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RE: Novelty Search related to Tokenised Virtual Video Delivery System and Method (Australian Patent Application No. 2026900706)

Dear Anthony ,

We refer to your instructions to conduct a Novelty Search relating to **Tokenised Virtual Video Delivery System and Method** as described in the provisional specification filed and the documents shared in relation to the invention prior filing the provisional application.

The Novelty search was conducted using different databases, such as Espacenet; PatentScope; FPO; USPTO; Jplat-Pat; KIPRIS; Patseer and Other Non-Patent Literature Publication Sources(Google/Google Scholar/Science Direct).

The search focused on the below jurisdictions:

1. USA
2. Japan
3. Korea
4. Europé

5. WIPO (PCT applikations)

The search was conducted with reference to Claim 1 of the provisional application. The claims may be amended in subsequent filings, hence the search results are indicative and may require updating if required.

A. THE INVENTION

The invention addresses the problem of securely assembling and monetizing programmable video without exposing raw media by converting rendered files into metadata-only reference containers that preserve ISO structures and resolve content through remote requests, with AI-driven sequencing independent of media samples.

The core of the technology lies in decoupling video structure from actual media samples to enhance security and monetization:

The system generates cryptographic video tokens binding transaction, consent, licensing, and micro-payment logic to segment resolution events, embedding unique session nonces and acting as payload-independent authorization gatekeepers.

A hardware-attested secure resolution service validates tokens, dereferences media, and logs auditable events triggering billing, royalties, or advertising, while the playback environment manages multi-owner tokens, dynamically assembles authorized streams, and terminates playback upon consent revocation

B. KEY FEATURES CONSIDERED FOR THE SEARCH

Novelty - *An invention must not be anticipated by prior art information that was publicly available anywhere in the world before the priority date*.

Inventive Step - *The invention must not be obvious to a "person skilled in the relevant art" (PSA) in light of common general knowledge combined with prior art.*

Test for Novelty - A invention must not be anticipated by prior art information that was publicly available anywhere in the world before the priority date.

Test for Inventive Step- For inventive step, the invention must not be obvious to a person skilled in the relevant art (PSA) in light of:

1. Common general knowledge in the field.
2. Prior art documents.

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. **SEARCH TERMS**

- Media, Video, Audio, Movies, Song, Images, Pictures
- Configurable, Customizable, Adaptable, Scriptable, Configurable, Policy-Driven, Rule-Based, Logic-Controlled, Parameterized, Dynamically Configurable, Runtime-Configurable, Condition-Based
- Streaming, Content Distribution, Media Transmission, Broadcast, Playing
- Data Representation, Information Display, Graphical Rendering, Visual Analytics, Video Processing, Frame Generation, Visual Output, Graphics Rendering

- Reference Container, Blueprint Container, Virtual Video File, Metadata, Indexing, Pointers, Summary, Captions, Links, Identifiers, Remote References,
- Tokenized, Token-Based, Encrypted, Cryptographically Bound, Digital Token, Digitally Certified
- Data Mining, Information Retrieval, Content Parsing, Attribute Identification
- Playback Session, Viewing Session, Streaming Session, Runtime Session, Execution Session, Access Session, Media Session, Content Session
- Ai Framework, Machine Learning System, Cognitive Computing Environment, Intelligent Application Suite
- Validation, Verify, Authenticate, Authorize, Confirm, Prove, Certify
- Transactions, Payments, Subscriptions, License, Rights

D. RELEVANT PATENTS AND ANALYSIS

1. **US20250342232A1** (Wells Fargo Bank NA) describes a system using smart contract control structures and secure containers to protect asset tokens. It identifies metadata objects from segmented allocations (video, audio, etc.) and generates container tokens to restrict access within specific computing environments. It matches the programmable video assembly concept and the use of AI to classify tokens based on attributes.

It does not explicitly disclose ISO Base Media File Format (ISOBMFF) structures or specific MDAT range requests.

2. **US20170195697A1** (Telefonaktiebolaget LM Ericsson AB) discloses a media distribution system using "sample variants" for normalized encryption. It constructs variant tracks from metadata and media data to ensure content protection from encoding to the end-user device. This documents utilizes ISOBMFF container formats and metadata-driven track extraction. It uses Key Identifiers (KIDs) as functional tokens to regulate access.

However, it lacks the specific binding of micro-payments to individual segment resolution events and does not disclose instant termination upon consent revocation.

3. **WO2025245645A1** (Breeze Labs Inc) discloses an object-level access control where multimedia files are segmented into data streams based on "objects of interest". Each stream is encrypted with a unique key and packaged into a media container.

This documents uses the "authorization gatekeeper" role, using a Key Management Service (KMS) to validate requests before decryption.

But it does not disclose auditable transaction logging for every individual media dereference event.

4. **US11582206B2** (Snap Inc) discloses a device-independent system for retrieving authentication credentials and decryption keys for user-generated content. This document employs authentication and encryption tokens to access remotely stored content. It manages distinct keys for different content pieces, which functions similarly to a multi-token playback environment.

There is no mention of virtualization engine specific to converting rendered files into metadata-only containers by removing media sample data.

5. **US20110173653A1** (AT&T MVPD Group LLC) discloses the Virtual Video on Demand (VOD) using multiple encrypted segments where a pre-stored segment is played while others are recorded in parallel. The Purchase Information Packet (PIP), w acts as a token binding transaction/billing info to video segments.

This document does not utilize AI orchestration or hardware-attested resolution services.

6. **US20250181747A1** (Genetec Inc) recites of a fusion stream system that assembles a composition of multiple media streams (video, audio, metadata) based on a scenario dataset. It manages independent streams under unique owner identifiers.

This document does not disclose micro-payments triggered by resolution events or the instant termination of streams upon consent revocation.

E. CONCLUSION

Based on the analysis of the relevant citations, Alder IP opines that Tokenised Virtual Video Delivery System and Method Invention is both novel and inventive due to its unique technical architecture and governance model based on the attached search results.

The elements of tokenization, media segmentation, and digital rights management currently exist in the market, but the combination of features of this invention addresses a gap through four key differentiators:

- a virtualization engine to create a metadata-only reference container that retains ISO Base Media File Format box structures.
- an AI orchestration layer that modifies sequencing instructions without accessing raw media samples provides a level of programmable flexibility.
- ability to trigger micro-payments at the individual segment resolution event level
- restricting the secure resolution service to a hardware-attested Trusted Execution Environment (TEE) and enabling instant stream termination upon consent revocation.

Please refer to **Annexure A** for the detailed report. Please note that this search only detects and identifies publicly available disclosures as of the date of the search. When this patent application is examined by patent examiners around the world, they may raise citations not detected by us or not deemed relevant by us.

If you have any questions regarding any of the matters in this document, please do not hesitate to contact us.

Yours faithfully

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