CLAIMS

1. A method of retrieving media data, the method comprising:

receiving (202), by a media device from a server device in a Server And Network Assisted DASH (SAND) Parameters Enhancing Delivery, PED, message that is separate from a manifest file for the media data, information indicating at least one data structure of a plurality of data structures of a common media content that is likely to be retrieved by a plurality of user devices operated by a respective plurality of users, each of the data structures including media data, the at least one data structure comprising a first data structure, and the information indicating that the first data structure is more likely to be retrieved by the plurality of user devices than a second, different data structure of the plurality of data structures; and

in response to the information indicating that the first data structure is more likely to be retrieved by the plurality of user devices than the second data structure,

extracting (204), by the media device from the information received from the server device, the information indicating that a first data structure is more likely to be retrieved by the plurality of user devices; and

retrieving (206), by the media device from the server device, the media data of the first data structure before receiving requests for the media data of the first data structure from the user devices.

2. The method of claim 1, wherein the media device comprises a media aware network element, MANE, in communication with the server device and the plurality of user devices or a Dynamic Adaptive Streaming over HTTP, DASH, aware network element, DANE.

3. The method of claim 1, wherein the first data structure comprises one of a Dynamic Adaptive Streaming over HTTP, DASH, representation, a DASH adaptation set, or a set of media presentations including a plurality of related DASH representations and corresponding to a particular movie title.

4. The method of claim 1, wherein receiving the information comprises receiving the information in a manifest file for the media data, wherein the manifest file comprises a Dynamic Adaptive Streaming over HTTP, DASH, Media Presentation Description, MPD.

5. The method of claim 1, wherein the media device comprises a media aware network element, MANE, or a DASH aware network element, DANE, the method further comprising extracting the information from the PED message and updating relative consumption or request rates using the extracted information.

6. The method of claim 1, wherein the PED message includes a value for an @mpdId element that identifies a media presentation description, MPD, to which the PED message applies, a value for the @contentRequestRate element indicating a relative consumption or request rate for media data corresponding to the MPD, and an array of {@repId, RepRequestRate} syntax elements indicating relative consumption or request rates for respective representations.

7. The method of claim 1, wherein the PED message includes a DASH MPD for the media data.

8. A media device for retrieving media data, the media device comprising:

means for receiving, from a server device in a Server And Network Assisted DASH (SAND) Parameters Enhancing Delivery, PED, message that is separate from a manifest file for the media data, information indicating at least one data structure of a plurality of data structures of a common media content that is likely to be retrieved by a plurality of user devices operated by a respective plurality of users, each of the data structures including media data, the at least one data structure comprising a first data structure, and the information indicating that the first data structure is more likely to be retrieved by the plurality of user devices than a second, different data structure of the plurality of data structures; and

means for extracting (204), from the information received from the server device, the information indicating that a first data structure is more likely to be retrieved by the plurality of user devices; and

means for retrieving, from the server device, the media data of the first data structure before receiving requests for the media data of the first data structure from the user devices in response to the information indicating that the first data structure is more likely to be retrieved by the plurality of user devices than the second data structure.

9. A computer-readable storage medium having stored thereon instructions that, when executed, cause a processor of a media device to carry out the method of any of claims 1 to 7.