monit block — encoder 'keeps running at all times and does not stop upon failure'); Col. 9:55-61 (multicast-01 and multicast-02 Recording function 790 for failure recovery); Col. 9:66–10:4 (fault-tolerant mode — immediate pre-recorded audio playback); Col. 10:42-45 (ping monitoring timeout triggers pre-recorded content). *[EX1001 ('002 Patent); POR-350 pp. 17-24; Sur Reply-350 pp. 9-14]*

WANNAMAKER — THREE RESTART ADMISSIONS:

¶ 0320 (telnet fix / automatic restart upon fatal fault); ¶ 0103 (restart failed component or entire system as necessary); ¶ 0103 (restart at power up following power outage). *[EX1014 (Wannamaker); POR-350 pp. 22-30; Sur Reply-350 pp. 15-22]*

PATENT OWNER RESPONDS TO DI DIRECTION (IPR2025-00350 — CLAIMS 7–12)

IPSE DIXIT EXPERT DECLARATION:

Expert ¶¶ 183-184: verbatim repetition of petition; no independent analysis; no addressing of ¶ 0320 restart disclosure; no bridging of transaction routing to stream-level generation continuity. *[Petitioner's Expert Decl. ¶¶ 183-184; TQ Delta LLC v. Cisco Systems, 942 F.3d 1352, 1362 (Fed. Cir. 2019); POR-350 p. 28 fn. 8; Sur Reply-350 pp. 21-22]*

CLAIM CONSTRUCTION STANDARD AND AUTHORITY:

Phillips v. AWH Corp., 415 F.3d 1303, 1315-17 (Fed. Cir. 2005) (en banc); 37 C.F.R. § 42.100(b); 35 U.S.C. § 316(e) (preponderance standard at FWD stage). *[POR-350 pp. 17-24; Sur Reply-350 pp. 9-12]*

REQUESTED RELIEF — CLAIMS 7–12:

Final Written Decision confirming patentability of all challenged claims 7 through 12 of U.S. Patent 10,524,002 ('002 Patent). *[35 U.S.C. § 318(a); POR-350 Conclusion p. 61; Sur Reply-350 Conclusion p. 28]*

LIMITATION 1a — STEP 1: THE DI'S 'NO LIMITATION IN ANY WAY' FINDING IS NOT IN ACCORDANCE WITH PHILLIPS

Applicable to: IPR2025-00351 — Claims 1 and 7 | Ground 1: Farber Anticipation | Element 1a: 'Caching Unit'

[DI-351 at pp. 12-16; POR-351 pp. 30-40; Sur Reply-351 pp. 9-16; EX1001 ('441 Patent)]

THE DI'S PRELIMINARY FINDING:

The Board's preliminary finding on element 1a rested on a single statement: 'Claim 1 does not limit the caching unit in any way.' Patent Owner's position: that statement is not a claim construction — this approach loses fidelity with Phillips.

[DI-351 at pp. 12-14; POR-351 pp. 30-33; Sur Reply-351 pp. 9-11]

THE CONTROLLING LEGAL STANDARD — PHILLIPS v. AWH:

Under Phillips v. AWH Corp., terms are given their ordinary and customary meaning as understood by a POSITA in view of the specification and the entire claim. The specification is the primary guide. A claim construction of 'no limitation in any way' is not the broadest reasonable interpretation under Phillips — it is no interpretation at all, and it directly contradicts what the '441 patent teaches about what a caching unit is and does.

[Phillips v. AWH Corp., 415 F.3d 1303, 1315-17 (Fed. Cir. 2005) (en banc); 37 C.F.R. § 42.100(b); POR-351 pp. 30-33; Sur Reply-351 pp. 9-11]

LIMITATION 1a — STEP 1: THE DI'S 'NO LIMITATION IN ANY WAY' FINDING IS NOT IN ACCORDANCE WITH PHILLIPS

Applicable to: IPR2025-00351 — Claims 1 and 7 | Ground 1: Farber Anticipation | Element 1a: 'Caching Unit'

[DI-351 at pp. 12-16; POR-351 pp. 30-40; Sur Reply-351 pp. 9-16; EX1001 ('441 Patent)]

PATENT OWNER SUGGESTS CONSTRUCTION IN ACCORDANCE WITH PHILLIPS:

"With respect, the Board's statement that 'Claim 1 does not limit the caching unit in any way' is not an accurate claim construction — it does not consider the Specification in its entirety. Under Phillips, the specification is the primary guide. Here, the specification is extraordinarily specific about what a caching unit is and does. The Board's DI reading of 'no limitation in any way' directly contradicts what the patent teaches. A correct Phillips analysis compels a materially different result."

[Phillips v. AWH Corp., 415 F.3d 1303, 1315-17; DI-351 at pp. 12-14; POR-351 pp. 30-33; Sur Reply-351 pp. 9-11]

LIMITATION 1a — THE '441 SPECIFICATION DESCRIBES A COMPUTATIONAL MEDIA-PROCESSING SERVER

The '441 patent gives a detailed and consistent description of the caching unit across multiple sections. A POSITA reading this patent would understand a 'caching unit' as a computational media-processing unit with storage — not a passive storage device.

[EX1001 ('441 Patent); EX2039 ¶¶[relevant ¶¶]; POR-351 pp. 33-38; Sur Reply-351 pp. 11-14]

Col. 5:6-16 — Active Computing Functions: *'The caching unit can communicate with Multicast-01 and Multicast-02. The two multicast units can pull or obtain information from the caching unit. The caching unit can also encode and transcode the multimedia files it downloads from the Cloud. The caching unit can also keep updated information of all the metadata and create customizable screens provided to the cable operator at its MSO.'*

[EX1001, 5:6-16; POR-351 pp. 33-34; Sur Reply-351 pp. 11-12]

Col. 6:33-38 and 6:46-47 — Encoding and Disk Use: *Figure 5 illustrates the method 'implemented by the Mediaplug, and in particular, by the Caching unit.' And: 'The caching unit encodes audio and video, and can use the disk space in the Mediaplug.'*

[EX1001, 6:33-38, 6:46-47; POR-351 pp. 34-35; Sur Reply-351 pp. 12-13]

Col. 8:23-30 — Full System Architecture (Figure 7): *Figure 7 is described as 'a block diagram of an example architecture of the Caching Unit components,' and the caching unit 'can contain two types of operating system services HTTP 710 and RTSP 712.'*

[EX1001, 8:23-30; POR-351 pp. 35-36; Sur Reply-351 pp. 13-14]

LIMITATION 1a — THE '441 SPECIFICATION DESCRIBES A COMPUTATIONAL MEDIA-PROCESSING SERVER

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[EX1001 ('441 Patent); EX2039 ¶¶[relevant ¶¶]; POR-351 pp. 33-38; Sur Reply-351 pp. 11-14]

Col. 12:62-65 and 13:10-13 — Complete Self-Contained Computing System: *'[C]opy data from the memory and/or the storage device to the cache 1212 for quick access by the processor. In this way, the cache can provide a performance boost.' And: 'The processor may essentially be a completely self-contained computing system, containing multiple cores or processors, a bus, memory controller, cache, etc.'*

[EX1001, 12:62-65, 13:10-13; POR-351 pp. 36-38; Sur Reply-351 pp. 13-14]

THE UNMISTAKABLE PICTURE:

A caching unit under this patent is a computational media-processing server — one that encodes, transcodes, manages metadata, creates HTML user interfaces, runs HTTP and RTSP services, monitors its own operation, and communicates with multicast units. It is not a passive storage device. It is not a DVD writer. It is not a CD-ROM.

[EX1001, 5:6-16, 6:33-38, 6:46-47, 8:23-30, 12:62-65, 13:10-13; POR-351 pp. 33-38; Sur Reply-351 pp. 11-14]

LIMITATION 1a — CLAIM 25 INDEPENDENT CLAIM EXPRESSLY DEFINES THE CACHING UNIT'S OPERATIONAL SCOPE

Standard: Full claim construction requires inspection of the entire specification and all claims. An independent claim in the same patent that expressly recites what a term requires is direct, authoritative evidence of its meaning.

[Phillips v. AWH Corp., 415 F.3d 1303, 1314-17 (Fed. Cir. 2005); EX1001 ('441 Patent), Claim 25; POR-351 pp. 38-40; Sur Reply-351 pp. 14-16]

CLAIM 25 TELLS US EXACTLY WHAT A 'CACHING UNIT' DOES:

Claim 25, an independent claim in the '441 patent, expressly recites what happens 'at a caching unit.' It requires all of the following:

[EX1001 ('441 Patent), Claim 25]

- (1)** Receiving from a content provider a request for a media stream;
- (2)** Obtaining content from external sources;
- (3)** Rendering a web page by a browser;
- (4)** Generating temporal screen captures;
- (5)** Assembling a media stream;
- (6)** At a separately recited multicast unit: providing the stream for broadcast, recording the stream, and supplying recorded content upon failure.

LIMITATION 1a — CLAIM 25 INDEPENDENT CLAIM EXPRESSLY DEFINES THE CACHING UNIT'S OPERATIONAL SCOPE

Standard: Full claim construction requires inspection of the entire specification and all claims. An independent claim in the same patent that expressly recites what a term requires is direct, authoritative evidence of its meaning.

[Phillips v. AWH Corp., 415 F.3d 1303, 1314-17 (Fed. Cir. 2005); EX1001 ('441 Patent), Claim 25; POR-351 pp. 38-40; Sur Reply-351 pp. 14-16]

WHAT THIS COMPELS:

This express recitation in an independent claim of the same patent tells us precisely what a POSITA would understand a 'caching unit' to do: it is the locus of active computing — receiving requests, obtaining content, rendering web pages, generating screen captures, assembling streams. It is the operational core of the claimed invention.

A DVD player that stores assembled audio and burn-in-prevention content for later display is architecturally unrecognizable as a caching unit under this disclosure. The Board's DI finding of 'no limitation in any way' cannot be squared with an independent claim in the same patent that defines 'caching unit' with six distinct operational requirements.

[EX1001 ('441 Patent), Claim 25; Phillips v. AWH Corp., 415 F.3d 1303, 1315-17; POR-351 pp. 38-40; Sur Reply-351 pp. 14-16]

LIMITATION 1a — FARBER'S STORAGE DEVICE IS CATEGORICALLY DIFFERENT FROM A CACHING UNIT

Applicable to: Ground 1 (Farber anticipation) — Claims 1 and 7 | Element 1a: At a caching unit

[EX1003 (Farber), 7:62–8:3; POR-351 pp. 28-32; Sur Reply-351 pp. 9-15]

FARBER'S ENTIRE DISCLOSURE ON STORAGE — COLUMN 7:62 THROUGH 8:3:

'In applications where playout is desired at a later time, the storage/playout device 150 may be implemented utilizing a recorder for creating or writing to any suitable storage medium such as DVD, CD ROM, hard disk, or any other suitable read only or rewritable storage medium.'

[EX1003 (Farber), 7:62–8:3; POR-351 pp. 28-30; Sur Reply-351 pp. 9-11]

WHAT FARBER'S STORAGE DEVICE IS AND IS NOT:

Farber's storage/playout device is a passive downstream storage receptacle that receives encoded content from the multiplexer for playback at a later time. It does not encode. It does not transcode. It does not run operating system services. It does not communicate with multicast units. It does not check storage space. It does not create HTML interfaces. It does not process multimedia content in any way. A DVD. A CD-ROM. A hard disk.

[EX1003 (Farber), 7:62–8:3; EX1001 ('441 Patent), 5:6-16, 6:46-47, 8:23-30; POR-351 pp. 28-32; Sur Reply-351 pp. 9-14]

pp. 28-32; Sur Reply-351 pp. 9-14]

LIMITATION 1a — FARBER'S STORAGE DEVICE IS CATEGORICALLY DIFFERENT FROM A CACHING UNIT

Applicable to: Ground 1 (Farber anticipation) — Claims 1 and 7 | Element 1a: At a caching unit

[EX1003 (Farber), 7:62–8:3; POR-351 pp. 28-32; Sur Reply-351 pp. 9-15]

FARBER IS ABSOLUTELY SILENT ON A CACHING UNIT:

The Farber reference contains no mention of a caching unit, no component that performs caching functions, and no architecture that approximates what the '441 patent means by the term. Anticipation cannot be based on silence. Equating a passive DVD or CD-ROM storage device with the computing-intensive caching unit of the '441 patent improperly broadens claim scope beyond its ordinary meaning, contrary to settled claim construction principles.

[EX1003 (Farber) (no 'caching unit' anywhere in the reference); Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1269 (Fed. Cir. 1991) (anticipation cannot rest on silence); POR-351 pp. 28-32; Sur Reply-351 pp. 9-14]

LIMITATION 1b — THE DI'S TWO PRELIMINARY POSITIONS AND WHAT THE SPECIFICATION ACTUALLY REQUIRES

Element at Issue: 'For each of the plurality of multimedia assets: determining that there is sufficient storage space for the multimedia asset at the caching unit' (EX1001, Col. 14:55-57)

[DI-351 at pp. 16-22; POR-351 pp. 40-54; Sur Reply-351 pp. 16-22; EX1001 ('441 Patent), Fig. 5, 6:46-51, 14:55-57, 15:1-7]

THE DI'S TWO PRELIMINARY DETERMINATIONS:

1 — TIMING: The Board held the determination need not be made before storing — but that reading strips the step of its functional purpose entirely.

2 — MEANING: The Board accepted Farber's mere successful storage and retrieval as satisfying the 'determining' step through inherency — but that is not inherency at all. That is outcome-based reasoning that swallows the step whole.

[DI-351 at pp. 16-22; POR-351 pp. 40-44; Sur Reply-351 pp. 16-18]

WHAT THE SPECIFICATION ACTUALLY REQUIRES — FIGURE 5, STEP 508 (Step 2):

At column 6:46-51: 'The caching unit encodes audio and video, and can use the disk space in the Mediaplug. Hence in step 508 the method checks for sufficient space left in the memory or hard drive . . . to speed up the processes of encoding and transcoding.'

Step 508 in Figure 5 is a discrete evaluation step — 'Disk Space > Threshold' — that determines whether the total storage in the drive, minus swap space, minus log space, and other allocations, exceeds the threshold required for the multimedia asset. If it does, the method proceeds. If not, it reschedules the task (element 590 in FIG. 5).

[EX1001 ('441 Patent), Fig. 5, 6:46-51, Step 508 ('Disk Space > Threshold'), Step 590 (reschedule); POR-351 pp. 40-44; Sur Reply-351 pp. 16-18]

LIMITATION 1b — THE DI'S TWO PRELIMINARY POSITIONS AND WHAT THE SPECIFICATION ACTUALLY REQUIRES

Element at Issue: 'For each of the plurality of multimedia assets: determining that there is sufficient storage space for the multimedia asset at the caching unit' (EX1001, Col. 14:55-57)

[DI-351 at pp. 16-22; POR-351 pp. 40-54; Sur Reply-351 pp. 16-22; EX1001 ('441 Patent), Fig. 5, 6:46-51, 14:55-57, 15:1-7]

WHAT THIS REQUIRES — THREE COMPONENTS:

A POSITA reading this specification would understand the 'determining' step requires: **(1) awareness of available storage capacity; (2) evaluation or comparison against a threshold; and (3) an affirmative determination that produces a binary outcome controlling the method's flow.** It is not satisfied by merely storing data, assuming storage exists, or failing when storage runs out.

[EX1001, Fig. 5, 6:46-51, 14:55-57; EX2039 ¶¶[relevant ¶¶]; POR-351 pp. 40-44; Sur Reply-351 pp. 16-18]

LIMITATION 1b — THE CLAIM'S SEQUENTIAL STRUCTURE MAKES PRE-STORAGE TIMING MANDATORY

Standard: Under Bicon v. Straumann and In re Wilson, all words in a claim must be considered and given effect. A construction that renders a claim step superfluous is legally impermissible.

[Bicon, Inc. v. Straumann Co., 441 F.3d 945, 950 (Fed. Cir. 2006); In re Wilson, 424 F.2d 1382, 1385 (CCPA 1970); POR-351 pp. 44-48; Sur Reply-351 pp. 18-20]

THE CLAIM'S THREE-STEP SEQUENTIAL STRUCTURE:

STEP 1 — Col. 14:55-57 (DETERMINE FIRST): *'For each of the plurality of multimedia assets: determining that there is sufficient storage space for the multimedia asset at the caching unit.'*

[EX1001 ('441 Patent), 14:55-57]

STEP 2 — Col. 15:1-2 (THEN STORE): *Subsequent to the determining step — 'storing each of the multimedia assets at the caching unit.'*

[EX1001 ('441 Patent), 15:1-2]

STEP 3 — Col. 15:5-7 (THEN PROVIDE): *Subsequent to the storing step — 'responsive to receiving the request, the caching unit providing the multimedia asset to the broadcasting unit.'*

[EX1001 ('441 Patent), 15:5-7]

LIMITATION 1b — THE CLAIM'S SEQUENTIAL STRUCTURE MAKES PRE-STORAGE TIMING MANDATORY

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WHY THE BOARD'S TIMING PRELIMINARY ANALYSIS IS LEGALLY UNTENABLE:

Determine → Store → Provide. The steps are recited in that order for a reason. A construction that collapses 'determining' into the mere act of having stored data successfully — as Petitioner argues and the DI accepted — renders the determining step completely superfluous.

If successful storage means there must have been sufficient storage space, then the determining step is always satisfied by any storage system that happens to work. That cannot be right, and the law does not permit it. Under Bicon and In re Wilson, a claim must be construed to give effect to every limitation. The determining step has a distinct purpose: it is a threshold evaluation that occurs before storing, conditions the subsequent steps, and can produce a negative outcome (reschedule) that prevents storing. No interpretation that erases this function is permissible.

[EX1001, 14:55-57, 15:1-2, 15:5-7, Fig. 5 (Steps 508, 590); Bicon, 441 F.3d at 950; In re Wilson, 424 F.2d at 1385; POR-351 pp. 44-48; Sur Reply-351 pp. 18-20]

LIMITATION 1b — PETITIONER'S OWN PETITION SELF-DEFEATS THE INHERENCY ARGUMENT

Petitioner's inherency argument is destroyed by Petitioner's own words in its own petition.

[Pet.-351 at pp. 29-30; In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999); In re Oelrich, 666 F.2d 578, 581 (CCPA 1981); POR-351 pp. 48-52; Sur Reply-351 pp. 20-22]

PETITIONER'S OWN ADMISSION — PETITION AT PAGES 29-30:

"It is advantageous to check for available space in storage prior to storing data . . . and not checking for sufficient storage space could lead to system errors and storage failure."

[Pet.-351 at pp. 29-30 (emphasis added)]

WHY THIS ADMISSION IS FATAL TO PETITIONER'S INHERENCY CLAIM:

The words 'advantageous' and 'could lead to' are the language of probability and possibility — not inevitability.

Under In re Robertson: Inherency cannot be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

[In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999)]

Under In re Oelrich: The characteristic must be inevitable — not merely a probability or possibility — and it must occur each and every time the prior art is practiced.

[In re Oelrich, 666 F.2d 578, 581 (CCPA 1981)]

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THE IRRECONCILABLE CONTRADICTION:

Petitioner cannot simultaneously argue that checking for storage space is 'advantageous' (i.e., a feature some systems have but do not require) and that it is inherently present in Farber (i.e., inevitably present every time Farber is practiced). The admission that not checking 'could lead to system errors' is a direct concession that many storage implementations do not check — they simply attempt to write until failure, overwrite data, or error out. None of those behaviors constitute the claimed 'determining' step. Petitioner has defeated its own inherency argument.

[Pet.-351 at pp. 29-30; In re Robertson, 169 F.3d 743, 745; In re Oelrich, 666 F.2d 578, 581; POR-351 pp. 48-52; Sur Reply-351 pp. 20-22]

LIMITATION 1b FARBER IS COMPLETELY SILENT AND PETITIONER'S EXPERT IS IPSE DIXIT

FARBER IS COMPLETELY SILENT ON THE DETERMINING STEP:

Farber's entire disclosure on storage is a single passage: writing to a DVD, CD-ROM, or hard disk for playout at a later time. There is no storage check. There is no threshold evaluation. There is no storage management mechanism of any kind.

[EX1003 (Farber), 7:62–8:3; POR-351 pp. 52-54; Sur Reply-351 pp. 22-23]

The '441 patent distinguishes affirmative checking from merely writing: at column 10:41-43, the patent states 'the streamer will check if the Caching server is alive,' and at column 10:56: 'If it is determined that the caching server is functioning properly.' These are described as discrete evaluations — because they are.

[EX1001, 10:41-43, 10:56; POR-351 pp. 52-54; Sur Reply-351 pp. 22-23]

Under *In re Cruciferous Sprout* Litigation, to demonstrate inherency a petitioner must show the reference necessarily functions in accordance with the claimed limitation. Farber does not. A CD-ROM does not check whether it has sufficient space before accepting data written to it. A hard disk in Farber's system does not perform a threshold evaluation and decide whether to reschedule a task. Farber has no monitoring function, no evaluation mechanism, and no storage management policy. Farber's silence cannot establish inherency as a matter of law.

[In re Cruciferous Sprout Litigation, 301 F.3d 1343, 1349-50 (Fed. Cir. 2002); EX1003 (Farber), 7:62–8:3; POR-351 pp. 52-54; Sur Reply-351 pp. 22-24]

LIMITATION 1b FARBER IS COMPLETELY SILENT AND PETITIONER'S EXPERT IS IPSE DIXIT

PETITIONER'S EXPERT PROVIDES ONLY IPSE DIXIT:

At paragraph 126 of Ex-1002, the expert merely repeats the petition's conclusion — that by retrieving stored data 'at a later time,' sufficient storage space must have existed. The declaration provides no rationale, no explanation, and no mechanism by which Farber's storage device would necessarily perform a storage sufficiency evaluation.

[Ex-1002 (Expert Decl.), ¶ 126; POR-351 p. 54; Sur Reply-351 pp. 23-24]

Under TQ Delta LLC v. Cisco Systems, 942 F.3d 1352, 1362 (Fed. Cir. 2019), this type of unsupported, conclusory expert testimony cannot establish unpatentability. Petitioner's burden is not met by an expert who says the step is satisfied without explaining how.

[TQ Delta LLC v. Cisco Systems, 942 F.3d 1352, 1362 (Fed. Cir. 2019); 35 U.S.C. § 316(e); POR-351 p. 54; Sur Reply-351 pp. 23-24]

PATENT OWNER ANSWERS DI REQUEST WITH SUGGESTED CLAIM CONSTRUCTION

The specification defines the caching unit with specificity — it is a computing system that encodes, transcodes, manages metadata, runs operating system services, and actively processes multimedia content. Claim 25, an independent claim in the same patent, lists six operational functions the caching unit performs. Farber's DVD or CD-ROM storage device performs none of those functions. Farber is absolutely silent on the caching unit as the '441 patent describes it.

The specification also defines the determining step with specificity — it is a threshold evaluation at Figure 5 step 508 that precedes storage, produces a binary outcome, and controls the method's flow. If the evaluation fails, the method reschedules the task. Farber has no such evaluation anywhere in its disclosure. And Petitioner's own petition conceded this step is only 'advantageous' and that not performing it 'could lead to' system errors — the language of probability, which is the exact opposite of the inevitability that inherency requires.

These are not close questions requiring expert inference or inherency arguments. These are straightforward absences. Farber is absolutely silent on both the caching unit as the '441 patent describes it and the storage determination step as the '441 patent implements it. Petitioner has not proven anticipation by a preponderance of the evidence, and the Board should enter a Final Written Decision confirming the patentability of claims 1 and 7 under Ground 1."

[EX1001 ('441 Patent), Fig. 5, 5:6-16, 6:46-51, 8:23-30, 14:55-57, Claim 25; EX1003 (Farber), 7:62-8:3; Pet.-351 pp. 29-30; In re Robertson, 169 F.3d 743, 745; 35 U.S.C. § 318(a); POR-351 Conclusion; Sur Reply-351 Conclusion]

'441 PATENT 'CACHING UNIT' vs. FARBER 'STORAGE/PLAYOUT DEVICE'

Function / Feature	'441 Patent — Caching Unit	Farber — Storage/Playout Device	Record Cite
Encoding audio and video	YES — 'The caching unit encodes audio and video' (col. 6:46-47)	NO — passive storage receptacle; encoding done by separate MPEG encoder upstream	EX1001, 6:46-47; EX1003, Fig. 4; POR-351 pp. 28-32
Transcoding multimedia files	YES — 'encode and transcode the multimedia files it downloads from the Cloud' (col. 5:6-16)	NO — no transcoding function anywhere in Farber's disclosure	EX1001, 5:6-16; EX1003 (no transcoding); POR-351 pp. 33-35
Running OS services (HTTP/RTSP)	YES — 'can contain two types of operating system services HTTP 710 and RTSP 712' (col. 8:23-30)	NO — a DVD or CD-ROM recorder has no operating system services	EX1001, 8:23-30; EX1003, 7:62–8:3; POR-351 pp. 35-36
Managing metadata and MSO interfaces	YES — 'keep updated information of all the metadata and create customizable screens provided to the cable operator at its MSO' (col. 5:6-16)	NO — no metadata management, no MSO interface, no HTML creation	EX1001, 5:6-16; EX1003 (no metadata management); POR-351 pp. 33-35
Storage threshold evaluation	YES — Step 508 'Disk Space > Threshold' in FIG. 5; reschedules task if threshold not met (col. 6:46-51)	NO — no threshold check, no evaluation, no rescheduling; writes to DVD/CD-ROM passively	EX1001, Fig. 5, 6:46-51; EX1003, 7:62–8:3; POR-351 pp. 40-54
Mention of 'caching unit' anywhere	YES — throughout the patent; defined across multiple specification sections and Claim 25	NO — the word 'caching unit' does not appear anywhere in Farber	EX1001, 5:6-16, 8:23-30, Claim 25; EX1003 (no mention); POR-351 pp. 28-32

PETITIONER'S MOTIVATION TO COMBINE RATIONALE IS CIRCULAR AND SELF-DEFEATING — PETITIONER'S OWN PAPERS PROVE IT

Applicable to: IPR2025-00351 — Ground 2 (Farber + Vermeulen) | Claims 1 and 2

[DI-351 at pp. 22-28; Pet.-351 at pp. 29-30; Ex-1002 (Liphoff Decl.) ¶ 130; POR-351 pp. 54-60; Sur Reply-351 pp. 22-26]

THE DI'S MOTIVATION FINDING — WHAT THE BOARD ACCEPTED:

The Board accepted Mr. Liphoff's testimony that it is 'advantageous' to check available storage space and that 'not checking for sufficient storage space could lead to system errors and storage failure.' The Board treated this as expert analysis establishing a motivation to combine Farber and Vermeulen.

[DI-351 at pp. 22-25; Ex-1002 (Liphoff Decl.) ¶ 130]

THE FATAL PROBLEM — PETITIONER IS THE SOURCE, NOT THE PRIOR ART:

These are the exact words Petitioner used in its own petition at pages 29-30: 'it is advantageous to check for available space in storage prior to storing data' and 'not checking for sufficient storage space could lead to system errors and storage failure.' Mr. Liphoff's declaration then repeats this language at paragraph 130 as if it were technical opinion.

PETITIONER'S MOTIVATION TO COMBINE RATIONALE IS CIRCULAR AND SELF-DEFEATING — PETITIONER'S OWN PAPERS PROVE IT

Applicable to: IPR2025-00351 — Ground 2 (Farber + Vermeulen) | Claims 1 and 2

[DI-351 at pp. 22-28; Pet.-351 at pp. 29-30; Ex-1002 (Liphoff Decl.) ¶ 130; POR-351 pp. 54-60; Sur Reply-351 pp. 22-26]

Petitioner — not Vermeulen, not Farber, not any prior art — is the source of the motivation rationale. Petitioner is supplying the reason to combine, not the prior art. That is circular. Under KSR, a motivation to combine requires a specific reason grounded in the prior art, in the knowledge of a POSITA, or in the nature of the problem to be solved — not attorney argument recycled into an expert declaration.

[Pet.-351 at pp. 29-30; Ex-1002 (Liphoff Decl.) ¶ 130; KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007); TQ Delta LLC v. Cisco Systems, 942 F.3d 1352, 1362 (Fed. Cir. 2019); POR-351 pp. 54-58; Sur Reply-351 pp. 22-24]

Petitioner wrote at pages 29-30 of the petition: 'it is advantageous to check for available space in storage prior to storing data' and 'not checking for sufficient storage space could lead to system errors and storage failure.' Mr. Liphoff's declaration repeats this at paragraph 130 as expert opinion. But this is not expert analysis of the prior art — it is advocacy dressed as testimony. Under TQ Delta, conclusory expert testimony that merely echoes counsel's arguments without underlying rationale cannot establish obviousness.

[Pet.-351 pp. 29-30; Ex-1002 ¶ 130; TQ Delta, 942 F.3d at 1362; KSR, 550 U.S. at 418; POR-351 pp. 54-58; Sur Reply-351 pp. 22-24]

VERMEULEN DOES NOT TEACH THE CLAIMED DETERMINING STEP

The Board accepted that Vermeulen's nodepicker 'teaches, or at least suggests' the determining step. The full trial record establishes three independent reasons why this is inaccurate — any one of which disposes of Ground 2.

[DI-351 at pp. 25-27; EX1004 (Vermeulen), Fig. 2, Col. 16:18-29; Ex-1002 (Liphoff Decl.) ¶ 126; POR-351 pp. 58-65; Sur Reply-351 pp. 24-28]

THE DETERMINATION IS NOT AT THE CACHING UNIT:

The claim requires 'determining that there is sufficient storage space for the multimedia asset at the caching unit.' In Vermeulen's architecture, the storage location is node 160, but any determination about storage sufficiency is made by nodepicker 130 — an entirely separate component. Figure 2 of Vermeulen makes this unambiguous: nodepicker 130 and nodes 160 are distinct, separated components. The nodepicker is external selection logic that sits outside the storage nodes. To get the claimed determining step from the combination, you would need to add Vermeulen's nodepicker as a new component on top of Farber's system — which is constructing an entirely new system not disclosed in either reference.

[EX1004 (Vermeulen), Fig. 2, Col. 6:1-20; EX1001 ('441 Patent), 14:55-57; POR-351 pp. 58-61; Sur Reply-351 pp. 24-26]

NODEPICKER DOES NOT EVALUATE STORAGE FOR EACH MULTIMEDIA ASSET:

Vermeulen's own disclosure at column 16:18-29: 'in some instances, nodepicker 130 may not have a perfectly synchronous view of the state of nodes 160 . . . a particular node 160 believed to be available by nodepicker 130 may in fact have failed since the last update of state information. In such instances, nodepicker 130 may be unable to guarantee that its read or write plans may be able to be completed by a coordinator.'

Vermeulen's own admission: the nodepicker does not check for sufficient storage before each storage operation — its information is potentially stale, the operation can fail, and reattempt is required. That is a probabilistic assessment, not the affirmative per-asset determination the claim requires.

[EX1004 (Vermeulen), Col. 16:18-29; EX1001 ('441 Patent), 14:55-57 ('for each of the plurality of multimedia assets'); POR-351 pp. 61-63; Sur Reply-351 pp. 26-27]

VERMEULEN DOES NOT TEACH THE CLAIMED DETERMINING STEP

The Board accepted that Vermeulen's nodepicker 'teaches, or at least suggests' the determining step. The full trial record establishes three independent reasons why this is inaccurate — any one of which disposes of Ground 2.

[DI-351 at pp. 25-27; EX1004 (Vermeulen), Fig. 2, Col. 16:18-29; Ex-1002 (Liphoff Decl.) ¶ 126; POR-351 pp. 58-65; Sur Reply-351 pp. 24-28]

EXPERT IS PURE IPSE DIXIT ON VERMEULEN:

Paragraph 126 of Ex-1002 provides no analysis of Vermeulen's architecture. It does not address the nodepicker-node separation. It does not address the stale-state disclosure at column 16:18-29. It concludes only that 'by retrieving stored data at a later time, there must have been sufficient storage space' — outcome reasoning that works backward from a result to infer the existence of a method step the prior art never discloses. Under *In re Cruciferous Sprout Litigation*, a petitioner must show the reference necessarily functions in accordance with the claimed limitation. This declaration does not.

[Ex-1002 (Liphoff Decl.) ¶ 126; EX1004 (Vermeulen), Fig. 2, Col. 16:18-29; In re Cruciferous Sprout Litigation, 301 F.3d 1343, 1349-50 (Fed. Cir. 2002); POR-351 pp. 63-65; Sur Reply-351 pp. 27-28]

'COMPATIBLE WITHOUT ALTERATION' REASONING IS FACTUALLY INVERTED — VERMEULEN DOES NOT SUPPLEMENT FARBER; IT CAN ONLY REPLACE

The Board preliminarily found sufficient Mr. Liphoff's testimony that Vermeulen's nodepicker would be 'compatible' with Farber's storage media without requiring any alteration to its operation. Patent Owner's position is this is flawed reasoning. The relationship between the two references precisely backwards.

[DI-351 at pp. 27-28; EX1004 (Vermeulen), Cols. 1:44–2:11; POR-351 pp. 65-70; Sur Reply-351 pp. 28-32]

VERMEULEN'S OWN BACKGROUND SECTION CRITICIZES FARBER'S STORAGE ARCHITECTURE:

At columns 1:44 through 2:11, Vermeulen identifies the problems of conventional local storage systems — the very approach Farber uses — as the problems Vermeulen was designed to solve:

[EX1004 (Vermeulen), Cols. 1:44–2:11; POR-351 pp. 65-67; Sur Reply-351 pp. 28-30]

- Limited accessibility of application data
- Insufficient reliability from storing only a single copy
- Cross-platform incompatibility
- Network isolation barriers restricting access to local area networks

The storage approach Farber uses — DVDs, CD-ROMs, local hard disks, standalone storage media — is the architecture Vermeulen was designed to supersede and replace.

'COMPATIBLE WITHOUT ALTERATION' REASONING IS FACTUALLY INVERTED — VERMEULEN DOES NOT SUPPLEMENT FARBER; IT CAN ONLY REPLACE

VERMEULEN'S SOLUTION IS AN ENTIRELY DIFFERENT STORAGE PARADIGM:

Vermeulen discloses: location-independent web-services based distributed storage; automatic data replication across multiple distributed nodes; standardized bucket-and-object interfaces; and a keymap system for tracking data across a network. To integrate this into Farber, you must network Farber's standalone system, implement a coordinator and nodepicker infrastructure, implement web-services protocols, and restructure the storage architecture from scratch.

[EX1004 (Vermeulen), Cols. 2:12–3:50, Fig. 1-2; EX1003 (Farber), 7:62–8:3; POR-351 pp. 65-70; Sur Reply-351 pp. 28-32]

CONTROLLING LEGAL STANDARD — TEACHING AWAY:

Under *In re Gordon* and the Federal Circuit's teaching-away doctrine, a reference that criticizes, discredits, or discourages a particular approach teaches away from that approach. A motivation to combine cannot be found where the combination would require abandoning the very foundation of one reference to adopt the other. Vermeulen does not add a feature to Farber — it replaces Farber's architecture with a different one.

[In re Gordon, 733 F.2d 900, 902 (Fed. Cir. 1984); In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994) (teaching away); EX1004 (Vermeulen), Cols. 1:44–2:11; POR-351 pp. 65-70; Sur Reply-351 pp. 28-32]

THE REFERENCES ADDRESS FUNDAMENTALLY DIFFERENT PROBLEMS — NO RATIONAL BASIS FOR COMBINATION

Standard: Under KSR, motivation to combine requires that the combination address the same problem or that a POSITA would naturally look to the second reference to solve a problem identified in the first. Generic engineering common sense does not supply a specific motivation to combine two particular references in a particular way.

[KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 401, 418 (2007); In re Kahn, 441 F.3d 977, 987-88 (Fed. Cir. 2006); POR-351 pp. 70-74; Sur Reply-351 pp. 30-34]

FARBER'S PROBLEM SPACE — SCREEN BURN-IN PREVENTION IN BROADCAST:

Farber is directed to preventing screen burn-in on digital broadcast displays. Its storage feature — the optional storage/playout device 150 — is a secondary, non-primary embodiment for situations where playout is desired at a later time rather than in real-time. Farber's system is not networked. It has no need for distributed redundant storage. It has no multi-user storage access problem. It has no cross-platform data compatibility issue. It has no location-independence requirement.

[EX1003 (Farber), Abstract, 1:1-25, 7:62–8:3; POR-351 pp. 70-72; Sur Reply-351 pp. 30-32]

VERMEULEN'S PROBLEM SPACE — DISTRIBUTED WEB-SERVICE STORAGE:

Vermeulen addresses managing application data across multiple networked nodes for multiple users who need location-independent, reliable, replicated access to data objects stored across a geographically distributed infrastructure. Vermeulen addresses none of the problems Farber addresses. The fields are different. The problem spaces are entirely different. The architectures are incompatible.

[EX1004 (Vermeulen), Cols. 1:44–2:11, Abstract; POR-351 pp. 72-74; Sur Reply-351 pp. 32-34]

THE REFERENCES ADDRESS FUNDAMENTALLY DIFFERENT PROBLEMS — NO RATIONAL BASIS FOR COMBINATION

Standard: Under KSR, motivation to combine requires that the combination address the same problem or that a POSITA would naturally look to the second reference to solve a problem identified in the first. Generic engineering common sense does not supply a specific motivation to combine two particular references in a particular way.

[KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 401, 418 (2007); In re Kahn, 441 F.3d 977, 987-88 (Fed. Cir. 2006); POR-351 pp. 70-74; Sur Reply-351 pp. 30-34]

WHY A POSITA SOLVING FARBER'S PROBLEM WOULD NOT LOOK TO VERMEULEN:

A POSITA solving Farber's screen burn-in problem — or even the secondary storage problem of writing optional playout content to a DVD — would have no reason to look to Vermeulen. Vermeulen is not cited by Farber. The fields are unrelated. The problems are unrelated. The architectures are incompatible. The only 'connection' Petitioner has identified is the generic statement that storage space checking is generally advantageous. But generic engineering common sense does not supply a specific motivation to combine these two particular references in this particular way. Under KSR and In re Kahn, that is not enough.

[KSR, 550 U.S. at 418; In re Kahn, 441 F.3d at 987-88; EX1003 (Farber); EX1004 (Vermeulen); POR-351 pp. 70-74; Sur Reply-351 pp. 30-34]

REASONABLE EXPECTATION OF SUCCESS IS ABSENT — THE COMBINATION REQUIRES SUBSTANTIAL RECONSTRUCTION

the Board preliminarily found sufficient Mr. Liphoff's conclusion that 'the process of checking storage space was well-known and commonly implemented in computer systems.' Patent Owner's position is that this answers the wrong question.

[DI-351 at pp. 27-28; Ex-1002 (Liphoff Decl.); EX2039 (PO Expert Decl.) ¶ 103; POR-351 pp. 74-78; Sur Reply-351 pp. 34-38]

THE CORRECT QUESTION — NOT ANSWERED BY PETITIONER:

The relevant question is not whether storage-space checking is well-known. The relevant question is: would a POSITA have had a reasonable expectation of success in specifically taking Vermeulen's distributed nodepicker architecture — including its coordinator, node topology, keymap system, web-services interface, and bucket-and-object storage model — and integrating it into Farber's standalone broadcast burn-in prevention system, which uses a passive local storage device receiving output from a multiplexer for optional deferred playout?

[KSR, 550 U.S. at 418; POR-351 pp. 74-76; Sur Reply-351 pp. 34-36]

WHAT THE COMBINATION WOULD ACTUALLY REQUIRE — NOT SIMPLE ADDITIONS:

Farber's system operates in isolation. It is not networked. It has no web-services interface. It has no coordinator. It has no distributed node topology. Converting Farber's storage/playout device 150 from a passive local DVD or hard disk into a Vermeulen-compatible storage node would require all of the following:

(1) Networking Farber's standalone system; (2) Implementing a coordinator component; (3) Implementing a nodepicker component; (4) Implementing Vermeulen's web-services protocols; (5) Restructuring the storage architecture from scratch.

These are not minor modifications — they are a fundamental redesign of one of Farber's components into something Farber does not contemplate.

[EX1003 (Farber), 7:62–8:3; EX1004 (Vermeulen), Fig. 1-2, Cols. 2:12–3:50; POR-351 pp. 74-78; Sur Reply-351 pp. 34-38]

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[DI-351 at pp. 27-28; Ex-1002 (Liphoff Decl.); EX2039 (PO Expert Decl.) ¶ 103; POR-351 pp. 74-78; Sur Reply-351 pp. 34-38]

PATENT OWNER'S EXPERT — POSITA ANALYSIS:

Patent Owner's own POSITA expert noted at Ex-2039, paragraph 103, that Farber's system uses a Finite State Machine (FSM) architecture, and that attempting to convert a REST-style web-services architecture like Vermeulen's into an FSM system — or attempting to combine the two — would be complex with minimal chances of success. That is not the reasonable expectation of success that obviousness requires under KSR and the Federal Circuit.

[EX2039 (PO Expert Decl.) ¶ 103; KSR, 550 U.S. at 418; Medichem, S.A. v. Rolabo, S.L., 437 F.3d 1157, 1165 (Fed. Cir. 2006); POR-351 pp. 74-78; Sur Reply-351 pp. 34-38]

ALL PRELIMINARILY PRESENTED MOTIVATION REASONINGS UNDERMINED

General advantage of storage checking: UNDERMINED. The 'general advantage' language is Petitioner's own attorney argument from pages 29-30 of the petition, recycled into the expert declaration. Generic engineering truism is not a specific motivation to combine these two particular references.

[Pet.-351 pp. 29-30; Ex-1002 ¶ 130; KSR, 550 U.S. at 418; POR-351 pp. 54-58]

Mr. Liphoff's expert testimony: UNDERMINED. Mr. Liphoff's declaration parrots the petition without independent analysis, fails to address the nodepicker's stale-state limitation at Vermeulen column 16:18-29, fails to address the nodepicker-node separation, and fails to explain how the nodepicker would physically operate in Farber's system. Under TQ Delta, this type of testimony cannot carry Petitioner's burden.

[Ex-1002 ¶¶ 126, 130; EX1004 (Vermeulen), Col. 16:18-29; TQ Delta, 942 F.3d at 1362; POR-351 pp. 58-65]

Farber's use of common storage media: UNDERMINED. Farber's storage media being DVDs and hard disks does not make Vermeulen's distributed web-services infrastructure 'compatible' without alteration. Vermeulen was built expressly to replace the very storage paradigm Farber uses, and says so in its own background section at columns 1:44 through 2:11. The 'compatible' finding inverts the actual relationship between the two references.

[EX1004 (Vermeulen), Cols. 1:44–2:11; EX1003 (Farber), 7:62–8:3; In re Gordon, 733 F.2d 900, 902; POR-351 pp. 65-70]

No alteration to operation required: UNDERMINED. The combination would require networking Farber's standalone system, implementing a coordinator and nodepicker, implementing Vermeulen's web-services protocols, and restructuring the storage architecture from scratch. Patent Owner's POSITA expert at Ex-2039 ¶ 103 identified this as complex with minimal chances of success. This is not 'no alteration' — it is a fundamental redesign.

[EX2039 ¶ 103; EX1003 (Farber), 7:62–8:3; EX1004 (Vermeulen), Fig. 1-2; POR-351 pp. 74-78]

ALL PRELIMINARILY PRESENTED MOTIVATION REASONINGS UNDERMINED

REQUESTED RELIEF — CLAIMS 1 AND 2 (GROUND 2):

On the full trial record, Petitioner has not proven by a preponderance of the evidence that a POSITA would have been motivated to combine Farber and Vermeulen with a reasonable expectation of success. The Board should enter a Final Written Decision confirming the patentability of claims 1 and 2 under Ground 2.

[35 U.S.C. § 316(e); 35 U.S.C. § 318(a); KSR, 550 U.S. at 418; POR-351 Conclusion; Sur Reply-351 Conclusion]

THE BOARD'S DI INVITATION TO PATENT OWNER

Applicable to: ALL THREE IPR PROCEEDINGS — DI Language Identical in IPR2025-00349, IPR2025-00350, and IPR2025-00351

[DI-349; DI-350; DI-351 (identical language in all three); POR-349 pp. 9-11; POR-350 pp. 7-9; POR-351 pp. 11-13; Sur Reply-349 pp. 2-4; Sur Reply-350 pp. 2-4; Sur Reply-351 pp. 2-4]

THE DI'S EXACT LANGUAGE — THE INVITATION TO PATENT OWNER:

"Should Patent Owner dispute Petitioner's definition during trial, we encourage Patent Owner to explain how a software-focused definition would affect any obviousness analysis in our final written decision."

[DI-349; DI-350; DI-351 (language identical across all three decisions on institution)]

WHAT THE DI INVITATION ACTUALLY ASKED FOR — A FORWARD-LOOKING ANALYTICAL REQUEST:

This was not a general request to define POSITA. The Board's invitation was specific and targeted: walk us through the downstream consequences of adopting a software-focused POSITA on the specific obviousness combinations Petitioner has advanced in each case.

The Board asked Patent Owner to connect the software-focused definition to the specific obviousness grounds — to show how and why the definition change would affect the outcome of each combination ground in the Final Written Decision.

[DI-349; DI-350; DI-351; POR-349 pp. 9-11; POR-350 pp. 7-9; POR-351 pp. 11-13]

PATENT OWNER ANSWERED THE BOARD'S INVITATION ACROSS ALL THREE CASES

Patent Owner's response to the DI invitation consisted of three interconnected components, deployed consistently across all three PORs and all three Sur Replies.

[POR-349 pp. 9-11; POR-350 pp. 7-9; POR-351 pp. 11-13; Sur Reply-349 pp. 2-4; Sur Reply-350 pp. 2-4; Sur Reply-351 pp. 2-4]

SOFTWARE-FOCUSED POSITA DEFINITION MAINTAINED AND REASSERTED:

In all three PORs, Patent Owner reasserted that a POSITA would have 'at least two years of experience working in the field of software systems used in generating and broadcasting multimedia streams.' This stands in deliberate contrast to Petitioner's definition, which requires experience in multimedia 'processing or delivery using internet protocols' — a definition Patent Owner characterized as hardware-focused, directed to network transport and protocol engineering rather than to software systems for broadcast multimedia generation.

[POR-349 pp. 9-11; POR-350 pp. 7-9; POR-351 pp. 11-13; EX2006 ¶¶[relevant ¶¶]; EX2039 ¶¶[relevant ¶¶]; Sur Reply-349 pp. 2-4; Sur Reply-350 pp. 2-4; Sur Reply-351 pp. 2-4]

PETITIONER'S EXPERT ATTACKED AS HARDWARE-DISQUALIFIED:

In a footnote appearing consistently across all three PORs, Patent Owner noted: 'Not surprisingly, Petitioners' expert's experience is rooted in hardware relating to data communications over the Internet rather than software solutions as reflected in the claimed inventions.' Under the correct software-focused POSITA definition, Petitioner's expert does not qualify as a POSITA — and his opinions on how a POSITA would view the prior art combinations are therefore entitled to no weight.

[POR-349 fn. [n]; POR-350 fn. [n]; POR-351 fn. [n]; Petitioner's Expert CV (hardware/data communications background); EX2006; EX2039]

PATENT OWNER ANSWERED THE BOARD'S INVITATION ACROSS ALL THREE CASES

Patent Owner's response to the DI invitation consisted of three interconnected components, deployed consistently across all three PORs and all three Sur Replies.

[POR-349 pp. 9-11; POR-350 pp. 7-9; POR-351 pp. 11-13; Sur Reply-349 pp. 2-4; Sur Reply-350 pp. 2-4; Sur Reply-351 pp. 2-4]

HINDSIGHT/MOTIVATION ARGUMENTS ACROSS ALL THREE CASES:

Patent Owner argued across all three cases that Petitioner's obviousness combinations were assembled using the challenged patents as a roadmap, and that the prior art references 'contain no disclosure of the aggregate claim limitations in total' with 'no reasoned motivation to combine them apart from the teachings of the challenged patent itself.' The software-focused POSITA is the anchor for this argument: a POSITA with actual software systems experience in broadcast multimedia generation would not have looked to hardware-architecture references like Avellan as a starting point.

[POR-349 pp. 42-62; POR-350 pp. 24-62; POR-351 pp. 28-68; Sur Reply-349 pp. 3-7; Sur Reply-350 pp. 5-28; Sur Reply-351 pp. 4-28; KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007)]

HOW THE SOFTWARE-FOCUSED POSITA DEFEATS EVERY OBVIOUSNESS GROUND

This is the answer to the Board's specific DI invitation: under the correct software-focused POSITA, every Avellan-based obviousness combination fails — not for one technical reason, but for a fundamental definitional reason that pervades all three cases.

[DI-349; DI-350; DI-351 (invitation); POR-349 pp. 42-62; POR-350 pp. 24-62; POR-351 pp. 28-68; Sur Reply-349 pp. 3-7; Sur Reply-350 pp. 5-28; Sur Reply-351 pp. 4-28]

WHAT A SOFTWARE-FOCUSED POSITA WOULD SEE IN AVELLAN:

A POSITA with software-systems experience in generating and broadcasting multimedia streams would approach Avellan — which is fundamentally a hardware gateway architecture for low-latency internet delivery to desktop computers — as a reference from a different technical field entirely. Avellan does not describe software systems for broadcast multimedia generation. It describes a hardware gateway (device 134) that screenshots webpages and delivers compressed images to desktop computers via satellite or internet protocols. This is an internet-delivery, hardware-architecture reference — not a broadcast software reference.

[EX1003 (Avellan), Fig. 1, 4:25-32, 7:50-67, 8:18-21; POR-349 pp. 42-48; POR-350 pp. 24-32; POR-351 pp. 33-42; Sur Reply-349 pp. 3-5; Sur Reply-350 pp. 5-10; Sur Reply-351 pp. 4-9]

THE HINDSIGHT PROBLEM — VISIBLE ONLY TO A SOFTWARE-FOCUSED POSITA:

A software-focused POSITA would not have seen Avellan as a starting point for a cloud-based, software-driven multimedia streaming system for cable and satellite operators. The only way to arrive at the Petitioner's combinations — Avellan + Wannamaker, Avellan + Ma, Avellan + Fain, Avellan + Pavlovskaja-PCT, Farber + Vermeulen — is to use the claimed inventions as a roadmap and work backwards. The prior art references 'contain no disclosure of the aggregate claim limitations in total' and there is 'no reasoned motivation to combine them apart from the teachings of the challenged patent itself.'

[POR-349 pp. 42-62; POR-350 pp. 24-62; POR-351 pp. 28-68; Sur Reply-349 pp. 3-7; Sur Reply-350 pp. 5-28; Sur Reply-351 pp. 4-28; KSR, 550 U.S. at 418; In re NuVasive, 842 F.3d 1376, 1381-82 (Fed. Cir. 2016)]

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[DI-349; DI-350; DI-351 (invitation); POR-349 pp. 42-62; POR-350 pp. 24-62; POR-351 pp. 28-68; Sur Reply-349 pp. 3-7; Sur Reply-350 pp. 5-28; Sur Reply-351 pp. 4-28]

PETITIONER'S EXPERT IS DISQUALIFIED UNDER THE CORRECT DEFINITION:

Because Mr. Liphoff's experience is 'rooted in hardware relating to data communications over the Internet rather than software solutions as reflected in the claimed inventions,' he does not qualify as a POSITA under the software-focused definition. All of his obviousness opinions — which are the foundation of every combination ground in every case — are entitled to no weight. Without qualifying expert testimony, Petitioner is left with bare attorney argument that cannot satisfy the preponderance-of-evidence standard under 35 U.S.C. § 316(e).

[POR-349 fn. [n]; POR-350 fn. [n]; POR-351 fn. [n]; Broadcom Ltd. v. Invensas Corp., IPR2017-00424; Fed. R. Evid. 702(b); 35 U.S.C. § 316(e)]

POSITA DEFINITION — APPLICATION TO EACH IPR PROCEEDING AND ITS SPECIFIC OBVIOUSNESS GROUNDS

The software-focused POSITA argument applies identically across all three cases, but connects to specific obviousness grounds in each. The Board asked for this case-specific downstream analysis.

[DI-349; DI-350; DI-351 (invitation); POR-349; POR-350; POR-351; Sur Reply-349; Sur Reply-350; Sur Reply-351]

IPR2025-00349 ('074 Patent) — AVELLAN-BASED GROUNDS 1-5:

Grounds 1-5 all rely on Avellan (alone or with Wannamaker, Ma, Pavlovskaja-PCT, or Farber). Under the software-focused POSITA, a broadcast multimedia software engineer would not have identified Avellan — a hardware internet-delivery gateway for desktop web browsing — as a starting point. The combinations lack any motivation grounded in the software-systems problem space the patents address. Mr. Liphoff's Avellan-based opinions are from a hardware-focused expert who does not qualify under the correct definition.

[POR-349 pp. 9-11, 42-62; Sur Reply-349 pp. 2-7; DI-349 (POSITA invitation)]

IPR2025-00350 ('002 Patent) — AVELLAN GROUNDS 1, 3-6 AND WANNAMAKER GROUND 2:

The Avellan-based grounds fail for the same software-POSITA reason. On Wannamaker (Ground 2, Claims 7-12): Wannamaker is an enterprise multimedia delivery system — still not a broadcast software system in the sense the patents describe. A software-focused POSITA in broadcast multimedia generation would not have looked to either Avellan or Wannamaker to solve the problems addressed by the '002 patent's cloud-based multimedia generation and broadcast architecture.

[POR-350 pp. 7-9, 24-62; Sur Reply-350 pp. 2-28; DI-350 (POSITA invitation)]

POSITA DEFINITION — APPLICATION TO EACH IPR PROCEEDING AND ITS SPECIFIC OBVIOUSNESS GROUNDS

The software-focused POSITA argument applies identically across all three cases, but connects to specific obviousness grounds in each. The Board asked for this case-specific downstream analysis.

[DI-349; DI-350; DI-351 (invitation); POR-349; POR-350; POR-351; Sur Reply-349; Sur Reply-350; Sur Reply-351]

IPR2025-00351 ('441 Patent) — FARBER GROUNDS 1-5 AND AVELLAN+PAVLOVSKAIA GROUND 6:

Farber is a broadcast burn-in prevention system — hardware-focused, not software-systems focused. Under the software-focused POSITA, combining Farber with Vermeulen (a distributed web-services storage reference) or with Pavlovskiaia (a music metadata reference) addresses problems that a broadcast software engineer would not encounter in the problem space the '441 patent addresses. Ground 6 (Avellan + Pavlovskiaia-PCT) inherits all Avellan-related POSITA deficiencies from the other cases.

[POR-351 pp. 11-13, 28-68; Sur Reply-351 pp. 2-28; DI-351 (POSITA invitation); EX2039 ¶¶[relevant ¶¶]]

"Comprising" Does Not Dissolve the Meaning of Recited Claim Terms

DI POSITION REASSESSED:

The Board treated "comprising" as if it licenses reinterpretation of the claim's express language. We assert that it does not. "Comprising" speaks to what steps may be added — it says nothing about the meaning of the steps that are recited.

PATENT OWNER'S POSITION — PO RESPONSE & SUR REPLY:

EVEN Broadest Reasonable Interpretation Has Limits. PO Response and Sur Reply establish that even "the broadest-construction rubric coupled with the term 'comprising' does not give the PTO an unfettered license to interpret claims to embrace anything remotely related to the claimed invention." (2024 Pat. App. LEXIS 1033, *10). The broadest reasonable interpretation differs from the broadest possible interpretation. In re Smith Int'l, Inc., 871 F.3d 1375, 1383 (Fed. Cir. 2017); MPEP § 2111.

Specification Governs Meaning. The claim term "content provider" is used with a specific, defined meaning throughout the specification and claim structure. "Comprising" permits additional unrecited steps — it does not authorize the Board to redefine or reinterpret the substance of the steps expressly recited. PO Sur Reply (IPR2025-00349) at 10; PO Sur Reply (IPR2025-00350) at 10.

The Board's reliance on "comprising" to expand the content provider limitation beyond its express role — requesting, receiving, and broadcasting — is legal error. A POSITA would understand the term "content provider" in its industry-specific sense, not as an open-ended label for any system component. PO Response (IPR2025-00349) at 49-50; PO Response (IPR2025-00350) at 49-50.

The Specification Expressly Defines Who the "Content Provider" Is — Not a Gateway

DI POSITION REASSESSED:

The Board read "content provider" in isolation, without reference to the specification, which directly provides insight.

PATENT OWNER'S POSITION — PO RESPONSE & SUR REPLY:

Specification Is Explicit. The specification states: "an example computer-implemented method can receive, from a content provider such as a cable or satellite operator, a request for at least one media stream for playback on a broadcast channel." EX1001, 2:50-56. The patent also states: "The media stream can be provided to the content provider for broadcast on the broadcast media channel." EX1001, 8:17-19. The content provider requests, receives, and broadcasts. PO Response (IPR2025-00349) at 49; PO Response (IPR2025-00350) at 49.

Industry Usage Confirms the Meaning. W3C, FCC, and IEEE standards uniformly treat "content provider" as a source entity responsible for supplying content to end users — not a transmission intermediary. The Avellan gateway platform is an intermediary system that facilitates communication between user computers. It does not originate content but acts solely as a distribution intermediary — receiving, processing, and enabling delivery of webpage images to end users. PO Response (IPR2025-00349) at 49-50; PO Response (IPR2025-00350) at 49-50.

The Board did not consult the specification on the meaning of an expressly defined term in accordance with Phillips v. AWH Corp., 415 F.3d 1303 (Fed. Cir. 2005) (en banc), which establishes the specification as the primary source for claim construction. The intrinsic record unambiguously identifies the content provider as a cable or satellite operator-type entity, not a gateway.

Claim Structure Confirms the Content Provider Must Be a Requesting, Receiving, and Broadcasting Entity

DI POSITION REASSESSED:

The Board looked at only the first part of element 1a ("receiving from a content provider") without considering how "content provider" functions throughout the entire claim.

PATENT OWNER'S POSITION — PO RESPONSE & SUR REPLY:

Three-Part Functional Role Is Built Into the Claim. Patent Owner's Response establishes that the claim language, read as a whole, requires the content provider to: (1) originate the request for the media stream, (2) receive the assembled media stream, and (3) use it for playback on a broadcast media channel. The claim structure expressly differentiates the content provider — the requesting and receiving entity — from the cloud-based system components that process, assemble, and deliver the stream. PO Response (IPR2025-00349) at 49; PO Response (IPR2025-00350) at 15-16; EX2006, ¶ 63.

The Gateway Plays the Processor Role — Not the Content Provider Role. The specification distinguishes the processing entity ("a computer or server . . . that can store, encode, and transmit multimedia files in the format that the cable operator at its MSO requires," EX1001, 4:38-43) from the content provider. The gateway occupies the former role. Petitioner's attempt to re-label the gateway platform as a content provider is contradicted by the entire claim structure. PO Response (IPR2025-00349) at 49-50.

A claim must be construed as a whole. Merck & Co. v. Teva Pharms. USA, Inc., 347 F.3d 1367 (Fed. Cir. 2003). The Board's isolated reading of the opening phrase of element 1a, without consideration of the content provider's role throughout the remainder of the claim, violates this foundational principle and produces a construction inconsistent with the claim's internal logic.

The "Nonsensical" Rendering Argument: The Gateway Cannot Be Both the Requestor and the Provider

DI POSITION REASSESSED:

Under the Board's construction, the gateway receives the request, performs the method, and provides the result back to itself. That makes the "receiving" and "providing" steps pointless.

PATENT OWNER'S POSITION — PO RESPONSE & SUR REPLY:

The Circular Construction Renders Steps Meaningless. Under the Board's reading, the gateway platform (1) receives a request from itself, (2) assembles the requested media, and (3) provides it back to itself. Patent Owner's Response states: "It would be nonsensical to interpret the gateway platform as both requesting and providing to itself the assembled media stream it creates." PO Response (IPR2025-00349) at 37; PO Response (IPR2025-00350) at 36; EX2006, ¶¶ 74, 77. Such a construction renders the 'requesting' and 'receiving' steps unnecessary and meaningless in both the claimed systems and methods.

In Avellan, All Requests Originate From User Computers — Not the Gateway. The Sur Reply confirms: "In Avellan, all requests generate from the user computers." PO Sur Reply (IPR2025-00349) at 10; PO Sur Reply (IPR2025-00350) at 10. EX1003, 6:65-7:5; 6:37-40 ("If the user requests a web page, the user computer 104 checks its local storage device 110 for the desired information."). There is no request from a content provider, and no action step that begins or ends within the Avellan communication infrastructure.

A claim construction that renders a limitation superfluous or meaningless is legally impermissible. Bicon, Inc. v. Straumann Co., 441 F.3d 945 (Fed. Cir. 2006). The requesting and receiving steps necessarily presuppose two distinct entities on either side of a transaction. The Board's construction, which collapses those two roles into one, must be reassessed.

Dependent Claim 9 Forecloses the Board's Construction Under the Doctrine of Claim Differentiation

DI POSITION REASSESSED:

The Board did not address the doctrine of claim differentiation, which is directly implicated by dependent claim 9.

PATENT OWNER'S POSITION — PO RESPONSE & SUR REPLY:

Claim 9 Narrows "Content Provider" to Cable/Satellite Operators. Dependent claim 9 recites: "The method of claim 1, wherein the content provider is a cable television operator or a satellite television operator." EX1001, 15:31-50. Under the doctrine of claim differentiation, independent claim 1 must already carry the ordinary meaning of a source entity responsible for supplying content, before claim 9 narrows that scope further to cable and satellite operators. PO Response (IPR2025-00349) at 49; PO Response (IPR2025-00350) at 49-50.

Petitioner's Own Claim 9 Argument Undermines Its Construction. Petitioner argued for claim 9 that Avellan's broadcast device 102 "can be a satellite 102." PO Response (IPR2025-00349) at 32-34. This confirms Petitioner's view that the content provider is the broadcast device — yet a satellite relay in Avellan is a passive communication intermediary, not a satellite television operator within the meaning of the claim. The Board did not address claim differentiation, and this position requires reassessment.

The presumption of claim differentiation requires that independent claim 1's "content provider" already bear a meaning that is broader than, but consistent with, claim 9's specific enumeration of cable and satellite television operators. The Board's reading — which would encompass a gateway intermediary — is irreconcilable with this presumption. Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898 (Fed. Cir. 2004).

Avellan's Broadcast Device Is a Passive Intermediary — It Cannot "Request" Anything

DI POSITION REASSESSED:

Even accepting the Board's framing, Avellan's broadcast device 102 does not request a media stream — it merely transmits one. A passive relay cannot satisfy an active method step.

PATENT OWNER'S POSITION — PO RESPONSE & SUR REPLY:

The Broadcast Device Cannot Request — It Can Only Relay. Patent Owner's Response establishes: "A broadcast device cannot perform any 'request' capability. The broadcast device described in Avellan is merely a passive intermediary in the communication path. It does not itself 'request' a media stream, but only transmits a computer user-generated request. As such, it cannot satisfy the active method step of 'receiving, from a content provider, a request for at least one media stream . . . ' required by the challenged claims." PO Response (IPR2025-00349) at 50; PO Response (IPR2025-00350) at 50.

The Aggregate Avellan Infrastructure Is Purely Passive. Because of the passive intermediary function of the gateway server, gateway cache, antennas, and satellite in the aggregate, the Avellan gateway platform provides only transmission infrastructure. "There is no request from a content provider, there is no action step that begins or ends within the communication infrastructure of Avellan, and in particular, Avellan does not in any way at all teach . . . that the Gateway Platform is a content provider. Avellan does not teach, suggest, or disclose any such interpretation." PO Sur Reply (IPR2025-00349) at 10-11; PO Sur Reply (IPR2025-00350) at 10-11.

Where a prior art device is physically incapable of performing a claimed active method step, it cannot anticipate or render the claim obvious — regardless of how the Board construes the term. The broadcast device 102 in Avellan is structurally a passive relay; it never originates a request. No amount of claim construction can impute an active requesting function to a device that does not perform one. PO Response (IPR2025-00349) at 50-51; PO Response (IPR2025-00350) at 50-51.

Application of Correct Claim Construction Across all Claims

Patent Owner respectfully requests the Board reconsider and reassess appropriate Claim Construction across all Claims of all IPRs.

"Comprising" Error: "Comprising" cannot redefine the substantive meaning of expressly recited claim terms. BRI has limits. In re Smith Int'l, 871 F.3d 1375; MPEP § 2111.

Specification Error: The specification expressly identifies the content provider as a cable/satellite operator-type entity (EX1001, 2:50). The Board's misstep in not consulting intrinsic evidence is not in accordance with Phillips.

Whole Claim Error: The whole claim structure — not just element 1a — confirms the content provider is the requesting, receiving, and broadcasting entity, not the upstream processing gateway.

Claim Vitiating Error: The Board's construction renders the requesting/receiving steps meaningless. A gateway cannot be both requestor and provider. Bicon, 441 F.3d 945.

Claim Differentiation Error: The Board did not address claim differentiation. Dependent claim 9 forecloses reading "content provider" to encompass a transmission intermediary. Liebel-Flarsheim, 358 F.3d 898.

Prior Art Misreading Error: Avellan's broadcast device 102 is a passive relay physically incapable of originating requests. All requests in Avellan come from user computers. Avellan does not disclose the claimed element.

PETITIONER'S BURDEN NEVER SHIFTS

- **Petitioner bears the burden of proving unpatentability by a preponderance of the evidence.** [35 U.S.C. § 316(e)]
- That burden never shifts to Patent Owner at any stage of the proceeding.
- Petitioner must affirmatively show that each and every element of each challenged claim is taught or suggested by the cited prior art.
- **THE CASCADING RULE:**
 - If Petitioner fails on even a single element of any independent claim → that independent claim, and every dependent claim from it, survives.
- Dependent claims incorporate all limitations of the independent claim from which they depend. 35 U.S.C. § 112(d). A secondary reference cannot cure a primary reference's failure on an independent claim element.
- **HERE: Petitioner fails on the foundational threshold element in every independent claim across all three patents — 'content provider' (all three patents) and 'caching unit' ('441 Claims 1–9).**

'074 PATENT (IPR2025-00349)

- Patent: U.S. Patent No. 10,123,074 | IPR: IPR2025-00349 | Claims Challenged: 21 (Claims 1–21)
 - Independent Claims: 1, 12, 17
 - Dependent Claims: 2–11 (from Claim 1) · 13–16 (from Claim 12) · 18–21 (from Claim 17)
- **GROUND'S ASSERTED BY PETITIONER:**
 - Ground 1: Avellan alone — §102 anticipation of independent claims and select dependents
 - Grounds 2–9: Avellan + secondary references — §103 obviousness of dependent claims:
 - Durante (Cl. 5) · Ma (Cl. 6) · Suzuki (Cl. 7) · Wannamaker (Cls. 10, 11, 21) · Heikens (Cl. 16) · Matthews (Cl. 19) · Wilsher / Gen. Knowledge (Cl. 20)
- **PATENT OWNER'S POSITION:**
 - Avellan fails to disclose the threshold 'content provider' element of independent Claims 1, 12, and 17. This single failure eliminates all 21 claims under all 9 grounds simultaneously. *[PO Resp. (IPR2025-00349) at 60–61; PO Sur Reply (IPR2025-00349) at 9–10]*
 - All 9 secondary-reference combinations (Grounds 2–9) are moot — they assume Avellan established the independent claim foundation, which it did not. *[PO Resp. (IPR2025-00349) at 61]*

'074 PATENT: 'CONTENT PROVIDER' ELEMENT

- **CLAIM 1, ELEMENT 1a (same structure in Claims 12 and 17):**
 - "receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types." *[EX1001 ('074), Claims 1, 12, 17]*
- **SPECIFICATION CONTEXT:**
 - "an example computer-implemented method can receive, from a content provider such as a cable or satellite operator, a request for at least one media stream for playback on a broadcast channel." *[EX1001 ('074), 2:50]*
- **CLAIM DIFFERENTIATION — DEPENDENT CLAIM 9:**
 - Claim 9 limits the content provider to 'a cable television operator or a satellite television operator.' Under the doctrine of claim differentiation, the independent claim's 'content provider' must already mean a source-entity operator that requests, receives, and directs broadcast of a media stream. *[PO Resp. (IPR2025-00349) at 49]*
- **THEREFORE: A 'content provider' is not a transmission intermediary, proxy server, or web caching platform — it is the originating operator of the broadcast service.**

'074 PATENT: AVELLAN DOES NOT DISCLOSE A 'CONTENT PROVIDER'

- **Avellan's Gateway Platform 130 Is Not a Content Provider**
 - Gateway platform 130 is an internet caching and distribution intermediary — not a cable or satellite operator. It intercepts web page requests from user computers and processes/caches them. It does not originate any request for a media stream. *[PO Resp. (IPR2025-00349) at 35, 49]*
- **Petitioner Cannot Consistently Identify the 'Content Provider' in Avellan**
 - In IPR-00349 → Petitioner identifies user computer 104 or broadcast device 102. In IPR-00350 → Petitioner identifies gateway platform 130. Mutually exclusive positions from the same reference. This contradiction proves Avellan discloses no such entity. *[PO Resp. (IPR2025-00349) at 35; PO Resp. (IPR2025-00350) at 37]*
 - "Petitioners' internal contradictions stem from their tortured interpretations of Avellan to identify the claimed content provider." *[PO Resp. (IPR2025-00349) at 35]*
- **In Avellan, All Requests Originate From User Computers — Not Any 'Content Provider'**
 - Every request in Avellan is generated by user computers 104. Gateway platform 130 receives those requests — it does not originate them. Broadcast device 102 (satellite) is a passive relay that transmits data but never generates a request. *[PO Sur Reply (IPR2025-00349) at 10; EX1003, 6:65–7:5]*

'074 PATENT: CASCADING DEFEAT — ALL 21 CLAIMS SURVIVE

- **Because Avellan fails on Element 1a ('content provider') of Claims 1, 12, and 17 — the three independent claims — none is anticipated or rendered obvious under any ground.**
- Claims 2–11 each depend from Claim 1. Claim 1 SURVIVES → Claims 2–11 SURVIVE automatically. *[PO Resp. (IPR2025-00349) at 60]*
- Claims 13–16 each depend from Claim 12. Claim 12 SURVIVES → Claims 13–16 SURVIVE automatically. *[PO Resp. (IPR2025-00349) at 60]*
- Claims 18–21 each depend from Claim 17. Claim 17 SURVIVES → Claims 18–21 SURVIVE automatically. *[PO Resp. (IPR2025-00349) at 60–61]*
- **SECONDARY REFERENCES — GROUNDS 2–9 ARE MOOT:**
 - Durante (Cl. 5), Ma (Cl. 6), Suzuki (Cl. 7), Wannamaker (Cls. 10, 11, 21), Heikens (Cl. 16), Matthews (Cl. 19), Wilsher and General Knowledge (Cl. 20): each combination is Avellan + [secondary reference]. Avellan fails at the threshold → no secondary reference can supply the missing independent claim element. *[PO Resp. (IPR2025-00349) at 61]*
- "the inclusion of any number of secondary prior art references will not cure the deficiencies of Avellan in anticipating the independent claims... all independent claims and all dependent claims... remain patentable under all cited §102, §103... challenges." *[PO Resp. (IPR2025-00349) at 60–61]*

'074 PATENT: RESULT — ALL 21 CLAIMS PATENTABLE

- **Independent Claims 1, 12, 17: Avellan fails on 'content provider' element — SURVIVE all grounds.**
- Claims 2–11 (from Claim 1): inherit survival — SURVIVE.
- Claims 13–16 (from Claim 12): inherit survival — SURVIVE.
- Claims 18–21 (from Claim 17): inherit survival — SURVIVE.
- **All 9 Grounds (Grounds 1–9): FAIL.**
 - Ground 1 (Avellan alone): Avellan fails on threshold content provider element.
 - Grounds 2–9 (Avellan + secondary references): independently fail because secondary references cannot cure a primary reference's failure on an independent claim limitation.
- **TOTAL: 21/21 claims of U.S. Patent No. 10,123,074 are PATENTABLE.**
- "Patent Owner respectfully submits that none of the challenged claims are unpatentable under 35 U.S.C. §§ 102 or 103. Petitioner has not shown that the cited prior art references anticipate or render obvious the challenged claims, either individually or in combination." *[PO Resp. (IPR2025-00349) at 62]*

'002 PATENT (IPR2025-00350)

- Patent: U.S. Patent No. 10,524,002 | IPR: IPR2025-00350 | Claims Challenged: 13 (Claims 1–13)
 - Independent Claims: 1, 7, 13
 - Dependent Claims: 2–6 (from Claim 1) · 8–12 (from Claim 7)
- **GROUND'S ASSERTED BY PETITIONER:**
 - Ground 1: Avellan alone — §102 anticipation of Claims 1–6 and 13
 - Ground 2: Avellan + Ma + Fain — §103 obviousness of Claims 1–6 and 13
 - Ground 3: Wannamaker alone — §102 anticipation of Claims 7–12
 - Ground 4: Wannamaker + Avellan + Fain — §103 obviousness of Claim 10
- **PATENT OWNER'S POSITION:**
 - Avellan fails on 'content provider' element of Claims 1 and 13 — same structural failure as in the '074 proceeding. *[PO Resp. (IPR2025-00350) at 20]*
 - Wannamaker independently fails on four separate elements of independent Claim 7 — each failure is independently sufficient. *[PO Resp. (IPR2025-00350) at 41–44]*
 - All 13 claims survive all 4 grounds. Secondary references (Ma, Fain) are moot. *[PO Resp. (IPR2025-00350) at 60–61]*

'002 PATENT: INDEPENDENT CLAIM 1 — 'CONTENT PROVIDER' FAILURE

- **'002 Claim 1 recites the identical 'content provider' element as '074 Claim 1.** *[PO Resp. (IPR2025-00350) at 20]*
- **SPECIFICATION PARALLEL:**
 - The '002 specification describes 'content provider' as 'a cable or satellite operator that requests, receives, and broadcasts the media stream' — drawn from the same disclosure as the '074. *[EX1001 ('002), 2:53–56]*
- **CLAIM DIFFERENTIATION — '002 DEPENDENT CLAIM 9:**
 - Claim 9 limits content provider to 'a cable television operator or a satellite television operator.' The independent claim's 'content provider' is therefore already a source-entity operator — not a transmission intermediary. *[PO Resp. (IPR2025-00350) at 20]*
- **PETITIONER'S CONTRADICTION POSITION:**
 - In IPR-00350, Petitioner identifies gateway platform 130 as the 'content provider' — contradicting its own identification of broadcast device 102 in IPR-00349. Gateway platform 130 is a processing/distribution entity that cannot also be the entity requesting and receiving the stream it assembles. *[PO Resp. (IPR2025-00350) at 37]*
- **NEW THEORY BAR:** Any argument relying on broadcast device 102 (the '349 theory) cannot be imported into IPR-00350 — it was not presented in that petition. *[PO Resp. (IPR2025-00350) at 37; Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc., 853 F.3d 1272, 1286 (Fed. Cir. 2017)]*

'002 PATENT: CLAIM 7 — WANNAMAKER FAILS ON FOUR INDEPENDENT ELEMENTS

- Wannamaker is a broadcast delivery system for analog CATV terminals that converts HTML web pages into CPML/MML format and FBM image files for delivery over coaxial cable. *[PO Resp. (IPR2025-00350) at 41–44]*
- **Element 7a — 'CONTENT PROVIDER':** Wannamaker's 'content processor' (CP) is an encoding/transcoding unit — not a cable or satellite operator requesting and receiving a media stream. *[PO Resp. (IPR2025-00350) at 42]*
- **Element 7b/7c — 'OBTAINING CONTENT' / 'RENDERING A WEB PAGE BY A BROWSER':** Wannamaker converts HTML to CPML/MML image files — it does not separately obtain multimedia content items nor render a web page in a live browser to generate screen captures. *[PO Resp. (IPR2025-00350) at 42–43]*
- **Element 7d — 'GENERATING A TEMPORAL SEQUENCE OF SCREEN CAPTURES ILLUSTRATING DYNAMIC CHANGE':** Wannamaker captures static FBM image files — not a temporal sequence illustrating dynamic content change over time. *[PO Resp. (IPR2025-00350) at 43]*
- **Element 7f — 'PROVIDING THE MEDIA STREAM TO THE CONTENT PROVIDER FOR BROADCAST':** Wannamaker delivers data to CATV set-top boxes — it does not provide a media stream back to a requesting content provider for broadcast on a broadcast media channel. *[PO Resp. (IPR2025-00350) at 44]*
- **Each of the four failures is independently sufficient. Together they are conclusive. Claims 8, 9, 11, 12 (depend from Claim 7) survive with it.** *[PO Resp. (IPR2025-00350) at 45–46]*

'002 PATENT: CASCADING DEFEAT AND RESULT — ALL 13 CLAIMS SURVIVE

- **Claims 1 and 13 (Avellan-based grounds): Avellan fails on 'content provider' → SURVIVE.**
- Claims 2–6 (depend from Claim 1): inherit survival → SURVIVE. *[PO Resp. (IPR2025-00350) at 60]*
- **Claim 7 (Wannamaker-based grounds): Wannamaker fails on four independent elements → SURVIVE.**
- Claims 8, 9, 11, 12 (depend from Claim 7): inherit survival → SURVIVE. *[PO Resp. (IPR2025-00350) at 45–46]*
- Claim 10 (Wannamaker + Avellan + Fain, Ground 4): Both primary references fail on the shared 'content provider' element → SURVIVES. *[PO Resp. (IPR2025-00350) at 46–47]*
- **SECONDARY REFERENCES (Ma, Fain) — MOOT:**
 - Offered only against Avellan-based dependent claim limitations. Ma (identifier-to-website mapping) and Fain (content formatting) cannot cure Avellan's failure on the foundational 'content provider' element. *[PO Resp. (IPR2025-00350) at 61]*
 - "no matter how many additional references Petitioner may cite, that do not cure the foundational deficiencies of Wannamaker, Avellan, Ma, and Fain in rendering the '002 independent claims unpatentable, all independent claims and all dependent claims... remain patentable." *[PO Resp. (IPR2025-00350) at 61]*
- **TOTAL: 13/13 claims of U.S. Patent No. 10,524,002 are PATENTABLE.** *[PO Resp. (IPR2025-00350) at 61–62; PO Sur Reply (IPR2025-00350) at 29]*

'441 PATENT (IPR2025-00351): OVERVIEW — TWO DISTINCT CLAIM ARCHITECTURES

- Patent: U.S. Patent No. 11,140,441 | IPR: IPR2025-00351 | Claims Challenged: 26 (Claims 1–26)
- **ARCHITECTURE 1 — CLAIMS 1–9: 'CACHING UNIT' ARCHITECTURE (Farber = Primary Reference)**
 - Independent Claims 1 and 7 recite: creating multimedia assets at a caching unit · determining sufficient storage space · retrieving from a cloud service · encoding in MPEG transport stream format.
 - Grounds 1–5: Farber alone or Farber + secondary references (Vermeulen, Pavlovskaja, Davis, Fogel)
- **ARCHITECTURE 2 — CLAIMS 10–26: 'CONTENT PROVIDER' + CACHING UNIT + TCP/IP (Avellan = Primary Reference)**
 - Independent Claims 10, 25, 26 recite the 'content provider' element plus caching unit and TCP/IP socket limitations.
 - Grounds 6–13: Avellan alone or Avellan + secondary references (Pavlovskaja-PCT, Durante, Ma, Suzuki, Gangadharan, Wannamaker)
- **PATENT OWNER'S POSITION:**
 - Farber fails on 'caching unit,' 'storage determination,' and 'cloud retrieval' (Claims 1, 7). Avellan fails on 'content provider' and 'caching unit' (Claims 10–26). All 26 claims survive all 13 grounds. *[PO Resp. (IPR2025-00351) at 51–54, 33–35, 66–68]*

'441 PATENT: FARBER FAILS ON 'CACHING UNIT' — CLAIMS 1 AND 7

- **THE '441 PATENT'S 'CACHING UNIT' IS A SPECIALIZED SERVER:**
 - Dynamically manages memory · caches recently accessed multimedia data to reduce latency · manages storage via operating-system-level iNode checks · handles concurrent multi-channel streams · provides MPEG transport stream output. *[PO Resp. (IPR2025-00351) at 51–53]*
- **FARBER'S 'STORAGE/PLAYOUT DEVICE' (ELEMENT 150) IS NOT A CACHING UNIT:**
 - Farber implements storage using DVD, CD-ROM, PCMCIA slots, or hard disk — fixed-capacity, general-purpose storage media that have none of the dynamic memory management, iNode monitoring, or concurrent-stream-handling behavior of the claimed caching unit. *[PO Resp. (IPR2025-00351) at 53]*
 - "Any premise that a storage device is a caching unit, is erroneous. As such, it cannot satisfy the active method step of 'creating a plurality of multimedia assets at a caching unit, for each of the plurality of multimedia assets' required by the challenged claims. Accordingly, Farber fails to disclose the 'caching unit' limitation." *[PO Resp. (IPR2025-00351) at 53]*
- This failure applies equally to independent Claim 7, which mirrors Claim 1 in its caching unit architecture. Claims 2–6 and 8–9 depend from Claims 1 and 7 respectively — all survive. *[PO Resp. (IPR2025-00351) at 53–54]*

'441 PATENT: FARBER'S TWO ADDITIONAL INDEPENDENT FAILURES

- **FAILURE 2: Element 1b — 'DETERMINING SUFFICIENT STORAGE SPACE' Before Storing**
 - Farber's CD-ROMs and DVDs have fixed capacities physically determined by the medium — there is no operational pre-storage determination, no pre-storage evaluation, and no monitoring of available space.
 - Petitioner's inherency argument fails: inherency requires inevitability, not mere possibility. *[In re Rijckaert, 9 F.3d 1531, 1534 (Fed. Cir. 1993)]*
 - Petitioner contradicted its own inherency argument — the Petition states it is 'advantageous' but not automatic to check for available storage space. *[PO Resp. (IPR2025-00351) at 47–48, quoting Petition at 29–30]*
- **FAILURE 3: Element 1c — 'RETRIEVING MEDIA FILES FROM A CLOUD SERVICE'**
 - Farber is a self-contained, on-premises broadcast playout system that writes to CD-ROMs and DVDs — it has no cloud retrieval architecture of any kind. *[PO Resp. (IPR2025-00351) at 21]*
 - The supplemental Vermeulen reference (Ground 2) addresses distributed storage for a different problem set and actually teaches away from Farber's conventional local storage approach. *[PO Resp. (IPR2025-00351) at 42]*
- **Any ONE of these three failures (caching unit · storage determination · cloud retrieval) is independently sufficient to defeat Grounds 1–5 for Claims 1–9.**

'441 PATENT: CLAIMS 10–26 — AVELLAN FAILS ON 'CONTENT PROVIDER' AND 'CACHING UNIT'

- Claims 10–26 challenged under Grounds 6–13, all using Avellan as the primary reference.
- **INDEPENDENT CLAIM 10 — 'CONTENT PROVIDER' FAILURE:**
 - Contains the identical 'content provider' element as '074 and '002 independent claims. Avellan fails to disclose it for all the same reasons established in those proceedings. *[PO Resp. (IPR2025-00351) at 33–35]*
- **INDEPENDENT CLAIMS 25 AND 26 — 'CONTENT PROVIDER' + TCP/IP + MULTICASTING:**
 - Also contain the 'content provider' element, plus additional TCP/IP socket and multicasting unit limitations. Avellan operates exclusively via HTTP Port 80 web interception — it has no second TCP/IP socket, no separate status-reporting channel, and no multicasting unit architecture. *[PO Resp. (IPR2025-00351) at 43–46]*
- **CLAIMS 10–23 ALSO REQUIRE A 'CACHING UNIT' — AVELLAN HAS NONE:**
 - Ground 6 claims include 'virtualizing a system including a virtualized caching server' and performing method steps 'at a caching unit.' Avellan's gateway server cache (Element 136) is an internet page-caching proxy — not a multimedia caching unit operating at the MPEG transport stream level. *[PO Resp. (IPR2025-00351) at 46–47]*

'441 PATENT: PAVLOVSKAIA-PCT AND WANNAMAKER CANNOT SAVE AVELLAN

- **PAVLOVSKAIA-PCT (Grounds 6–9, Claims 10–23):**
 - Deployed only against specific dependent-claim limitations — MPEG multiplexer streaming (Claim 19a) and virtualization (Claim 10's 'virtualized caching server'). It was not offered to cure Avellan's failure on the threshold 'content provider' element. *[PO Resp. (IPR2025-00351) at 43; PO Sur Reply (IPR2025-00351) at 20–28]*
 - Once Avellan fails on the independent claim, Pavlovskiaia-PCT and all other secondary references in IPR-00351 become legally moot.
- **WANNAMAKER (Grounds 10–13, Claims 25–26):**
 - Offered to supplement Avellan on TCP/IP socket status-reporting and multicasting-unit fault-response limitations for Claims 25 and 26.
 - Wannamaker delivers broadcast services over coaxial cable to analog CATV terminals — an architecture that is structurally incompatible with Avellan's internet gateway web-page-capture system. *[PO Resp. (IPR2025-00351) at 44–47]*
 - Combining these architecturally incompatible references would require reconstructing fundamental system architecture from scratch — constituting undue experimentation that defeats the obviousness theory. *[PO Resp. (IPR2025-00351) at 44–47]*
- **RESULT: All 13 secondary references across IPR-00351 are moot once the primary references fail on threshold independent claim elements.**

'441 PATENT: RESULT — ALL 26 CLAIMS PATENTABLE

- **Claims 1, 7 (Independent — Farber grounds):** Farber fails on 'caching unit,' 'storage determination,' and 'cloud retrieval' → **SURVIVE.**
- Claims 2–6 (from Claim 1): inherit survival → SURVIVE.
- Claims 8–9 (from Claim 7): inherit survival → SURVIVE.

- **Claims 10, 25, 26 (Independent — Avellan grounds):** Avellan fails on 'content provider' and TCP/IP/multicasting elements → **SURVIVE.**
- Claims 11–24 (from Claim 10): inherit survival → SURVIVE.

- **ALL 13 GROUNDS FAIL:**
 - Grounds 1–5: Farber fails on threshold caching unit element.
 - Grounds 6–13: Avellan fails on threshold content provider element.
 - All 9 secondary references (Pavlovskaia-PCT, Vermeulen, Davis, Fogel, Durante, Ma, Suzuki, Gangadharan, Wannamaker): MOOT. *[PO Resp. (IPR2025-00351) at 66–68; PO Sur Reply (IPR2025-00351) at 28]*

- **TOTAL: 26/26 claims of U.S. Patent No. 11,140,441 are PATENTABLE.**

SECONDARY REFERENCES ARE MOOT: THE ESTABLISHED LEGAL PRINCIPLE

- **CONTROLLING LEGAL STANDARD:**
 - A secondary reference in an obviousness combination cannot cure a primary reference's failure to disclose an element of an independent claim. [*In re Keller*, 642 F.2d 413, 425 (C.C.P.A. 1981)]
 - "The test for obviousness is not whether the combination of references could be modified to work, but whether the prior art actually suggests the claimed combination with a reasonable expectation of success." [*In re Keller*, 642 F.2d 413, 425 (C.C.P.A. 1981)]
- **APPLICATION TO THESE PROCEEDINGS:**
 - Every secondary reference in all three proceedings was deployed only against dependent claim limitations — on the assumption the primary reference already established the independent claim. That assumption fails in every proceeding.
- IPR-00349 ('074): Grounds 2–9 (Durante, Ma, Suzuki, Wannamaker, Heikens, Matthews, Wilsher, Gen. Knowledge) — ALL MOOT. [*PO Resp. (IPR2025-00349) at 61*]
- IPR-00350 ('002): Grounds 2–4 (Avellan+Ma+Fain; Wannamaker combinations) — ALL MOOT. [*PO Resp. (IPR2025-00350) at 61*]
- IPR-00351 ('441): Grounds 2–13 (all Farber and Avellan combinations) — ALL MOOT. [*PO Resp. (IPR2025-00351) at 66–68*]
- **BOARD PRACTICE:** Where a primary reference fails prima facie for an independent claim, the Board may confirm patentability without extended secondary reference analysis. [*Novartis AG v. Torrent Pharms. Ltd.*, 853 F.3d 1316 (Fed. Cir. 2017); *PTAB Trial Practice Guide*]

CROSS-IPR CONSISTENCY: AVELLAN'S FAILURE IS A FINDING ABOUT THE REFERENCE

- The three IPRs draw on many of the same references — particularly Avellan. Core claim elements are shared across all three patents' independent claims.
- **PETITIONER'S OWN CONTRADICTIONS PROVE AVELLAN DISCLOSES NO 'CONTENT PROVIDER':**
 - IPR-00349: Petitioner identifies user computer 104 or broadcast device 102 as the 'content provider.' *[PO Resp. (IPR2025-00349) at 35]*
 - IPR-00350: Petitioner switches to identifying gateway platform 130 as the 'content provider.' *[PO Resp. (IPR2025-00350) at 37]*
 - IPR-00351: Petitioner again uses broadcast device 102.
 - These are mutually exclusive identifications from the same reference. No consistent reading of Avellan yields a 'content provider.' The contradiction is itself conclusive evidence of failure.
- **A finding that Avellan fails to disclose a 'content provider' in one proceeding is a factual finding about the Avellan reference itself — applicable with equal force in all three proceedings.**
- Patent Owner's Responses explicitly cross-reference each other to establish this record of contradictions — framing the question correctly as a fact about the prior art, not merely a claim construction dispute. *[PO Resp. (IPR2025-00349) at 35 fn.13; PO Resp. (IPR2025-00350) at 37; PO Resp. (IPR2025-00351) at 39 fn.10]*

EXPERT DECLARATION: INDEPENDENTLY COMPROMISED — ENTITLED TO NO WEIGHT

- **PATENT OWNER ESTABLISHED AT DEPOSITION — ACROSS ALL THREE PROCEEDINGS:**
 - The expert (Lipoff) received a draft of the Petition before preparing his declaration.
 - The expert selectively adopted Petitioner's attorney positions without conducting full, independent analysis.
 - The expert did not disclose his reliance on the Petition draft in the declaration.
 - Material deposition testimony was altered after conferring with counsel between deposition sessions. *[PO Resp. (IPR2025-00349) at 10–11; PO Resp. (IPR2025-00350) at 7–8; PO Resp. (IPR2025-00351) at 12–13; EX2102, 116:23–25, 117:1–8, 120:16–25, 121:1–11]*
- **LEGAL STANDARD:**
 - Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight. *[Broadcom Ltd. v. Invensas Corp., IPR2017-00424, Paper 7 at 13, 17; Fed. R. Evid. 702(b)]*
- **IMPACT: The Petitions' evidentiary backbone — the expert declaration — carries no weight. A petition without credible expert support cannot meet the burden of proving unpatentability by a preponderance of the evidence.**
- **This is an independent, sufficient ground for confirming patentability of all 60 challenged claims in all three proceedings — regardless of the prior art analysis.**

MASTER SUMMARY: CLAIM-BY-CLAIM SURVIVAL ACROSS ALL THREE PROCEEDINGS

Patent / IPR	Primary Reference Failure	Claims Surviving
'074 IPR2025-00349 Claims 1–21	Avellan: fails to disclose 'content provider' element of independent Claims 1, 12, 17. All requests in Avellan originate from user computers — not any content provider. Multimedia is only part of the web page, not separate requests. A webpage is not a media stream.	All 21 Claims (21/21)
'002 IPR2025-00350 Claims 1–13	Avellan: fails on 'content provider' (Claims 1, 13) and obtaining/retrieval of content. Wannamaker: independently fails on 'content provider,' 'rendering by browser,' and 'temporal sequence' elements of Claim 7.	All 13 Claims (13/13)
'441 IPR2025-00351 Claims 1–26	Farber: fails on 'caching unit,' 'storage determination,' and 'cloud retrieval' (Claims 1, 7). Avellan: fails on 'content provider' element (Claims 10, 25, 26).	All 26 Claims (26/26)
TOTAL	All primary references fail on foundational independent claim elements. All 13 secondary references across all three proceedings are MOOT.	60/60 Claims PATENTABLE

ALL 13 SECONDARY REFERENCES ARE MOOT ACROSS ALL THREE PROCEEDINGS

Reference	Deployed Against	Status
Durante	'074: Claim 5 (§103, Grd. 2)	MOOT
Ma	'074: Claim 6 (§103, Grd. 3) '002: Claims 1-6, 13 (Avellan+Fain) '441: Claim 16 (Avellan+Pavlovskaia)	MOOT
Suzuki	'074: Claim 7 (§103, Grd. 4) '441: Claim 17 (Avellan+Pavlovskaia)	MOOT
Wannamaker	'074: Claims 10,11,21 (§103, Grd. 5) '002: Claims 7-9,11-12 (§102, Grd. 3) '441: Claims 25,26 (Grds. 10-13)	MOOT
Heikens	'074: Claim 16 (§103, Grd. 6)	MOOT
Matthews / Wilsher	'074: Claims 19, 20 (§103, Grds. 7-8)	MOOT
Fain	'002: Claims 1-6, 13 (Avellan+Ma, Grd. 2)	MOOT
Pavlovskaia-PCT	'441: Claims 10-23 (§103, Grd. 6)	MOOT
Vermeulen	'441: Claims 1, 2 (§103, Grd. 2 with Farber)	MOOT
Davis	'441: Claims 4, 5, 8 (§103, Grd. 4 with Farber)	MOOT
Fogel	'441: Claims 6, 9 (§103, Grd. 5 with Farber)	MOOT
Gangadharan	'441: Claim 24 (Grd. 9 with Avellan+Pavlovskaia)	MOOT
POSITA / Gen. Knowledge	'074: Claim 20 (§103, Grd. 9)	MOOT

ALL 60 CLAIMS PATENTABLE

- **Primary References Fail on Threshold Independent Claim Elements**
 - Avellan fails to disclose 'content provider' in '074, '002, and '441 independent claims, and separate requests for “content”
 - Farber fails on 'caching unit,' 'storage determination,' and 'cloud retrieval' in '441 Claims 1–9.
 - Wannamaker fails on four elements of '002 Claim 7.
 - Established through intrinsic evidence, claim language, specification, claim differentiation, and Petitioner's own contradictions across proceedings.
- **Secondary References Are Moot — All 13 References in All Three Proceedings**
 - All 13 secondary references were deployed only against dependent claim limitations — assuming primary references established the independent claims. Those assumptions fail in every proceeding. Without a valid independent claim foundation, no secondary reference can rescue any ground. *[In re Keller, 642 F.2d 413 (C.C.P.A. 1981)]*
- **Expert Declaration Independently Compromised — Entitled to No Weight**
 - Petitioner's expert declaration — the evidentiary backbone of all three Petitions and Institution Decisions — shown at deposition to be derivative attorney argument with material testimony alterations. Without credible expert support, Petitioner cannot prove unpatentability by a preponderance. *[Broadcom Ltd. v. Invensas Corp., IPR2017-00424; Fed. R. Evid. 702(b)]*

PATENT OWNER'S REQUEST FOR FINAL WRITTEN DECISION

- **All 21 claims of U.S. Patent No. 10,123,074 (IPR2025-00349): PATENTABLE.**
 - Avellan fails on 'content provider.' Grounds 1–9 all fail. All secondary references moot. *[PO Sur Reply (IPR2025-00349) at 24]*
- **All 13 claims of U.S. Patent No. 10,524,002 (IPR2025-00350): PATENTABLE.**
 - Avellan fails on 'content provider' for Claims 1 and 13. Wannamaker independently fails on Claims 7–12. Grounds 1–4 all fail. Secondary references moot. *[PO Sur Reply (IPR2025-00350) at 29]*
- **All 26 claims of U.S. Patent No. 11,140,441 (IPR2025-00351): PATENTABLE.**
 - Farber fails on 'caching unit' for Claims 1–9. Avellan fails on 'content provider' for Claims 10–26. Grounds 1–13 all fail. Secondary references moot. *[PO Sur Reply (IPR2025-00351) at 28]*
- **TOTAL: 60/60 claims across three patents confirmed as patentable.**
- Petitioner has not met its burden of proving unpatentability by a preponderance of the evidence on any claim under any ground in any of the three proceedings.
- Patent Owner respectfully requests that the Board enter a Final Written Decision confirming the patentability of all challenged claims in IPR2025-00349, IPR2025-00350, and IPR2025-00351, and denying all relief requested by Petitioner. *[PO Resp. (IPR2025-00349) at 62; PO Resp. (IPR2025-00350) at 62; PO Resp. (IPR2025-00351) at 67–68]*

Claim Construction in Light of the Entire Specification

The terms used in **patent claims** are not construed in the abstract, but in the context in which the term was presented and used by the patentee, as it would have been understood by a person of ordinary skill in the field of the invention on reading the **patent** documents. . . . Thus, a **claim** receives the meaning it would have to persons in the field of the invention, when read and understood in light of the entire specification and prosecution history."); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) ("The claims, of course, do not stand alone. Rather, they are part of a fully integrated written instrument, consisting principally of a specification that concludes with the claims. For that reason, claims must be read in view of the specification, of which they are a part. *Tf3 Ltd. v. Tre Milano, LLC*, 894 F.3d 1366, 1372 (Fed. Cir. 2018)

US 10,123,074**US 10,524,002****US 11,140,441****Method, system, and apparatus for multimedia content delivery to cable TV and satellite operators****Abstract**

Systems, methods, and computer-readable media for delivering multimedia content from the cloud to cable operators are disclosed. A device located at the cable headend or implemented in the cloud can receive a request for at least one media stream for playback on a broadcast media channel. Content corresponding to a plurality of multimedia files in the media stream can be obtained from the internet or a cloud based service. The content can be used to generate the multimedia files in a format that is compatible with the cable operator. The multimedia files can be used to assemble the at least one media stream which can be provided to the cable operator for broadcast on the broadcast media channel.

US 10,123,074**US 10,524,002****US 11,140,441**

PETITIONER ALLEGES *AVELLAN*, *WANNAMAKER*, AND *FARBER* ANTICIPATE
OR RENDER OBVIOUS THE CHALLENGED PATENT CLAIMS IN LIGHT OF SECONDARY ART.

The Petitioner relies on the Main References (*Avellan*, *Wannamaker*, and *Farber*) to satisfy the independent claim limitations which include “content provider”, “media stream”, “playback”, “assembling a media stream”, and “caching unit”. Those Main References fail to teach, suggest, or disclose, *at least*, these limitations. The Petitioner does not cite other secondary references to supply missing independent claim elements; rather, they are cited only for subordinate features recited in the dependent claims.

Accordingly, an in-depth analysis of these secondary references is moot.

Avellan US 8,954,600

SYSTEM AND METHOD FOR ZERO LATENCY BROWSING

Abstract

A system replicates Internet websites on a large number of user computers having browsers. The system includes a gateway platform having a gateway server and a cache. In the broadcast mode, the gateway server periodically or continuously images broadcast data (e.g., popular websites), compresses the website images, and stores the compressed website images in the gateway cache. The gateway server then broadcasts all of the compressed broadcast data to all (millions) of the user computers over a broadcast device (such as a satellite), for subsequent display by the user in the browser. In the unicast mode, the user requests unicast data (e.g., less-popular websites or websites having highly user-customized information) at the browser. The gateway server images that one web page, compresses the unicast data, and transmits the compressed unicast data over the broadcast device substantially in real time to the one requesting user computer.

Avellan US 8,954,600

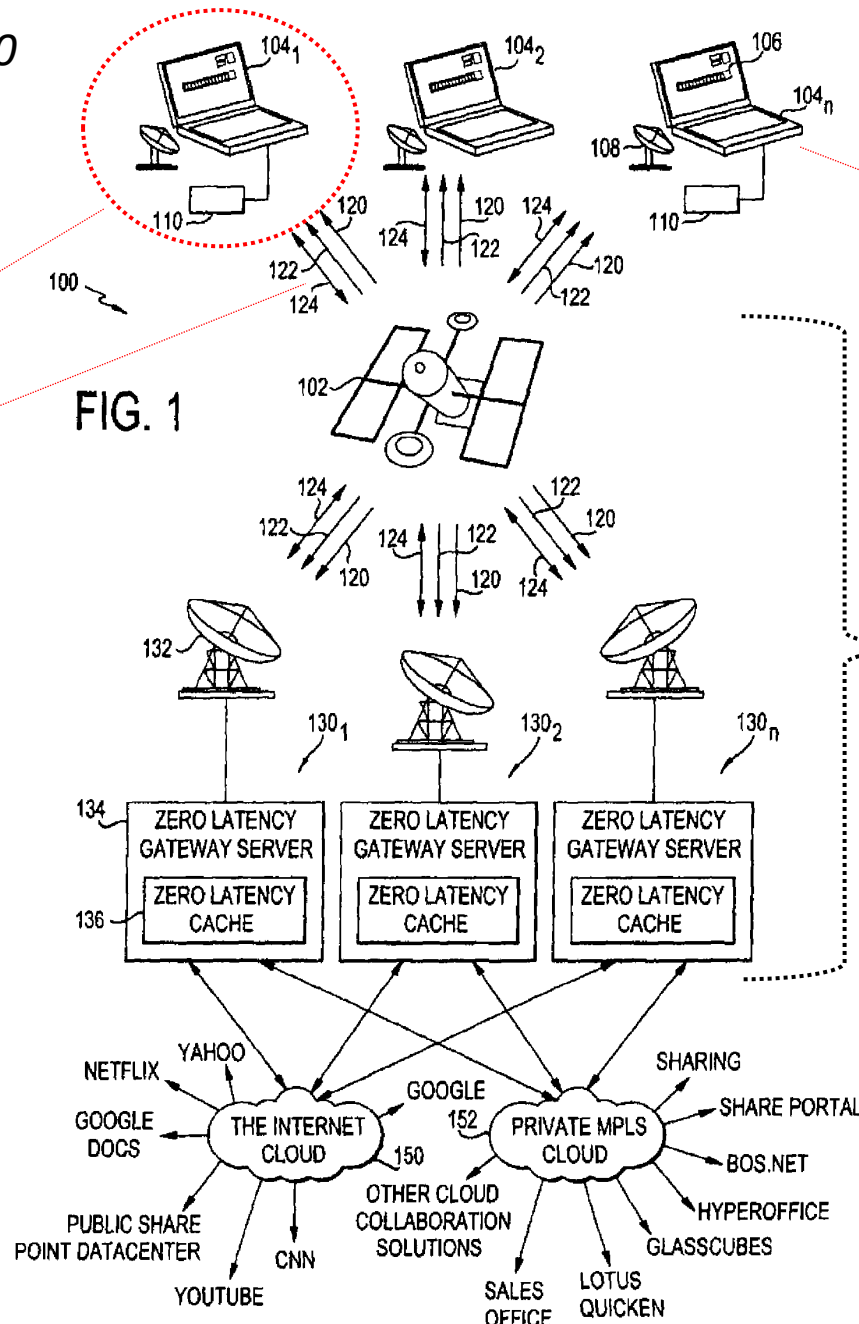
SYSTEM AND METHOD FOR ZERO LATENCY BROWSING

Remote Browser And Virtual Browser

TAG Files

Content Provider for other claims

- Content Provider for some claims



Avellan Patent Figures

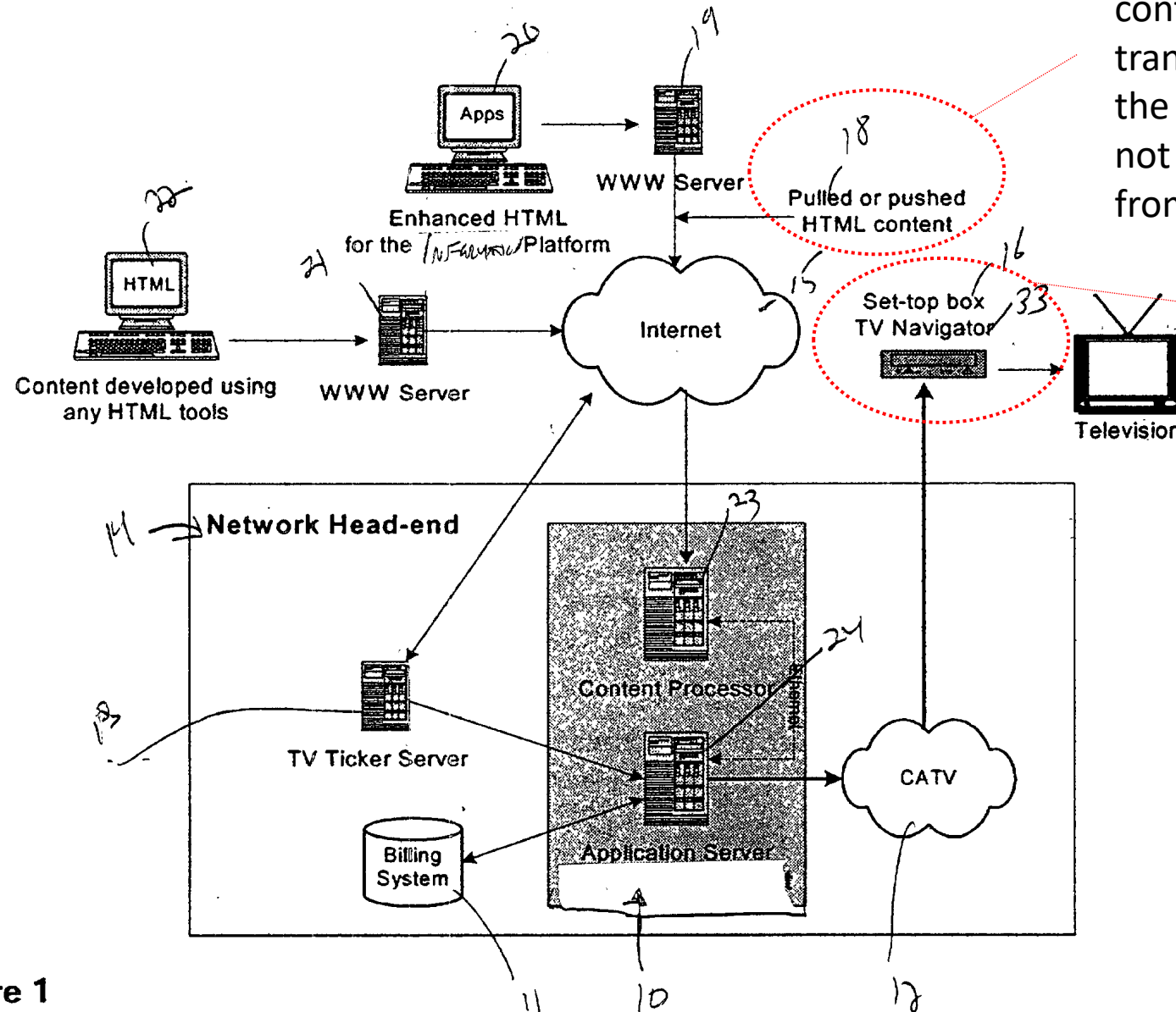
The figures in Avellan graphically demonstrate a **direct-to-consumer satellite broadcast** architecture that fundamentally fails to disclose the specific transactional loop required by Independent Claim 1 of the '074 patent. Specifically, **Figure 1** of Avellan explicitly depicts the **Gateway Server (134)** transmitting data directly to a **Broadcast Device (102)** (satellite), which then beams the signal directly to end-user **Computers (104)**. This visual evidence proves that Avellan lacks the critical claim limitation of "providing the media stream **to the content provider**" (e.g., a cable operator's headend) for subsequent broadcast. Avellan's architecture bypasses any intermediary content provider entirely, functioning instead as a direct delivery mechanism to the end user.

Furthermore, **Figure 2** of Avellan confirms that the "request" for content originates either from the **User Computer (104)** (see Step 204: "Connect to Gateway") or from an internal list maintained by the Gateway itself (see Step 220). This graphically contradicts the '074 patent's specific requirement of "receiving, **from a content provider**, a request." The flow of information in Avellan's figures creates a loop between the user and the gateway or the gateway and itself, whereas the '074 claim requires a distinct loop between the system and an external Content Provider entity. This structural difference, evidenced clearly in the figures, establishes that Avellan does not disclose the specific arrangement of elements defined in Claim 1.

Abstract

An inventive client/server system provides a platform for cable system operators to deliver a full range of sophisticated new products to cable television subscribers. Preferably a middleware solution, the information platform provides a flexible, versatile, and adaptable Internet-centric platform that network operators can use to deploy interactive television applications. The information platform mediates the communication between an abundance of Web-based content and the television set. Content and applications are written entirely in industry standard HTML and Java. Traditional television programming is integrated with Web content using TV-specific extensions to HTML and Java. Applications can be loaded from the network, from carousels, or from file systems, such as flash memory or EEPROM. The information platform consists of client-side middleware integrated with a native electronic program guide application. It includes a master application that defines service functionality, TV ticker, a suite of games, and a microbrowser for broadcast managed content. The presently preferred embodiment of the information platform supports broadcast-only applications, i.e. applications not requiring a return path) and also provides limited support for two-way applications such as store and forward and imprint server for gathering subscriber interactions and statistics.

Wannamaker US 2004/0031052 A1
Information platform



Wannamaker retrieves "HTML content" such that the the transcoded MML code is sent to the client, the TV Navigator. This is not a media stream generated from screen captures

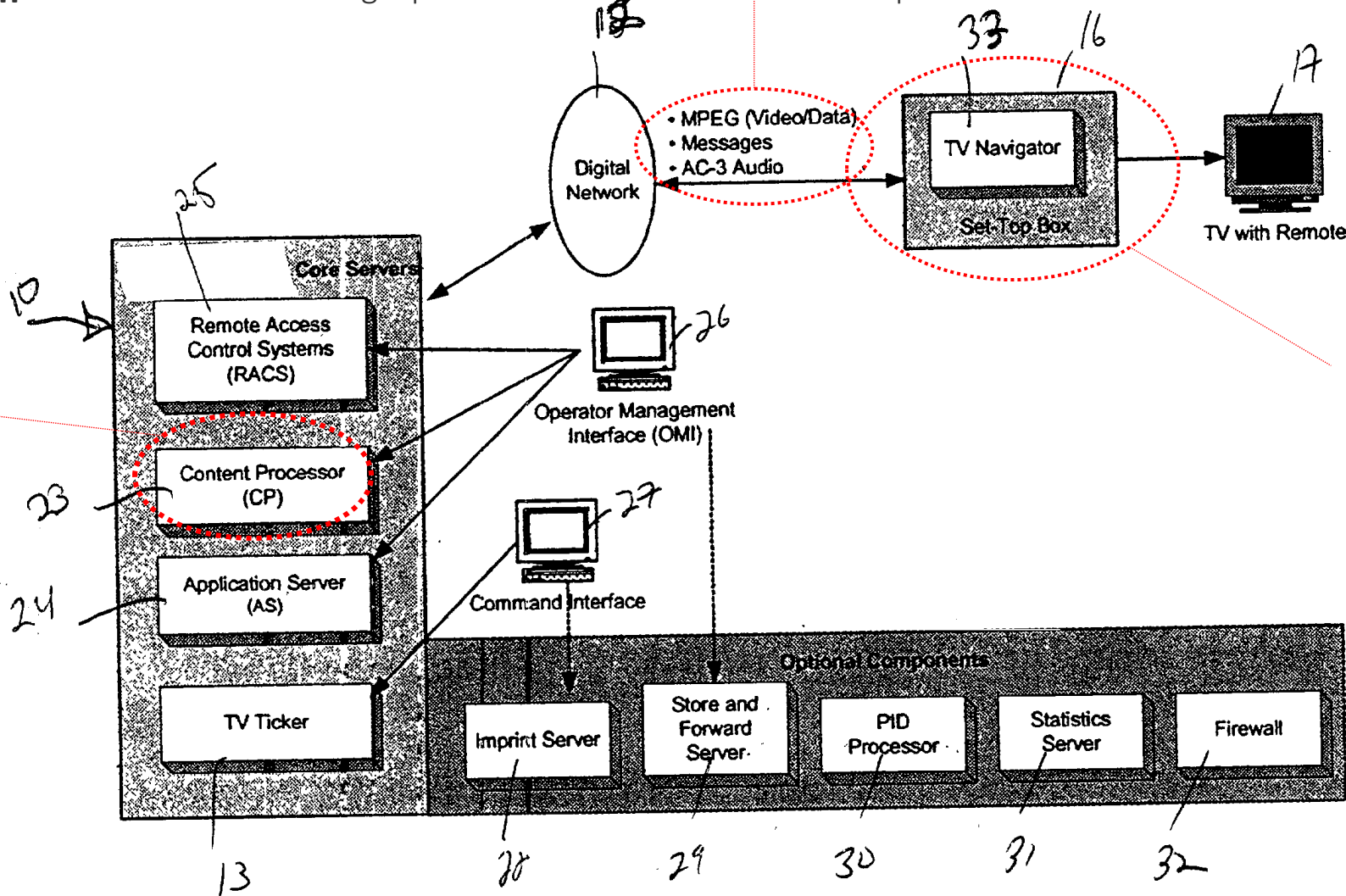
The graphical presence of "TV Navigator" on the set-top box confirms the client-side rendering architecture.

Figure 1

Wannamaker US 2004/0031052 A1
Information platform

The inclusion of "Messages" graphically indicates that the client (Set-Top Box 16) is receiving command/control data that it must process using the local TV Navigator (33), rather than just receiving a passive video stream of screen captures as described in the '002 patent

This shows a specific component dedicated to processing content (which the text describes as transcoding HTML to MML) separate from the "24 Application Server (AS)". This differs from the '002 patent's "caching server" which unifies the fetching, rendering, and screen-capturing functions.



This explicitly depicts that the navigation software (the "middleware" or "microbrowser") resides **locally on the client device**. This graphically contradicts the '002 patent's architecture, where the browsing/rendering logic is removed from the client and handled entirely by the server (MediaPlug) which sends only screen captures

Figure 2

Wannamaker US 2004/0031052 A1
Information platform

explicitly depicts a '**microBrowser**' (194) residing on the client set-top box. This proves Wannamaker relies on client-side rendering

This graphically proves that the Wannamaker client (Set-Top Box) requires a **Virtual Machine** (Java compatible) to interpret and execute code locally. In contrast, the '002 patent creates a video stream at the server to eliminate the need for such complex execution environments on the client

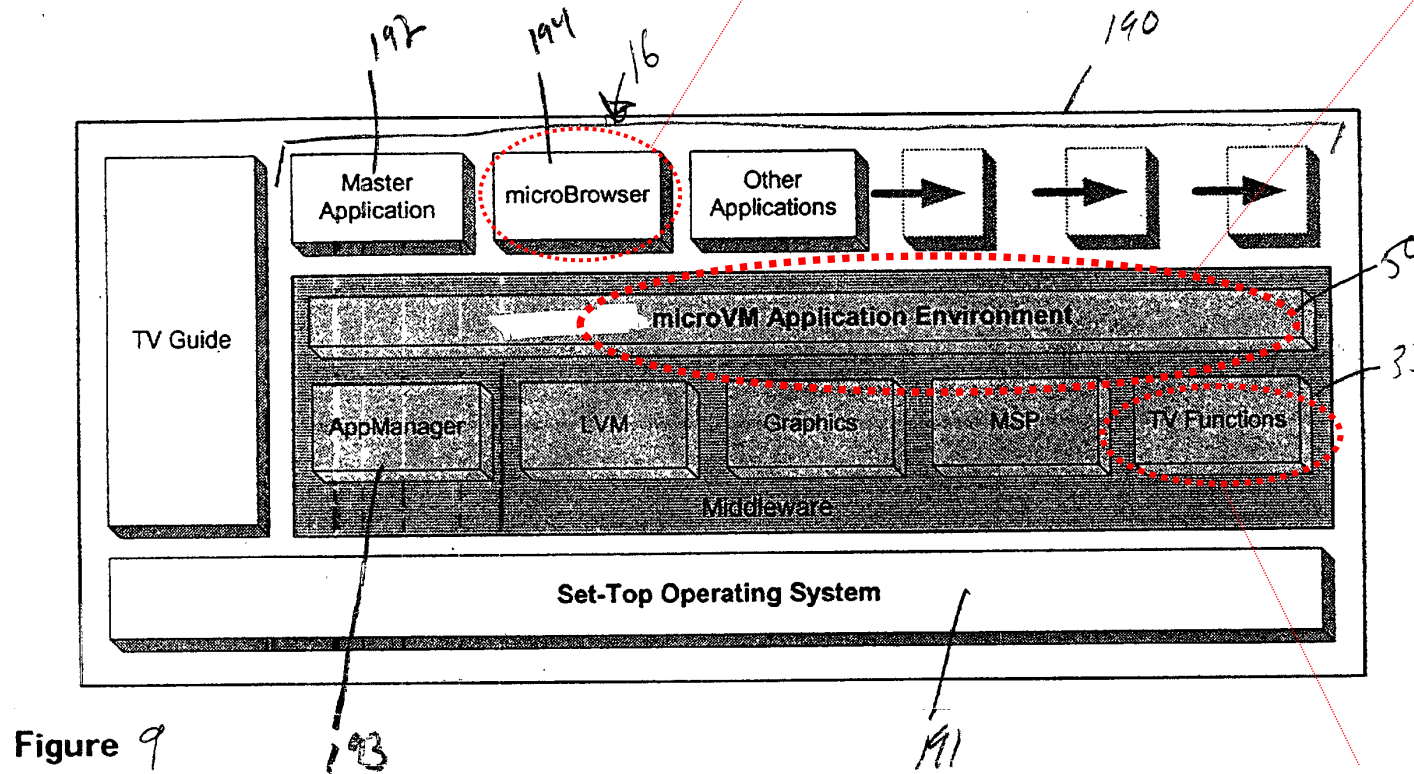
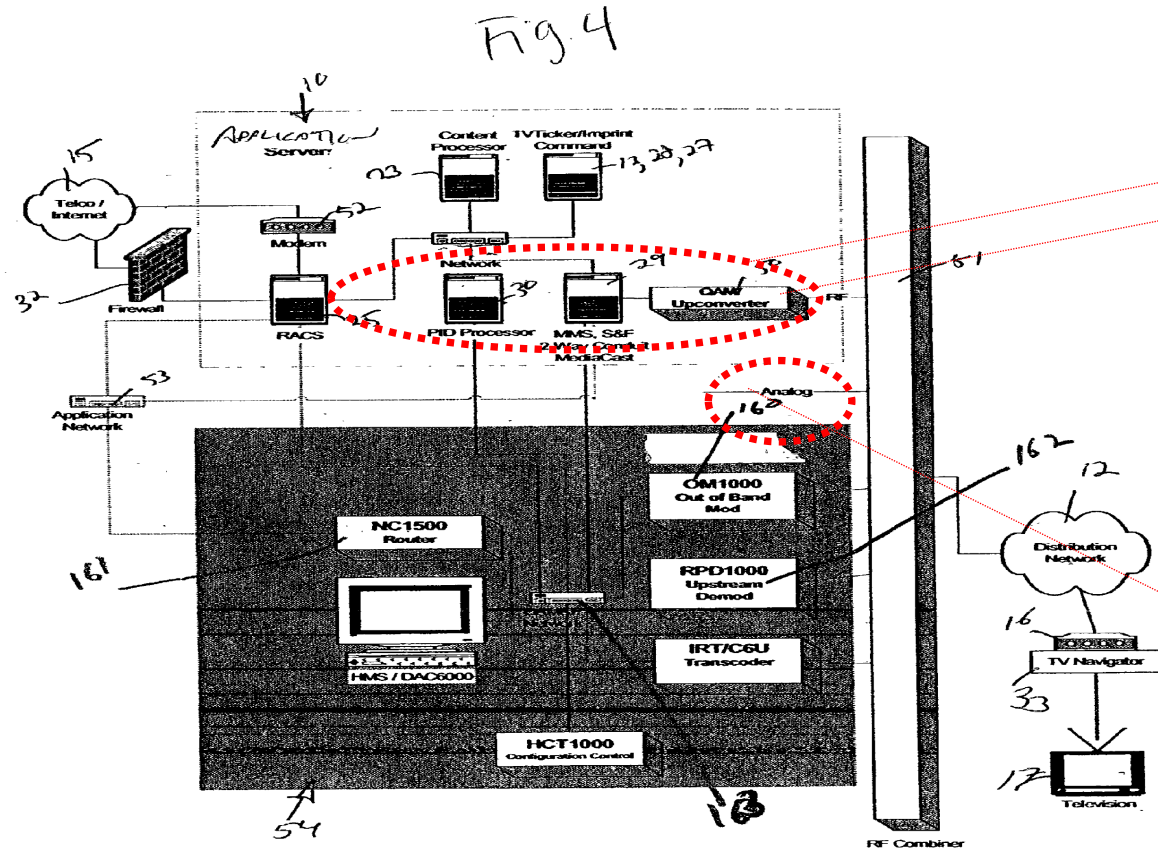


Figure 9

Illustrates that the navigation and display logic reside **on the client device**. The '002 patent distinguishes itself by moving this logic to the "MediaPlug" (server), which renders the interface and sends it as a passive video stream, removing the need for the client to possess the "TV Functions" middleware shown as Element 33

Patent Application Publication Feb. 12, 2004 Sheet 4 of 12 US 2004/0031052 A1



The MMS server that petitioner points to be the Multicast server, is based on MMS_OM1000 or OMS1000 by Motorola.

The documentation provided by Motorola indicates that such device lack support for multicast servicing, and as shown in the Specification

The output is analog, Hence teaches away from Implying a multicast server when it is based on IP.

Wannamaker Publication Figures

The figures in Wannamaker graphically demonstrate a **client-side rendering** architecture that is fundamentally different from the **server-side screen capture** system required by Independent Claim 7 of the '002 patent. Claim 7 specifically requires a "caching server" to "render a web page," create a "temporal sequence of screen captures" (images) of that page, and provide them to a multicast server to generate an "MPEG encoded video." In contrast, **Figure 1** of Wannamaker explicitly labels the data transmitted to the client as "**Pulled or pushed HTML content**" (Element 18). This visual evidence proves that Wannamaker transmits raw code (HTML) to the client for local processing, rather than converting the content into a video stream of screen captures at the server level as required by the '002 patent.

Furthermore, **Figure 9** of Wannamaker confirms this reliance on client-side rendering by depicting the internal software architecture of the set-top box, which explicitly includes a "**microBrowser**" (Element 194) and a "microVM Application Environment" (Element 50). The graphical presence of a browser on the client device establishes that the Wannamaker system requires the client to possess the computational logic to interpret and render web pages. This teaches away from the invention of Claim 7, which moves the rendering burden to the server (creating screen captures) to eliminate the need for such complex browsing capabilities on the client, replacing the HTML data stream with a standard MPEG video stream.

Method and system for displaying content while reducing burn-in of a display

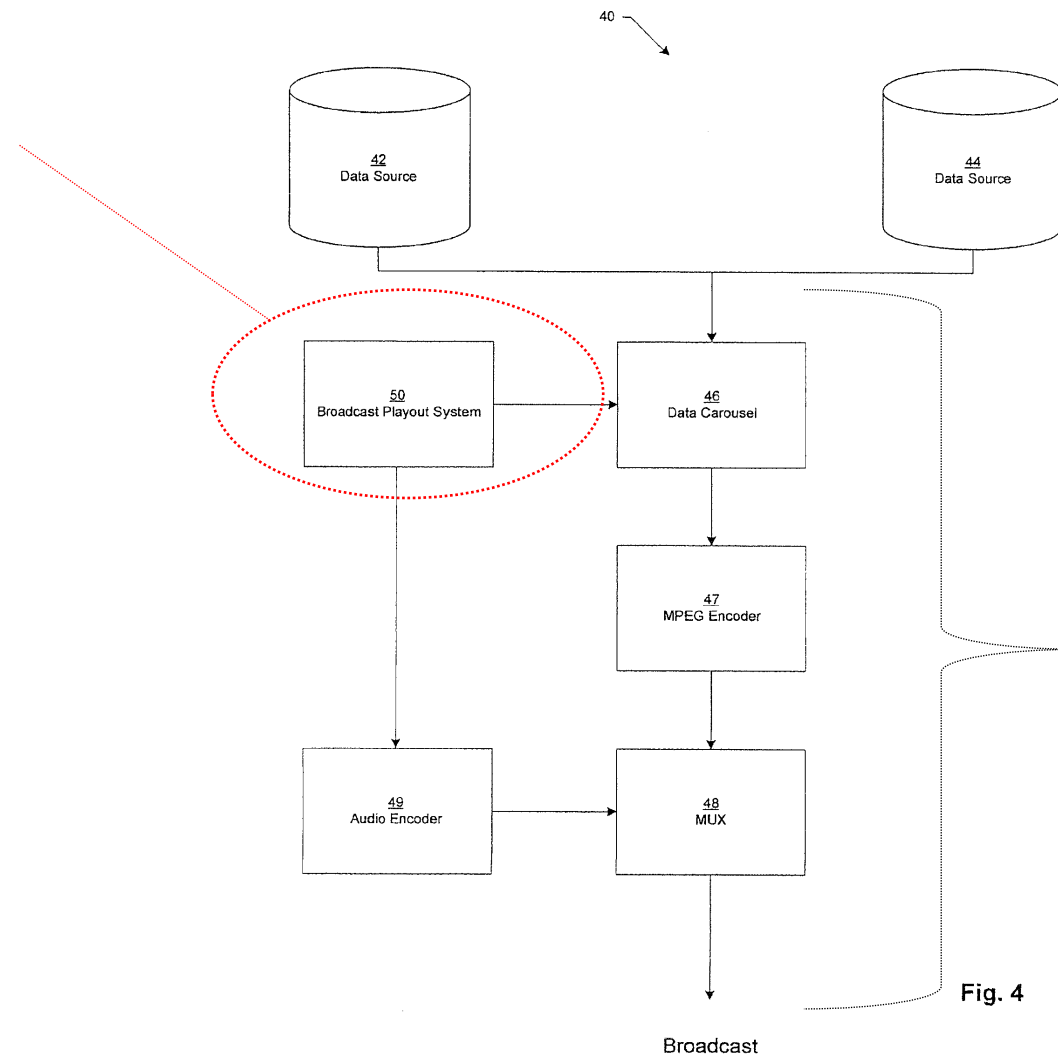
Abstract

A method and system for reducing burn-in of a display is disclosed. A plurality of assets containing text, graphics, and video are stored. Some of these assets are then assembled into a video frame or "screen", which is subsequently output. Some of the assets are then assembled to form a second video frame or screen. The second screen is subsequently output to the video transport stream and the process is repeated.

Farber US 7.940,303

Method and system for displaying content while reducing burn-in of a display

Figure 4 shows from the Playout System 50 to the Data Carousel 46, and the output flows to the MPEG Encoder 47 and then the MUX 48

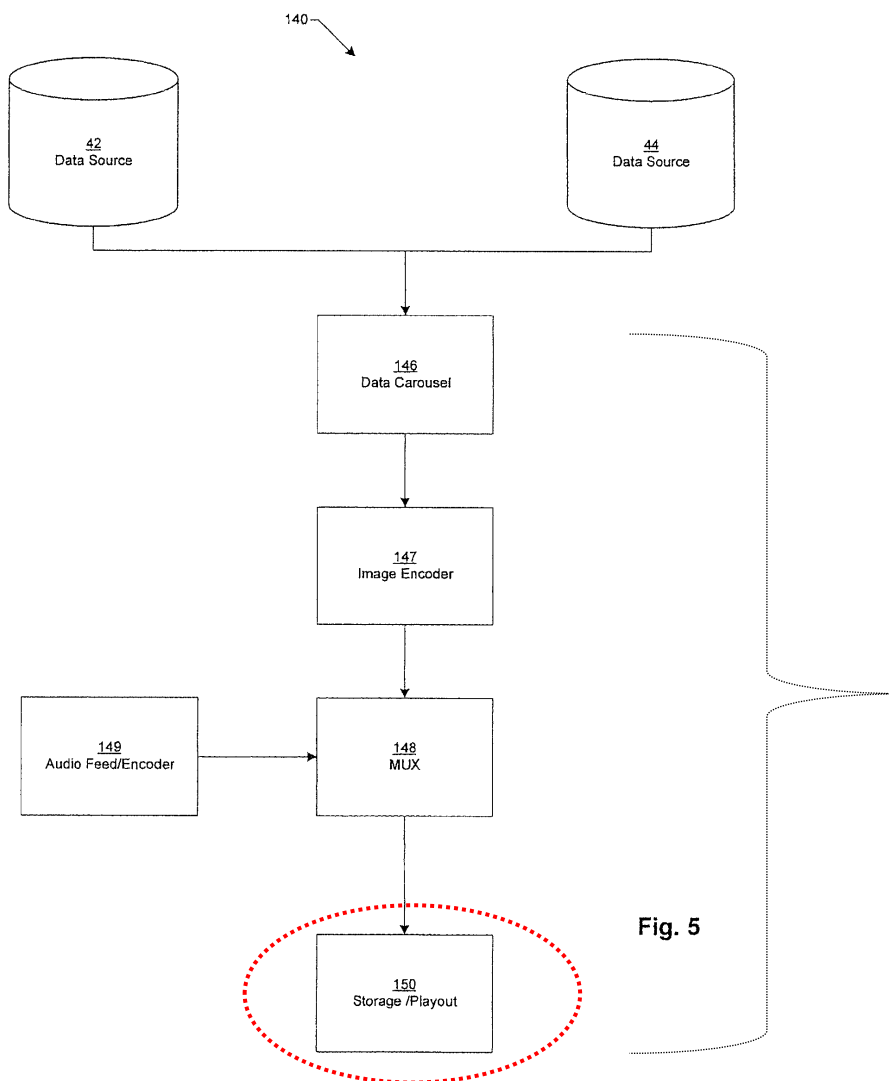


the broadcast system triggers the *generation* of a video frame (screen) for immediate broadcast. This differs from the '441 claim arrangement where a caching unit receives a request for a *stored*, for a “*plurality of media assets*” and “*for each one creates an HTML with video*” or generates (output)

Farber instead reads the XML as input (arrow) and does not generates or creates HTML with video (can't be served).

Farber's Figure 4 depicts a state a machine that cannot be interrupted by any request.

Farber US 7.940,303

Method and system for displaying content while reducing burn-in of a display

There is no logic block, feedback loop, or decision diamond in Farber's block diagrams (Figs 4 or 5) representing a check for "sufficient storage space" before processing. As this system is a collection of hardware computers. This contrasts with **the '441 patent**, which explicitly recites "determining that there is sufficient space for the multimedia asset at the caching unit" is important given the use of a self-contained server (multimedia, operating system, logs, same location) in the caching unit.

Farber US 7.940,303

Method and system for displaying content while reducing burn-in of a display

600

```

<?xml version="1.0"?>
<!DOCTYPE Scrn SYSTEM "file:///data/mc/MusicChoice.dtd">
<Scrn hgt="480" wid="704"
chan="001" chName="Soft Rock" Seq="02262">
  <IntWin xPos="200" yPos="90" xSz="390" ySz="236"
BgCl="0x1E1E1E" FgCl="0xC4C3C8" InCl="0xB71E16"
BgSl="0xB71E16" BtSl="0xB71E16" BdSl="0xC8C800" />
  <Grobj
xPos="214" yPos="92" xSz="214" ySz="251" wid="214" hgt="251"
pos="1" >
    <SongTitle value="Are You Ready For Love (2003)"/>
    <Artist value="Elton John"/>
    <RecordLabel value="ULTRA"/>
    <CD value="Elton John's Greatest Hits 1970-2002"/>
    <UnitID value="3310722"/>
  </Grobj>
  <Grobj src="mcBT_BuyPrevious_1.jpg" desc="Buy Previous Button"
xPos="209" yPos="314" xSz="129" ySz="37" wid="129" hgt="37"
pos="2" />
  <Grobj src="mcAA1730327.jpg" desc="Elton John's Greatest
Hits 1970-2002"
xPos="501" yPos="338" xSz="100" ySz="100" wid="100" hgt="100"
pos="3" />
  <Grobj src="mcBA506412.jpg" Billable="N"
xPos="336" yPos="128" xSz="320" ySz="192" wid="320" hgt="192"
pos="4" />
  <Grobj src="mcLG39.jpg"
xPos="29" yPos="46" xSz="139" ySz="55" wid="139" hgt="55" pos="6"
/>
  <Grobj src="mcPB408179.jpg" desc="347582" Billable="N"
xPos="80" yPos="128" xSz="240" ySz="192" wid="240" hgt="192"
pos="7" />
  <Grobj src="mcBT_NotAvailable_1.jpg" desc="Not Available"
xPos="76" yPos="314" xSz="129" ySz="37" wid="129" hgt="37"
pos="8" />
  <Grobj src="mcBT_NoDownload_1.jpg" desc="No Download"
xPos="312" yPos="342" xSz="129" ySz="37" wid="129" hgt="37"
pos="9" />
  <Grobj src="mcWP_Set2_LR.jpg"
xPos="0" yPos="0" xSz="704" ySz="480" wid="704" hgt="480"
pos="10" />
</Scrn>

```

Farber FIG. 6 graphically discloses an XML (Extensible Markup Language) based schema for defining screen layouts, not an HTML (Hypertext Transfer Markup Language) user interface

As shown, Farber there is no disclosure of a file, instead the use of a CD Value

Method and system for displaying content while reducing burn-in of a display

Farber Patent Figures

The figures in the Farber patent graphically demonstrate a fundamental difference in technology and system architecture compared to the '441 patent. Most notably, **Figure 6** of Farber explicitly displays code beginning with `<?xml version="1.0"?>` and using tags like `<Scrn>` and `<Grobj>`, which serves as undeniable visual evidence that Farber utilizes an **XML-based** schema to define static screen coordinates for burn-in reduction. This directly contradicts the specific limitation in Independent Claim 1 of the '441 patent, which requires "creating a custom **hypertext transfer markup language (HTML)** user interface with video" for each media file. Furthermore, **Figures 1, 2, and 3** of Farber illustrate the shifting of these screen elements to different physical coordinates to prevent phosphor burn-in, confirming that Farber generates a single, rasterized video frame (screen) that includes the XML, using a general purpose computer or hardware, rather than encapsulating distinct media files wrapped and generating HTML web pages for each of the media files as claimed in the '441 patent. Farber teaches that the XML is an input to the MPEG Encoder not an output to be "created" or "generated"

Additionally, **Figures 4 and 5** of Farber depicts a Finite State Machine (using triggers), where assets merge from a Data Carousel (46) into a single MPEG Encoder (47) to create a continuous video stream. This graphical arrangement fails to disclose the '441 patent's specific requirement of "encoding **each** of the media files and encapsulating **individually**" as it also creates or generates the user interface in HTML with video (EX2039-351, ¶105-106). Farber's architecture composites elements into a single video signal for immediate broadcast, whereas the '441 patent describes discrete file encapsulation. Finally, Farber's Figures 4 and 5 show no decision logic or feedback loop for "determining that there is **sufficient storage space**" at a caching unit before asset creation, a mandatory step in the '441 patent's method for managing multimedia assets.

PATENT OWNER'S REQUEST FOR FINAL WRITTEN DECISION

- **All 21 claims of U.S. Patent No. 10,123,074 (IPR2025-00349): PATENTABLE.**
 - Avellan fails on 'content provider.' Grounds 1–9 all fail. All secondary references moot. *[PO Sur Reply (IPR2025-00349) at 24]*
- **All 13 claims of U.S. Patent No. 10,524,002 (IPR2025-00350): PATENTABLE.**
 - Avellan fails on 'content provider' for Claims 1 and 13. Wannamaker independently fails on Claims 7–12. Grounds 1–4 all fail. Secondary references moot. *[PO Sur Reply (IPR2025-00350) at 29]*
- **All 26 claims of U.S. Patent No. 11,140,441 (IPR2025-00351): PATENTABLE.**
 - Farber fails on 'caching unit' for Claims 1–9. Avellan fails on 'content provider' for Claims 10–26. Grounds 1–13 all fail. Secondary references moot. *[PO Sur Reply (IPR2025-00351) at 28]*
- **TOTAL: 60/60 claims across three patents confirmed as patentable.**
- Petitioner has not met its burden of proving unpatentability by a preponderance of the evidence on any claim under any ground in any of the three proceedings.
- Patent Owner respectfully requests that the Board enter a Final Written Decision confirming the patentability of all challenged claims in IPR2025-00349, IPR2025-00350, and IPR2025-00351, and denying all relief requested by Petitioner. *[PO Resp. (IPR2025-00349) at 62; PO Resp. (IPR2025-00350) at 62; PO Resp. (IPR2025-00351) at 67–68]*