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PRIVILEGED AND CONFIDENTIAL

Ion Video Pty Ltd
Level 2, 161 Collins St,
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Alder IP Ref: 42282

Attention: Anthony Baker

March 09, 2026

Re: Patent "Freedom to Operate" search for ION Video Pty Ltd relating to "Tokenised Virtual Video Delivery System and Method"

Dear Anthony,

We have completed our Freedom to Operate patent search relating to **Tokenised Virtual Video Delivery System and Method** as described in the provisional specification filed and the documents shared.

A. SCOPE

A Freedom to Operate Search is a search performed to determine whether a specific product, process, can be commercially launched without infringing on existing, in-force patents held by others.

The primary objective is to determine if the production, sale, or use of the invention infringes upon any existing patent claims. If the Applicant (company) has the freedom to operate within its industry without facing any legal consequences.

The FTO search was conducted using different databases, such as Patseer, Patentscope, USPTO, ESPACENET, Free Patents Online, AusPat and Google Patents to extract relevant references.

The search covered the below jurisdictions:

- USA
- Europé
- Australia and
- WIPO

For the US database, the search was for patent applications granted and/or published in the US in the last 25 years; while for the WIPO database, the search was in the last 31 months.

Please note that patents filed outside of the aforementioned jurisdictions would not have been detected. Additionally, only patents filed at least 18 months prior to this search would have been detected by the search as it generally takes 18 months for the patent offices to publish the specifications.

For infringement to occur, the alleged infringer must be shown to have used the claimed invention for a commercial purpose within the protected jurisdiction during the life of the patent. The alleged infringing product must take or use each and every feature of at least one claim of a granted patent to infringe.

Pending patent applications cannot be technically infringed until they have been examined, found valid and then subsequently been granted. Pending applications identified in the report were not extensively reviewed by Alder IP as the claims and scope of pending patent applications is usually restricted during patent examination processes.

Additionally, it is possible, under special circumstances in USA, to request reissuance or re-examination to vary the claims of granted patents and these instances would not have been detected by this FTO Search.

Please note that expired patents are open to public access and freely available to be used without license or approval of the owner.

In USA, the maximum term may be extended wherein the owner has informed the Patent Office of delays caused by clinical trials (these extensions may be up to 5 years) and also US Patent Office awards automatic extensions to maximum term for time lost during the examiner's consideration and evaluations.

We note that whilst all possible care is taken when compiling this report, some patents may not have been taken that were incorrectly coded or entered by the relevant patent offices and we are not responsible for errors in the Patent Offices databases.

B. KEY FEATURES

In conducting the search, we used Claim 1 defining the essential features of the invention:

Claim 1 :

A system for programmable video assembly, comprising:

- **a virtualization engine, wherein the engine is configured to convert a rendered video file into a reference container by extracting metadata and removing media sample data**;
  - wherein the virtual video container retains ISO Base Media File Format box structures while being devoid of media sample data.
  - wherein the step of resolving referenced media data involves issuing MDAT range requests to the remote media data sources.
  - further comprising an artificial intelligence orchestration layer configured to modify the sequencing instructions of the reference container without accessing raw media samples.

- **a token issuance service, wherein the service configured to generate a cryptographic video token binding transaction, consent, and licensing information**;
  - wherein the token issuance service includes a unique session nonce in each generated token to prevent unauthorized resolution reuse.

- wherein the transaction metadata includes instructions for micro payments triggered by individual segment resolution events
- wherein the cryptographic video token may function as an integrated authorization gatekeeper that operates independently of the media payload by excluding media sample data and direct file paths, enforces the right to resolve by providing the necessary cryptographic permissions and binds governance logic to the resolution event.

- **a secure resolution service, wherein the service dereferences remote media data upon successful validation of the cryptographic video token; further comprising logging each individual media dereference event to an auditable transaction layer**.
  - wherein the secure resolution service is restricted to operating within a hardware-attested trusted execution environment.
  - wherein the logged dereference events trigger a commercial action selected from a group consisting of billing, royalty allocation, and advertising insertion.
- **a playback environment, wherein the playback environment stores multiple tokens and dynamically assembling video streams in real-time from authorized references.**
  - wherein the playback environment is configured to manage independent tokens from multiple content owners within a single session wherein the playback environment may function as a content wallet capable of managing multiple tokens from independent content owners.
  - wherein the system is configured to terminate the video stream instantly upon the revocation of user consent parameters associated with the token.

C. SUMMARY OF KEY IDENTIFIED PATENTS

Assignee /Applicant	Patent/Publication No.	Title	Expected Expiry Date	Potential Risk of Infringement	Comment
Netflix Inc	EP2791847 B1	Improving startup times of streaming digital media playback	12/12/2032	Low	This patent primarily relates to techniques for improving the startup time of streaming digital media by retrieving metadata and pre-processing license requests prior to a user initiating playback of a selected media title.

					The focus of the cited technology is on reducing playback latency and accelerating the initiation of streaming through early metadata retrieval and license acquisition. However, the cited document does not teach or suggest an AI orchestration layer capable of modifying sequencing instructions without accessing raw media samples, a cryptographic video token system that binds licensing, consent, and transaction information, or secure media dereferencing.
Sandpiper Cdn LLC	US 8,595,778 B2	User authentication in a content delivery network	29-05-2032	Low	The cited document focuses on the method of authorizing delivery The present invention is not authorizing a stream its validating a resolution event for a virtualized asset. The cited document relies on a Subscription Database to determine rights. However, the present invention uses a cryptographic video token that is an "integrated authorization gatekeeper." this token is not just a "yes/no" flag; it is a programmable object.
Ericsson AB	US 12,244,881 B2	Secure over-the-top live video delivery	25/10/20242	Low	The cited document describes a traditional secure delivery workflow. The present invention is a virtualized delivery system where the "video" being delivered is actually a set of instructions (metadata) resolving to remote sources in real-time. The claims of the cited document are restricted to the management of encryption keys and license server delivery. They do not encompass the programmable assembly of video or the use of hardware-attested trusted execution environments for dereferencing events.

A more detailed summary of the full list of identified patents is attached as **Annexure A** and this list includes extracts of the independent claims. The above summary is focused on the key patents of interest that were detected and focused on the closest examples of the prior art in our opinion.

We also note that we have assumed that all patent and patent applications identified in this search were valid and that no assessment of novelty or inventiveness of each identified patent has taken place.

D. CONCLUSION

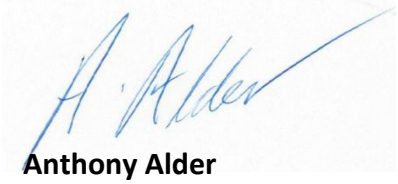
Based on the above analysis, Alder IP believes that ION Video product does not reasonably infringe any of the reviewed patents provided that the risk mitigation advice has been accepted and implemented for the relevant jurisdictions.

Please refer to **Annexure A** for a detailed summary of all patents reviewed.

This report and the analysis within are intended solely for the purpose of providing a opinion regarding the product. This interpretation is based on publicly available information from various sources and should not be construed as a formal legal opinion.

The findings are for the internal use and no part of this report shall be publicly distributed, published, or offered for sale without the explicit permission. This report is intended to serve as a risk assessment tool, it does not constitute a guarantee of definitive legal clearance for commercialization.

Yours faithfully



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Encl. Annexure A – Detailed Summary
Annexure B – FTO Raw Data Report

Annexure A

Assignee/ Applicant	Patent/Publication No.	Title	Expected Expiry Date	Claim discussion	Proposed Risk Mitigation
Netflix Inc	EP2791847 B1	Improving startup times of streaming digital media playback	12/12/2032	Claim 1 A computer-implemented method (300) for a client device to obtain authorization to stream a requested media title, the method comprising: outputting, for display in a user interface (400), a plurality of media titles available for streaming playback; prior to receiving a user request (308) to begin streaming playback of any of the plurality of media titles, retrieving, by operation of one or more computer processors, metadata (306, 510) associated with at least a first one of the plurality of media titles; upon receiving the request to play the first media title (520), generating, based at least in part on the metadata, a request for a license (310) authorizing playback of the first media title; and upon receiving the license (312, 540) for the first media title, beginning streaming playback (318, 550) of the first media title. **Claim 10** A system, comprising: one or more computer processors; and a memory (230), wherein the system is configured to perform an operation for obtaining authorization to stream a requested media title, the operation comprising: outputting, for display in a user interface (400), a plurality of media titles available for streaming playback; prior to receiving a user request (308) to begin streaming playback of any of the plurality of media titles, retrieving, metadata (306, 510) associated with at least a first one of the plurality of media titles; upon receiving the request (306, 520) to play the first media title,	Differentiate by structural necessity. Netflix pre-fetches for speed; your engine converts the file into a reference container devoid of media samples. Avoid describing metadata extraction as a latency-reduction tool. Ensure the claim emphasizes that the container is non-functional without MDAT range requests.

				generating, based at least in part on the metadata data, a request for a license (310) authorizing playback of the first media title; and upon receiving the license for the first media title (312, 540), beginning streaming playback (318, 550) of the first media title.	
Sandpiper Cdn LLC	US 8,595,778 B2	User authentication in a content delivery network	29-05-2032	Claim 1 A computer-implemented method for authorizing delivery of a video stream to an end user, wherein the video stream is associated with a content publisher, the method comprising: receiving a request from the end user for delivery of the video stream to the end user across a network; querying a subscription database associated with the content publisher; in response, processing a reply from the subscription database to determine whether the end user has authorization to receive delivery of the video stream; and performing at least one of: transmitting a notification to the end user indicating that the end user is not authorized to receive delivery of the video stream based on the processing of the reply from the subscription database; and initiating delivery of the video stream to the end user based on the processing of the reply from the subscription database, wherein the reply from the subscription database indicates the end user is authorized to receive delivery of the video stream.	Contrast the authorization logic. Sandpiper relies on a static database lookup. The present invention uses cryptographic tokens with session nonces bound to individual segment resolution events. Avoid using simple "Yes/No" subscription gates. Emphasize micro-payments triggered by specific resolution events.
Microsoft Technology Licensing LLC	US 10,455,286 B2	Protected media decoding system supporting metadata	08/03/2039	1.A method implemented in a computing device, the method comprising: obtaining video content from a media source, the video content including metadata as well as protected video content; extracting the metadata from the video content to obtain extracted metadata, the extracting the metadata including removing the metadata from the video content; providing the extracted metadata to a video decoder without providing the video content to the video decoder for processing by the video decoder; providing the video content with the metadata removed from the extracting to a secure digital rights management component; receiving, from the secure digital rights management component, a re-encrypted version of the video content, the re-encrypted version of the	Focus on the AI orchestration. Microsoft separates data for secure decoding paths. Avoid defining the system as a "secure decoding pipeline." Instead emphasize the AI layer that modifies sequencing instructions of the reference container without accessing raw

				video content comprising a version of the video content from which the protected video content has been decrypted and re-encrypted based on a key of the computing device; providing the re-encrypted version of the video content to the video decoder for decoding of the re-encrypted version of the video content to yield decoded video content rather than decoding of the video content including metadata; and providing the extracted metadata and the decoded video content to an application for playback. 7. A method implemented in a computing device, the method comprising: obtaining video content from a media source, the video content including metadata as well as protected video content; extracting the metadata from the video content to obtain extracted metadata, the extracting the metadata including removing the metadata from the video content; providing the extracted metadata to a video decoder without providing the video content to the video decoder for processing by the video decoder; providing the video content with the metadata removed from the extracting to a secure digital rights management component, the secure digital rights management component decrypting the protected video content and providing decrypted video content to a secure decoder component for decoding of the decrypted video content to yield decoded video content rather than decoding of the video content including metadata; and providing the extracted metadata and the decoded video content to an application for playback. 13.A computing device comprising: a media source component configured to obtain video content from a media source, the video content including metadata as well as protected video content; an extraction component configured to extract the metadata from the video content to obtain extracted metadata, extracting the metadata including removing the metadata from the video content, and provide the extracted metadata to a video decoder without providing the video	samples.

				content to the video decoder for processing by the video decoder; a secure digital rights management component configured to receive the video content with the metadata removed from the extracting and provide the protected video content to the video decoder for decoding of the protected video content to yield decoded video content rather than decoding of the video content including metadata; and a video decoder component configured to provide the extracted metadata and the decoded video content to an application for playback.	
Intel Corp .	EP 2832102 B1	Methods and systems for cryptographic access control of video Images (11)	31-03-2032	1. A method of cryptographic access control - CAC - of video, comprising: - by a metadata generator (225), generating (1215) metadata, said metadata representing an access control policy - ACP - associated with the video, the ACP including authorization rules and cryptographic information associated with an encryption policy; - by an encryptor (220), encrypting (1220) the video into an encrypted video (230) according to said encryption policy; and - by an encoder (240), encoding (1225) said encrypted video (230) into an encoded video (130) with said authorization rules and said cryptographic information, said encoded video having multiple segments; wherein the authorization rules and cryptographic information are intended for decrypting and rendering the encoded video, **characterized in that** said encoding includes encoding different time segments of the encrypted video with corresponding different authorization rules, wherein the authorization rules take into account user specific access controls, including Motion Picture - MP - ratings, an MP rating being embedded in a predetermined segment of said encoded video (130), each segment including a different rating intended for a different type of users.	Emphasize payload independence. Intel embeds rules in the media. The token in the present invention functions independently of the media payload. Avoid storing permissions or ratings inside media segments. Instead restrict all resolution to a hardware-attested TEE..
Comcast Cable Communications LLC	US 11,792,458 B2	Managing concurrent content playback	13/7/2042	1.A method comprising: receiving, by a user device and from a content server, an indication of a permission granting the user device access to a content asset; sending, by the user device and to the content server, a request for a segment of the content asset; and receiving, by the user device, from the content server, and based on a determination by the content server that the number of permissions currently granted to the user device exceeds the number of desired concurrent communication sessions by the user device, an indication that access to the another segment of the content asset has been denied.	Highlight the "Content Wallet". Comcast manages limits for a single asset. Avoid using simple concurrency/limit-counting logic.

				8. An apparatus comprising: one or more processors; and memory storing instructions that, when executed by the one or more processors, cause the apparatus to: receive, by a user device and from a content server, an indication of a permission granting the user device access to a content asset; send, by the user device and to the content server, a request for a segment of the content asset; receive, by the user device, from the content server, and based on a determination by the content server that the number of permissions currently granted to the user device exceeds the number of desired concurrent communication sessions by the user device, an indication that access to the another segment of the content asset has been denied. 15. A computer-readable medium storing instructions that, when executed, cause: receiving, by a user device and from a content server, an indication of a permission granting the user device access to a content asset; sending, by the user device and to the content server, a request for a segment of the content asset; and receiving, by the user device, from the content server, and based on a determination by the content server that the number of permissions currently granted to the user device exceeds the number of desired concurrent communication sessions by the user device, an indication that access to the another segment of the content asset has been denied.	Rather, focus on managing independent tokens from multiple content owners within a single session.
Ericsson AB	US 12,244,881 B2	Secure over-the-top live video delivery	25/10/20242	1.A method for managing secure distribution of audio or video content, comprising: generating a series of content encryption keys for encrypting a single audio or video content item, each content encryption key associated with a different portion of the single audio or video content item wherein client devices requesting the single audio or video content item is further provided with key expiration information usable by the client devices to identify transitions between portions of the single audio or video content item that use different ones of the content encryption keys; and providing the content encryption keys to a license server for delivery to the client devices for use in decrypting the content item, the license server being operative to establish that a requesting client device is	Focus on real-time consent. Ericsson uses key expiration. Avoid relying on standard key rotation for security. Rather, focus on instant termination upon revocation of user consent parameters bound to the token.

				authorized to access the content item, the license server being further operative to securely deliver the content encryption keys to a requesting client device whose authorization to access the content item has been established. 11. A computerized device operable as a workflow manager for managing secure distribution of audio or video content, comprising: memory operative to store computer program instructions; one or more processors; input/output interface circuitry; and interconnect circuitry coupling the memory, processors and input/output interface circuitry together, wherein the processors are operative to execute the computer program instructions from the memory to cause the computerized device to: generate a series of content encryption keys for encrypting a single audio or video content item, each content encryption key associated with a different portion of the single audio or video content item wherein client devices requesting the single audio or video content item is further provided with key expiration information usable by the client devices to identify transitions between portions of the single audio or video content item that use different ones of the content encryption keys; and provide the content encryption keys to a license server for delivery to the client devices for use in decrypting the content item, the license server being operative to establish that a requesting client device is authorized to access the content item, the license server being further operative to securely deliver the content encryption keys to a requesting client device whose authorization to access the content item has been established.	