CLAIMS

~~What is claimed is:~~

1. A system comprising:

at least one processor; and

memory, operatively connected to the at least one processor and storing instructions that, when executed by the at least one processor, cause the system to perform a set of operations, the set of operations comprising:

receiving, from a client device, a request for content of a content distribution network (CDN), wherein the request for content comprises requested format information indicating a request resolution that is different than a resolution of the content;

determining, from a set of transcoding models, a transcoding model to transcode the content;

transcoding, using the determined transcoding model, at least a part of the content to generate transcoded content having the request resolution; and

providing, in response to the request for content, the transcoded content to the client device.

2. The system of claim 1, wherein determining the transcoding model comprises:

selecting a content frame from the content;

downscaling the content frame;

processing the downscaled content frame using:

a first transcoding model to generate a first transcoded frame; and

a second transcoding model to generate a second transcoded frame; and

evaluating, based on the content frame, the first transcoded frame and the second transcoded frame to determine the transcoding model, wherein the transcoding model is either the first transcoding model or the second transcoding model.

3. The system of claim 2, wherein:

determining the transcoding model further comprises recognizing an object of the content frame; and

the first transcoded frame and the second transcoded frame are further evaluated based at least in part on the recognized object of the content frame to determine the transcoding model.

4. The system of any one of claims 1 to 3, wherein:
the transcoding model is a first transcoding model;
the at least a part of the content is a first part of the content; and
the set of operations further comprises:
determining, from a set of transcoding models, a second transcoding model to transcode the content; and
transcoding, using the determined transcoding model, a second part of the content to further generate the transcoded content having the request resolution.

5. The system of any one of claims 1 to 4, wherein:
the client device is a first client device;
the request for content is a first request for content; and
the set of operations further comprises:
storing the transcoded content in a data store;
receiving, from a second client device, a second request for the content; and
providing, in response to the second request for the content, the transcoded content from the data store.

6. The system of any one of claims 1 to 5, wherein the set of operations further comprises:
receiving, from a node of the CDN, a request for the transcoded content; and
providing, to the node of the CDN, the transcoded content.

7. The system of any one of claims 1 to 6, wherein the requested format information comprises at least one of audio requested format information or video requested format information.

8. A method for transcoding content using a transcoding recipe, the method comprising:

receiving, from a node of a content distribution network (CDN), content and a transcoding recipe indicating:

a first transcoding model for a first subpart of the content; and

a second transcoding model for a second subpart of the content;

transcoding, using the first transcoding model, the first subpart of the content to generate a first transcoded subpart;

transcoding, using the second transcoding model, the second subpart of the content to generate a second transcoded subpart; and

providing, to a client device, transcoded content comprising the first transcoded subpart and the second transcoded subpart.

9. The method of claim 8, further comprising:

receiving a request for the content from the client device;

wherein the first subpart and the second subpart are transcoded based at least in part on receiving the request.

10. The method of claim 9, wherein:

the request for the content comprises requested format information; and

the transcoding recipe is determined based at least in part on the requested format information.

11. The method of any one of claims 8 to 10, wherein:

the client device is a first client device; and

the method further comprises:

storing the transcoded content in a data store;

receiving, from a second client device, a request for the content; and

providing, in response to the request for the content, the transcoded content from the data store.

12. The method of any one of claims 8 to 11, wherein:

the first subpart of the content is a video track of the content; and

the second subpart of the content is an audio track of the content.

13. The method of any one of claims 8 to 12, further comprising;

receiving, from a node of the CDN, a request for the transcoded content; and

providing, to the node of the CDN, the transcoded content.

14. A method for transcoding content from a content provider, the method comprising:

receiving, from a client device, a request for content of a content distribution network (CDN), wherein the request for content comprises requested format information indicating a request resolution that is different than a resolution of the content;

determining, from a set of transcoding models, a transcoding model to transcode the content;

transcoding, using the determined transcoding model, at least a part of the content to generate transcoded content having the request resolution; and

providing, in response to the request for content, the transcoded content to the client device.

15. The method of claim 14, wherein determining the transcoding model comprises:

selecting a content frame from the content;

downscaling the content frame;

processing the downscaled content frame using:

a first transcoding model to generate a first transcoded frame; and

a second transcoding model to generate a second transcoded frame; and

evaluating, based on the content frame, the first transcoded frame and the second transcoded frame to determine the transcoding model, wherein the transcoding model is either the first transcoding model or the second transcoding model.

16. The method of claim 15, wherein:

determining the transcoding model further comprises recognizing an object of the content frame; and

the first transcoded frame and the second transcoded frame are further evaluated based at least in part on the recognized object of the content frame to determine the transcoding model.

17. The method of any one of claims 14 to 16, wherein:

the transcoding model is a first transcoding model;

the at least a part of the content is a first part of the content; and

the method further comprises:

determining, from a set of transcoding models, a second transcoding model to transcode the content; and

transcoding, using the determined transcoding model, a second part of the content to further generate the transcoded content having the request resolution.

18. The method of any one of claims 14 to 17, wherein:

the client device is a first client device;

the request for content is a first request for content; and

the method further comprises:

storing the transcoded content in a data store;

receiving, from a second client device, a second request for the content; and

providing, in response to the second request for the content, the transcoded content from the data store.

19. The method of any one of claims 14 to 18, further comprising:

receiving, from a node of the CDN, a request for the transcoded content; and

providing, to the node of the CDN, the transcoded content.

20. The method of any one of claims 14 to 19, wherein the requested format information comprises at least one of audio requested format information or video requested format information.

21. A system comprising:

at least one processor; and

memory, operatively connected to the at least one processor and storing instructions that, when executed by the at least one processor, cause the system to perform a set of operations, the set of operations comprising:

receiving, from a content source, an indication of content;

storing the content in a data store;

generating a content hash based on the content;

storing the content hash as a content record in a distributed ledger;

receiving, from a client device, a request for the content; and

providing, in response to the request, at least a part of the content from the data store.

22. The system of claim 21, wherein the set of operations further comprises:

generating a smart contract associated with the content, wherein the smart contract is associated with a trigger;

identifying the trigger based on the request for the content from the client device; and

in response to identifying the trigger, executing the smart contract to generate a new record in the distributed ledger.

23. The system of claim 22, wherein the set of operations further comprises:

processing the distributed ledger to identify at least the new record; and

generating, based at least in part on the new record, an accounting indication associated with the content; and

providing the accounting indication to the content source.

24. The system of claim 21, wherein the content hash is a first content hash and the set of operations further comprises:

receiving, from the client device, a validation request comprising a second content hash;

~~determining that the content is validated when the first content hash matches the second content hash; and~~

~~in response to the validation request, providing an indication that the content is validated.~~

~~25. The system of claim 21, wherein:~~

~~the indication of content further comprises metadata associated with the content; and~~

~~the metadata is not used to generate the content hash.~~

~~26. The system of claim 25, wherein at least a part of the metadata is stored in the content record.~~

~~27. The system of claim 25, wherein at least a part of the metadata is stored in a metadata repository and associated with the content hash.~~

~~28. A method for generating a smart contract for content of a content distribution network (CDN), the method comprising:~~

~~receiving, from a content source, an indication of content;~~

~~generating a smart contract associated with the content, wherein the smart contract is associated with a trigger;~~

~~storing the smart contract in a distributed ledger;~~

~~receiving, from a client device, a request for the content;~~

~~identifying the trigger based on the request for the content from the client device;~~

~~in response to identifying the trigger, executing the smart contract to generate a new record in the distributed ledger; and~~

~~providing, in response to the request, at least a part of the content.~~

~~29. The method of claim 28, further comprising:~~

~~processing the distributed ledger to identify at least the new record; and~~

~~generating, based at least in part on the new record, an accounting indication associated with the content; and~~

~~providing the accounting indication to the content source.~~

30. The method of claim 28, further comprising:

generating a content hash based on the content;

storing the content hash as a content record in the distributed ledger;

31. The method of claim 30, wherein the content hash is a first content hash and the method further comprises:

receiving, from the client device, a validation request comprising a second content hash;

determining that the content is validated when the first content hash matches the second content hash; and

in response to the validation request, providing an indication that the content is validated.

32. The method of claim 30, wherein:

the indication of content further comprises metadata associated with the content; and

the metadata is not used to generate the content hash.

33. The method of claim 28, wherein the content is a subpart of streaming content from the content source.

34. A method for adding content to a content distribution network (CDN), the method comprising:

receiving, from a content source, an indication of content;

storing the content in a data store;

generating a content hash based on the content;

storing the content hash as a content record in a distributed ledger;

receiving, from a client device, a request for the content; and

providing, in response to the request, at least a part of the content from the data store.

35. The method of claim 34, further comprising:

generating a smart contract associated with the content, wherein the smart contract is associated with a trigger;

identifying the trigger based on the request for the content from the client device; and

in response to identifying the trigger, executing the smart contract to generate a new record in the distributed ledger.

36. The method of claim 35, further comprising:

processing the distributed ledger to identify at least the new record; and

generating, based at least in part on the new record, an accounting indication associated with the content; and

providing the accounting indication to the content source.

37. The method of claim 34, wherein the content hash is a first content hash and the method further comprises:

receiving, from the client device, a validation request comprising a second content hash;

determining that the content is validated when the first content hash matches the second content hash; and

in response to the validation request, providing an indication that the content is validated.

38. The method of claim 34, wherein:

the indication of content further comprises metadata associated with the content; and

the metadata is not used to generate the content hash.

39. The method of claim 38, wherein at least a part of the metadata is stored in the content record.

40. The method of claim 38, wherein at least a part of the metadata is stored in a metadata repository and associated with the content hash.