CLAIMS

1. A method for playing on a player of a client device a content streamed in a network, said content consisting of a sequence of segments available in a plurality of quality levels, the player being configured so as to choose the quality level of the segments as a function of at least one parameter representative of a segment reception rate, according to an Adaptive BitRate, ABR, logic of the player; the client device comprising a first buffer for storing segments in a format adapted for transferring within the network, the method comprises performing by a processing unit of the client device:

(a0) training said model from said database of training examples each associating a vector of measured parameters representative of a segment reception rate with the corresponding quality level subsequently chosen by the player according to its ABR logic;

(a) receiving from the player a request for a current segment at a first quality level;

(b) estimating, for a second quality level, an optimal response delay such that providing the requested current segment at the expiration of said optimal response delay will cause the player to request according to its ABR logic a next segment at said second quality level, as a function of a model trained from a database of training examples each associating a vector of measured parameters representative of a segment reception rate with the corresponding quality level subsequently chosen by the player according to its ABR logic;

(c) providing the requested current segment from the first buffer memory at the expiration of said estimated optimal response delay.

2. A method according to claim 1, wherein said ABR logic is defined by a first function of said at least one parameter representative of a segment reception rate, said model approximating the first function.

3. A method according to one of claims 1 and 2, wherein the client device further comprises a second buffer for storing segments in a format

adapted for being played by the player, said current segment being provided at step (c) to said second buffer.

4. A method according to claim 3, wherein said parameter representative of a segment reception rate is a buffer level of the second buffer and/or a bandwidth.

5. A method according to claim 4, wherein, for a given segment, the vector of measured parameters representative of a segment reception rate comprises at least:

- the buffer level of the second buffer at which said given segment has been requested by the player
- a segment size and/or a segment download time and/or the segment bitrate;
- the bandwidth measured for said given segment.

6. A method according to claim 2, wherein said model is a linear regression of the first function parametrized by a vector of model parameters, step (a0) comprising determining said vector of model parameters using Ordinary Least Square techniques.

7. A method according to claim 6, wherein step (a0) comprises building a training matrix from all the vectors of measured parameters representative of a segment reception rate, and a training vector from all the corresponding quality levels subsequently chosen by the player according to its ABR logic, and determining said training parameters by using a normal equation on the training matrix and the training vector, according to the formula $\theta = (X^T X)^{-1} X^T Y$, wherein X is the training matrix, Y is the training vector, and θ is the vector of model parameters.

8. A method according to any one of claims 1 to 7, wherein step (a0) comprises training, for each a plurality of classes of ABR logic, a model associated to the class.

9. A method according to claim 8, wherein step (a0) comprises verifying the plurality of trained models, and selecting one of them as the model properly predicting the ABR logic of the player.

10. A method according to any one of claims 1 to 9, comprising a further step (d) of verifying that a request for the next segment at the second quality level is received from the player.

11. A method according to claim 10, wherein step (d) comprises, if it is not verified a given number of times that a request for the next segment at the second quality level is received from the player, triggering a new training of the model from said database of training examples.

12. A device for playing on a player a content streamed in a network, said content consisting of a sequence of segments available in a plurality of quality levels, the player being configured so as to choose the quality level of the segments as a function of at least one parameter representative of a segment reception rate, according to an Adaptive BitRate, ABR, logic of the player; the client device comprising a first buffer for storing segments in a format adapted for transferring within the network, the client device comprises a processing unit implementing:

(a0) training said model from said database of training examples each associating a vector of measured parameters representative of a segment reception rate with the corresponding quality level subsequently chosen by the player according to its ABR logic;

(a) receiving from the player a request for a current segment at a first quality level;

(b) estimating, for a second quality level, an optimal response delay such that providing the requested current segment at the expiration of said optimal response delay will cause the player to request according to its ABR logic a next segment at said second quality level, as a function of a model trained from a database of training examples each associating a vector of measured

parameters representative of a segment reception rate with the corresponding quality level subsequently chosen by the player according to its ABR logic;

(c) providing the requested current segment from the first buffer memory at the expiration of said estimated optimal response delay.

13. Computer program product comprising code instructions to execute a method according to one of claims 1 to 11 for playing on a player of a client device a content streamed in a network, when said program is executed on a computer

14. A non-transitory computer-readable medium, on which is stored a computer program product comprising code instructions for executing a method according to any one of claims 1 to 11 for playing on a player of a client device a content streamed in a network.