UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,

Petitioner,

v.

TIR TECHNOLOGIES LIMITED,

Patent Owner.

Case IPR2026-00347
U.S. Patent No. 10,484,442

TIR TECHNOLOGIES LIMITED'S
PATENT OWNER
PRELIMINARY SUR-REPLY

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2001	Order Granting Defendant's Motion to Dismiss, Dkt. 61, *Tir Technologies Limited v. Meta Platforms, Inc.*, No. 8:25-cv-02345-SVW-ADS, (C.D. Cal. June 25, 2026)
2002	Scheduling Order, Dkt. 40, *Tir Technologies Limited v. Amazon.com Services LLC, Amazon Web Services, Inc., Amazon Development Center U.S., Inc., AWS Security Assurances Services LLC, and Amazon Data Services, Inc.*, No. 1:25-cv-00865-RP, Scheduling Order (W.D. Texas Sept. 22, 2025)
2003	Defendants' Supplemental Preliminary Invalidity Contentions and Identification of Claims Defendants Contend are Directed to Ineligible Subject Matter, *Tir Technologies Limited v. Amazon.com Services LLC, Amazon Web Services, Inc., Amazon Development Center U.S., Inc., AWS Security Assurances Services LLC, and Amazon Data Services, Inc.*, No. 1:25-cv-00865-RP, (W.D. Texas Feb. 16, 2026)
2004	Defendant Meta Platforms, Inc. Motion to Dismiss First Amended Complaint and Memorandum of Points and Authorities, Dkt. 34, *Tir Technologies Limited v. Meta Platforms, Inc.*, No. 8:25-cv-02345-SVW-ADS, (C.D. Cal. Jan. 28, 2026)
2005	Tir Technologies Limited's Memorandum in Opposition to Motion to Dismiss, Dkt. 37, *Tir Technologies Limited v. Meta Platforms, Inc.*, No. 8:25-cv-02345-SVW-ADS, (C.D. Cal. Feb. 17, 2026)
2006	Statement Under 37 CFR 3.73(c) for parent application Ser. No. 13/945,747 (June 18, 2015)
2007	*Opera acquires Skyfire, broadens it mobile operator solutions beyond the browser* (Feb. 15, 2013), available at https://press.opera.com/2013/02/15/opera-acquires-skyfire-broadens-its-mobile-operator-solutions-beyond-the-browser/
2008	Order Granting-in-part Realtime's Motion to Compel Non-Party Skyfire to Comply with a Subpoena, *Realtime Data LLC d/b/a IXO v. Metropcs Texas, LLC, et al.,* No. C 12-80130 LHK (PSG), 2012 WL 3727304 (N.D.Cal. Aug. 28, 2012)

LISTING OF CHALLENGED CLAIMS

Reference	Limitation
Claim 1	
1[pre]	A computer-implemented method for streaming video, the method comprising:
1[a]	receiving a request to optimize an original source file from a client computing device, the request including a key specifying parameters to optimize the original source file;
1[b]	identifying, based on the key, a first portion of an optimized version of the original source file in a local cache of a video optimizer;
1[c]	generating a query, based on the key, to a database maintaining a plurality of reference keys corresponding to a plurality of optimized versions of source files stored on a plurality of other video optimizers, each reference key specifying parameters of an optimized version of a source file;
1[d]	receiving, from the database, a response indicating whether the key matches a reference key;
1[e]	receiving from the database, in response to a reference key matching the key, the address of another video optimizer storing a segment of the requested optimized version of the original source file;
1[f]	stitching the first portion of the optimized version of the original source file with the segment of the optimized version of the original source file stored on the other video optimizer; and
1[g]	streaming the stitched optimized version of the original source file for playback on the client computing device.
Claim 2	
2[a]	The method of claim 1, further comprising: storing a segment of the stitched optimized version of the original source file in a cache of the video optimizer; and

Reference	Limitation
2[b]	transmitting, to the database, instructions to update the database in response to storing the segment of the stitched optimized version of the original source file stored in the video optimizer.
Claim 3	
3	The method of claim 1, wherein the received response indicates that different segments of the optimized version of the same original source file are stored on a plurality of different video optimizers.
Claim 4	
4[a]	The method of claim 3, further comprising: transmitting, to the plurality of different video optimizers, a request for the segment of the optimized version of the original source file stored on each video optimizer; and
4[b]	stitching the different segments of the optimized version of the same original source file with the first portion of the original source file.
Claim 5	
5	The method of claim 1, wherein the key comprises a source content signature, the source content signature being a hash of the original source file.
Claim 6	
6	The method of claim 1, wherein the database comprises data entries identifying a plurality of video optimizers storing an optimized version of the original source file, the entries being modified through instructions transmitted to the database to update a location where the optimized version of the original source file is stored.
Claim 7	
7[pre]	The method of claim 1, further comprising:

Reference	Limitation
7[a]	determining a second segment of the optimized version of the original source file is not stored by the plurality of other video optimizers;
7[b]	transcoding, responsive to the determination, the second segment of the original source file;
7[c]	storing the transcoded second segment in the local cache of the video optimizer; and
7[d]	stitching the transcoded second segment with the stitched optimized version of the original source file.
Claim 8	
8	The method of claim 7, further comprising transmitting to the database, instructions to update the database with a reference key corresponding to the transcoded second segment of the optimized version of the source file stored at the video optimizer.
Claim 9	
9[a]	The method of claim 7, wherein transcoding the second segment of the original source file comprises: identifying a third segment of the optimized version of the original source file, subsequent to the second segment, that is stored by one of the plurality of other video optimizers; and
9[b]	transcoding the original source file from a start of the second segment to a start of the third segment.
Claim 10	
10	The method of claim 1, wherein the first portion is maintained in the local cache of the video optimizer after one or more purges of the local cache.
Claim 11	

Reference	Limitation
11[pre]	A system for streaming optimized video to a client device, comprising:
11[a]	a processor; and
11[b]	a non-transitory computer-readable storage medium storing executable computer program instructions that, when executed by the processor, causes the processor to:
11[c]	receive a request to optimize an original source file from a client computing device, the request including a key specifying parameters to optimize the original source file;
11[d]	identify, based on the key, a first portion of an optimized version of the original source file in a local cache of a video optimizer;
11[e]	generate a query, based on the key, to a database maintaining a plurality of reference keys corresponding to a plurality of optimized versions of source files stored on a plurality of other video optimizers, each reference key specifying parameters of an optimized version of a source file;
11[f]	receive, from the database, a response indicating whether the key matches a reference key;
11[g]	receive from the database, in response to a reference key matching the key, the address of another video optimizer storing a segment of the requested optimized version of the original source file;
11[h]	stitch the first portion of the optimized version of the original source file with the segment of the optimized version of the original source file stored on the other video optimizer; and
11[i]	stream the stitched optimized version of the original source file for playback on the client computing device.
Claim 12	

Reference	Limitation
12[a]	The system of claim 11, further comprising instructions that cause the processor to: store a segment of the stitched optimized version of the original source file in a cache of the video optimizer; and
12[b]	transmit, to the database, instructions to update the database in response to storing the segment of the stitched optimized version of the original source file stored in the video optimizer.
Claim 13	
13	The system of claim 11, wherein the received response indicates that different segments of the optimized version of the same original source file are stored on a plurality of different video optimizers.
Claim 14	
14[a]	The system of claim 13, further comprising instructions that cause the processor to: transmit, to the plurality of different video optimizers, a request for the segment of the optimized version of the original source file stored on each video optimizer; and
14[b]	stitch the different segments of the optimized version of the same original source file with the first portion of the original source file.
Claim 15	
15	The system of claim 11, wherein the key comprises a source content signature, the source content signature being a hash of the original source file.
Claim 16	
16	The system of claim 11, wherein the database comprises data entries identifying a plurality of video optimizers storing an optimized version of the original source file, the entries being modified through instructions transmitted to the database to update a location where the optimized version of the original source file is stored.
Claim 17	

Reference	Limitation
17[pre]	The system of claim 11, further comprising instructions that cause the processor to:
17[a]	determine a second segment of the optimized version of the original source file is not stored by the plurality of other video optimizers;
17[b]	transcode, responsive to the determination, the second segment of the original source file;
17[c]	store the transcoded second segment in the local cache of the video optimizer; and
17[d]	stitch the transcoded second segment with the stitched optimized version of the original source file.
Claim 18	
18	The system of claim 17, further comprising instructions that cause the processor to transmit to the database, instructions for updating the database with a reference key corresponding to the transcoded second segment of the optimized version of the source file stored at the video optimizer.
Claim 19	
19[a]	The system of claim 17, wherein transcoding the second segment of the original source file comprises: identifying a third segment of the optimized version of the original source file, subsequent to the second segment, that is stored by one of the plurality of other video optimizers; and
19[b]	transcoding the original source file from a start of the second segment to a start of the third segment.
Claim 20	
20	The system of claim 11, wherein the first portion is maintained in the local cache of the video optimizer after one or more purges of the local cache.

I. THE INVENTIONS CLAIMED IN THE '442 PATENT WERE COMMERCIALLY SUCCESSFUL

Meta's Reply disregards relevant Federal Circuit case law and Tir's evidence of commercial success. *See, e.g.*, Paper 11, 1-2. In *Chemours Co. FC, LLC v. Daikin Indus.*, the Federal Circuit agreed with the patentee's contention that sales data and/or market share are evidence of commercial success. *Chemours*, 4 F.4th 1370, 1378 (Fed. Cir. 2021) (reversing PTAB and agreeing that sales data alone should be enough for commercial success and that market share data is potentially useful).

Tir's evidence establishes that Tir's invention was recognized by others, a key element of the original patentee's platform, and widely adopted. *See* Ex. 2007, 1 ("Skyfire, headquartered in Mountain View, California, **is known for its Rocket Optimizer™ software**."); 2 ("Skyfire currently counts **three large U.S. mobile operators as customers** for its **Rocket Optimizer** and Skyfire Horizon solutions, and is in trials with ten other operators around the world.") (emphasis added).

Meta's requirement of individually novel features, Paper 11, 1-2, is also contrary to the law. *See Chemours* at 1378 (rejecting PTAB's requirement of separate disclosure of individual limitations and recognizing that a nexus can exist for a unique combination of known elements from the prior art).

II. META DID NOT ADDRESS ITS DISTRICT COURT CLAIM CONSTRUCTION IN THE PETITION

Meta does not dispute that its petition asserts that "[n]o express constructions are necessary." Paper 1, 6. Nor does Meta dispute that it argued in the District Court that the claims "require that a single key from a single request be used to locate at least two pieces of a file." Paper 11, 2. Nor does Meta dispute that the District Court understood Meta's argument to be "that the claims in our case boil down to the following meaning: 'a single request's single key is used to identify at least two distinct pieces of optimized video stored in at least two distinct locations' and stitch these portions together." Ex. 2001, 5.

Simply put, analysis of claim terms that establish the meaning of the patented subject matter are, most likely, claim construction. *See Google LLC v. Ecofactor Inc.,* 92 F.4th 1049, 1055 (Fed. Cir. 2024). By arguing to the District Court that the claims are limited to a "single key" from a "single request," Meta sought a claim construction, yet Meta never addressed these arguments in the petition.

Moreover, Meta's argument that Tir contends that it "could rely on separate keys from separate requests to locate each individual piece of a file to allege infringement" (Paper 11, 2) is a misstatement of Tir's contentions. To be clear, as set forth in its complaint claim charts, which Tir's soon-to-be-filed Federal Circuit brief will bear out, Tir contends that Meta's accused systems operate by issuing separate requests with a single key, *i.e.*, each of the requests includes the same "key," with each separate request directed to a different segment of the video.

III. META DOES NOT DISPUTE THAT THE PETITION PRESENTS 6 SEPARATE COMBINATIONS AND FAILS TO REBUT TIR'S CONTENTION THAT THE GROUNDS ARE VOLUMINOUS OR EXCESSIVE

Meta does not dispute that the Petition presents six (6) combinations of prior art references. Nor does Meta dispute that its use of "and" and "or" yields multiple combinations. Meta's contention that *Adaptics* is inapposite, Paper 11, 3-4, disregards the Board's specific findings. For example, the Board held that "[e]ven that conservative interpretation [seventeen (17)] of Petitioner's contention yields an unduly burdensome number of combinations." *Adaptics Ltd v Perfect Co.*, IPR2018-01596, Paper 20, 19 (P.T.A.B. March 6, 2019) (Informative). Tir respectfully submits that 6 combinations are similarly unduly burdensome.

Meta also failed to address the twenty-three (23) additional alleged prior art references cited in the Petition and Dr. Rubin's declaration. *See, e.g.*, Ex. 1010-1013 and 1015-1033. But, as the Board noted in *Adaptics,* "[T]he extent to which these additional documents may be relied upon to fill gaps in the asserted references with respect to the claimed subject matter increases our concern that the Petition lacks the required particularity, and, instead, turns the Petition into an empty invitation for the Board and Patent Owner to search the record for evidence that might support the full breadth of Petitioner's contentions." *Id.,* 22-23.

IV. THE PETITION DOES NOT ESTABLISH A REASONABLE LIKELIHOOD THAT PETITIONER WOULD PREVAIL

Meta's approach is fundamentally flawed because it is inconsistent with judicial guidance for determining obviousness. The Supreme Court's decision in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S. Ct. 1727 (2007) reaffirmed the approach to obviousness in *Graham v. John Deere Co.*, 383 U.S. 1, 86 S. Ct. 684 (1966), quoting the Court's obviousness decision in *Graham v. John Deere Co.*:

> Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

KSR, 550 U.S. at 406, 127 S. Ct. at 1734 (quoting *Graham*). Instead of determining the scope and content of the prior art, Meta used the individual claim limitations as a blueprint for hindsight reconstruction. For example, although all of the independent claims are directed to video (a method/system for streaming optimized video), Meta argues that "the references in each primary ground describe transcoding and searching for pieces of files across multiple servers" but <u>not</u> video. *See* Paper 11, 3. Moreover, individual consideration of individual references is particularly appropriate where, as here, Meta frequently asserts that a single reference alone discloses or suggests a claim limitation. *See*, *e.g.*, Paper 1, 18-20, 26, 35, 41-56, 57-60, 65-69, 73-75, 78-79.

Meta's criticism of Tir's analysis of Mattis, Paper 11, 4-5, is misplaced because it focuses entirely on a "further" statement without consideration of other criticism by Mattis in the same paragraph. *See* Paper 10, 7-8. And, to the extent there is ambiguity as to the database, that ambiguity is readily attributable to Meta's ambiguous identification of whether the allegedly corresponding "key" is Mattis's object key, name key, or perhaps both. *See* Paper 1, 19-26 (referring to the request's object or name keys).

Meta's criticism of Tir's analysis of Sackstein, Paper 11, 5, is illustrative of Meta's cherry-picking approach to the prior art that disregards contrary or unhelpful teachings in the same reference, notwithstanding the Federal Circuit's guidance that "[e]ven if evidence does not 'rise to the level of teaching away,' it is still proper for the Board to consider evidence that 'suggests reasons that a skilled artisan would be discouraged from pursuing such a combination.'" *Lab'y Corp. of Am. Holdings v. Ravgen, Inc.*, No. 2023-1342, 2025 WL 32904, at *4 (Fed. Cir. Jan. 6, 2025).

Notably, Meta does not rebut Tir's criticisms of either Hosur or Mills. *See* Paper 10, 8-10. Meta's Petition should be denied for the reasons submitted by Tir above and in Papers 7 and 10.

Date: September 14, 2026

Respectfully submitted,

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document was served on September 14, 2026, by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

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