CLAIMS

What is claimed is:

1. An apparatus for decoding a media stream, wherein the apparatus comprises:

a memory module;

a processor module coupled to the memory module, wherein the memory module contains instructions that when executed by the processor cause the apparatus to perform the following:

receive a media stream comprising segment signaling information and a plurality of segments, wherein the plurality of segments comprises encoded and unencoded segments, wherein the segment signaling information comprises identification of at least two segment groups each comprising at least one segment;

identify at least one segment group using the segment signaling information in the media stream;

identify at least one segment decoding algorithm for the at least one segment group;

identify at least one decoding key for the at least segment group; and

decode each encoded segment within the at least segment group using the at least segment decoding algorithm and the at least one decoding key.

2. The apparatus of claim 1, wherein the segment signaling information is not contained within a media stream initialization segment.

3. The apparatus of claim 1, wherein the segment signaling information comprises either:

a string of positive and negative numbers, wherein a positive number *n* indicates a segment group of *n* adjacent encoded segments, and wherein a negative number *-m* indicates a segment group of *m* unencoded segments; or

a string of data that in binary code indicates segments that are encoded with a one and indicates segments that are not encoded with a zero.

4. The apparatus of claim 1, wherein identifying at least one segment group comprises identifying a first segment group and a second segment group, and identifying the at least one decoding algorithm comprises identifying a first segment decoding algorithm for the first segment group and a second segment decoding algorithm for the second segment group, where the first and second segment decoding algorithms are different.

5. The apparatus of claim 1, wherein identifying at least one segment group comprises identifying a first segment group and a second segment group, and identifying the at least one decoding key comprises identifying a first decoding key for the first segment group and a second decoding key for the second segment group, where the first and second decoding keys are different.

6. The apparatus of claim 1, further comprising identifying at least one initialization vector for the at least one segment group, wherein the step of decoding further uses the at least one initialization vector.

7. The apparatus of claim 6, wherein the media stream further comprises an initialization vector template, and wherein the initialization vector template specifies the template for initialization vector generation.

8. An apparatus for sending an encoded media stream, wherein the apparatus comprises:

a memory module;

a processor module coupled to the memory module, wherein the memory module contains instructions that when executed by the processor cause the apparatus to send a media stream comprising:

a plurality of encoded and unencoded segments; and

segment signaling information comprising:

information sufficient to identify:

at least two segment groups each comprising at least one segment;

at least one segment decoding algorithm; and

at least one decoding key; and

at least one initialization vector,

wherein encoded segments of each of the at least two segment groups can be decoded using the at least one decoding algorithm, the at least one decoding key, and the at least one initialization vector.

9. The apparatus of claim 8, wherein the information sufficient to identify at least one initialization vector comprises a uniform resource locator (URL).

10. The apparatus of claim 8, wherein the information sufficient to identify at least one initialization vector further comprises an initialization vector template for initialization vector generation, and is sufficient to enable coordination with a third party to generate an initialization vector.

11. The apparatus of claim 8, wherein the information sufficient to identify at least two segment groups is sufficient to identify at least two segment groups comprising encoded segments, wherein the information sufficient to identify at least one decoding key is sufficient to identify at least two decoding keys for decoding the plurality of encoded segments, and wherein each decoding key is associated with one segment group comprising encoded segments.

12. The apparatus of claim 11, wherein the information sufficient to identify at least two segment groups is sufficient to identify at least two segment groups comprising encoded segments, wherein the information sufficient to identify at least one segment decoding algorithm is sufficient to identify at least two segment decoding algorithms, and wherein each segment decoding algorithm is associated with one segment group comprising encoded segments.

13. The apparatus of claim 8, wherein the information sufficient to identify at least two segment groups comprises either:

a string of positive and negative numbers, wherein a positive number *n* indicates a segment group of *n* adjacent segments that are encoded, and wherein a negative number *-m* indicates a segment group of *m* segments that are unencoded; or

a string of data that in binary code indicates encoded segments with a one and indicates unencoded segments with a zero.

14. The apparatus of claim 8, wherein the segment signaling information is not contained within a media stream initialization segment.

15. A method for decoding a media stream comprising:

receiving a media stream comprising a plurality of encoded and unencoded segments, wherein the media stream further comprises segment signaling information sufficient to:

identify a plurality of at least two segment groups each comprising at least one segment, wherein no segment group comprises both encoded and unencoded segments;

identify at least one segment decoding algorithm;

identify at least one decoding key for the encoded segments; and

decode the encoded segments;

identifying at least one segment group comprising encoded segments;

identifying at least one segment decoding algorithm;

identifying at least one decoding key; and

decoding the at least one segment group comprising encoded segments using the at least one segment decoding algorithm and the at least one decoding key.

16. The method of claim 15, wherein the segment signaling information further comprises information sufficient to query a third party for an initialization vector, wherein the method further comprises:

querying the third party for the initialization vector;

receiving the initialization vector; and

binding the initialization vector,

and wherein the step of decoding the encoded segment group further comprises using the initialization vector.

17. The method of claim 16, wherein the segment signaling information further comprises an initialization vector template specifying a template for initialization vector generation.

18. The method of claim 15, wherein the media stream further comprises information sufficient to identify a second segment decoding algorithm, and wherein the method further comprises:

identifying the second segment decoding algorithm;

identifying a second segment group comprising encoded segments; and

decoding the second segment group using the second segment decoding algorithm.

19. The method of claim 15, wherein the segment signaling information comprises a string of positive and negative numbers, wherein a positive number, n, indicates a segment group of n adjacent encoded segments, and wherein a negative number, $-m$, indicates a segment group of m unencoded segments.

20. The method of claim 15, wherein the segment signaling information is not contained within a media stream initialization segment.

CLAIMS

1. An apparatus for decoding a media stream, wherein the apparatus comprises:

a memory module;

a processor module coupled to the memory module, wherein the memory module contains instructions that when executed by the processor cause the apparatus to perform the following:

receive a media stream comprising segment signaling information and a plurality of segments, wherein the plurality of segments comprises encoded and unencoded segments, wherein the segment signaling information comprises identification of at least two segment groups each comprising at least one segment;

wherein the segment signaling information comprises either:

a string of positive and negative numbers, wherein a positive number n indicates a segment group of n adjacent encoded segments, and wherein a negative number -m indicates a segment group of m unencoded segments; or

a string of data that in binary code indicates segments that are encoded with a one and indicates segments that are not encoded with a zero;

identify at least one segment group using the segment signaling information in the media stream;

identify at least one segment decoding algorithm for the at least one segment group;

identify at least one decoding key for the at least segment group; and

decode each encoded segment within the at least segment group using the at least segment decoding algorithm and the at least one decoding key.

2. The apparatus of claim 1, wherein the segment signaling information is not contained within a media stream initialization segment.

3. The apparatus of claim 1, wherein identifying at least one segment group comprises identifying a first segment group and a second segment group, and identifying the at least one decoding algorithm comprises identifying a first segment decoding algorithm for the

first segment group and a second segment decoding algorithm for the second segment group, where the first and second segment decoding algorithms are different.

4. The apparatus of claim 1, wherein identifying at least one segment group comprises identifying a first segment group and a second segment group, and identifying the at least one decoding key comprises identifying a first decoding key for the first segment group and a second decoding key for the second segment group, where the first and second decoding keys are different.

5. The apparatus of claim 1, further comprising identifying at least one initialization vector for the at least one segment group, wherein the step of decoding further uses the at least one initialization vector.

6. The apparatus of claim 5, wherein the media stream further comprises an initialization vector template, and wherein the initialization vector template specifies the template for initialization vector generation.

7. An apparatus for sending an encoded media stream, wherein the apparatus comprises:

a memory module;

a processor module coupled to the memory module, wherein the memory module contains instructions that when executed by the processor cause the apparatus to send a media stream comprising:

a plurality of encoded and unencoded segments; and

segment signaling information comprising:

information sufficient to identify:

at least two segment groups each comprising at least one segment;

at least one segment decoding algorithm; and

at least one decoding key; and

at least one initialization vector,

wherein the information sufficient to identify at least two segment groups comprises either:

a string of positive and negative numbers, wherein a positive number n indicates a segment group of n adjacent segments that are encoded, and wherein a negative number -m indicates a segment group of m segments that are unencoded; or

a string of data that in binary code indicates encoded segments with a one and indicates unencoded segments with a zero;

wherein encoded segments of each of the at least two segment groups can be decoded using the at least one decoding algorithm, the at least one decoding key, and the at least one initialization vector.

8. The apparatus of claim 7, wherein the information sufficient to identify at least one initialization vector comprises a uniform resource locator (URL).

9. The apparatus of claim 7, wherein the information sufficient to identify at least one initialization vector further comprises an initialization vector template for initialization vector generation, and is sufficient to enable coordination with a third party to generate an initialization vector.

10. The apparatus of claim 7, wherein the information sufficient to identify at least two segment groups is sufficient to identify at least two segment groups comprising encoded segments, wherein the information sufficient to identify at least one decoding key is sufficient to identify at least two decoding keys for decoding the plurality of encoded segments, and wherein each decoding key is associated with one segment group comprising encoded segments.

11. The apparatus of claim 10, wherein the information sufficient to identify at least two segment groups is sufficient to identify at least two segment groups comprising encoded segments, wherein the information sufficient to identify at least one segment decoding algorithm is sufficient to identify at least two segment decoding algorithms, and wherein each segment decoding algorithm is associated with one segment group comprising encoded segments.

12. The apparatus of claim 7, wherein the segment signaling information is not contained within a media stream initialization segment.

13. A method for decoding a media stream comprising:

receiving a media stream comprising a plurality of encoded and unencoded segments, wherein the media stream further comprises segment signaling information sufficient to:

identify a plurality of at least two segment groups each comprising at least one segment, wherein no segment group comprises both encoded and unencoded segments;

identify at least one segment decoding algorithm;

identify at least one decoding key for the encoded segments; and

decode the encoded segments;

identifying at least one segment group comprising encoded segments;

identifying at least one segment decoding algorithm;

identifying at least one decoding key;

wherein the segment signaling information comprises a string of positive and negative numbers, wherein a positive number, n, indicates a segment group of n adjacent encoded segments, and wherein a negative number, -m, indicates a segment group of m unencoded segments;

and

decoding the at least one segment group comprising encoded segments using the at least one segment decoding algorithm and the at least one decoding key.

14. The method of claim 13, wherein the segment signaling information further comprises information sufficient to query a third party for an initialization vector, wherein the method further comprises:
querying the third party for the initialization vector;
receiving the initialization vector; and
binding the initialization vector,
and wherein the step of decoding the encoded segment group further comprises using the initialization vector.

15. The method of claim 14, wherein the segment signaling information further comprises an initialization vector template specifying a template for initialization vector generation.

16. The method of claim 13, wherein the media stream further comprises information sufficient to identify a second segment decoding algorithm, and wherein the method further comprises:
identifying the second segment decoding algorithm;
identifying a second segment group comprising encoded segments; and
decoding the second segment group using the second segment decoding algorithm.

17. The method of claim 13, wherein the segment signaling information is not contained within a media stream initialization segment.