Claims:

1. A method performed by at least one processor, the method comprising:

obtaining, from a descriptor corresponding to a network based media processing (NBMP) workflow, or a task included in the NBMP workflow, a syntax element indicating a protocol characteristic of a protocol corresponding to an input or an output of the NBMP workflow or the task,

deriving the NBMP workflow based on the task; and

managing at least one media processing entity according to the derived workflow,

wherein the protocol characteristic relates to at least one from among a nonessentiality, a timing, an order, a number, a latency, and a size associated with the input or the output of the NBMP workflow or the task.

2. The method of claim 1, wherein the descriptor is one from among an input descriptor corresponding to the NBMP workflow, an output descriptor corresponding to the NBMP workflow, an input descriptor corresponding to the task, or an output descriptor corresponding to the task.

3. The method of claim 1, wherein the protocol characteristic relates to the nonessentiality associated with the input or the output,

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies that the input is not required for operation of the NBMP workflow or the task, and

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies that the output is not guaranteed to be available.

4. The method of claim 1, wherein the protocol characteristic relates to the timing associated with the input or the output,

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies a minimum possible duration between two issued pulls or a minimum allowed duration between two issued pushes, and

wherein based on the protocol characteristic corresponding to the output, the protocol characteristic specifies a minimum possible duration between the two issued pushes or a minimum allowed duration between the two issued pulls.

5. The method of claim 1, wherein the protocol characteristic relates to the order associated with the input or the output, and

wherein the protocol characteristic specifies a maximum length of out of order pushes or pulls.

6. The method of claim 1, wherein the protocol characteristic relates to the number associated with the input or the output,

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies maximum possible number of parallel pulls or a maximum allowed number of parallel pushes, and

wherein based on the protocol characteristic corresponding to the output, the protocol characteristic specifies a maximum possible number of the parallel pushes or a maximum allowed number of the parallel pulls.

7. The method of claim 1, wherein the protocol characteristic relates to the timing corresponding to the input or the output, and

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies an amount of time before data is available after a pull.

8. The method of claim 1, wherein the protocol characteristic relates to the latency of the input or the output, and

wherein the protocol characteristic specifies a maximum time for a response to a push request or a pull request.

9. The method of claim 1, wherein the protocol characteristic relates to the size of the input or the output, and

wherein the protocol characteristic specifies a maximum size of a push request or a response to a pull request.

10. A workflow manager of a media system, the workflow manager comprising:

at least one memory storing program code; and

at least one processor configured to read the program code and operate as instructed by the program code, the program code including:

obtaining code configured to cause the at least one processor to obtain, from a descriptor corresponding to a network based media processing (NBMP) workflow, or a task included in the NBMP workflow, a syntax element indicating a protocol characteristic of a protocol corresponding to an input or an output of the NBMP workflow or the task,

deriving code configured to cause the at least one processor to derive the NBMP workflow based on the task; and

managing code configured to cause the at least one processor to manage at least one media processing entity according to the derived workflow,

wherein the protocol characteristic relates to at least one from among a nonessentiality, a timing, an order, a number, a latency, and a size associated with the input or the output of the NBMP workflow or the task.

11. The workflow manager of claim 10, wherein the descriptor is one from among an input descriptor corresponding to the NBMP workflow, an output descriptor corresponding to the NBMP workflow, an input descriptor corresponding to the task, or an output descriptor corresponding to the task.

12. The workflow manager of claim 10, wherein the protocol characteristic relates to the nonessentiality associated with the input or the output,

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies that the input is not required for operation of the NBMP workflow or the task, and

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies that the output is not guaranteed to be available.

13. The workflow manager of claim 10, wherein the protocol characteristic relates to the timing associated with the input or the output,

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies a minimum possible duration between two issued pulls or a minimum allowed duration between two issued pushes, and

wherein based on the protocol characteristic corresponding to the output, the protocol characteristic specifies a minimum possible duration between the two issued pushes or a minimum allowed duration between the two issued pulls.

14. The workflow manager of claim 10, wherein the protocol characteristic relates to the order associated with the input or the output, and

wherein the protocol characteristic specifies a maximum length of out of order pushes or pulls.

15. The workflow manager of claim 10, wherein the protocol characteristic relates to the number associated with the input or the output,

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies maximum possible number of parallel pulls or a maximum allowed number of parallel pushes, and

wherein based on the protocol characteristic corresponding to the output, the protocol characteristic specifies a maximum possible number of the parallel pushes or a maximum allowed number of the parallel pulls.

16. The workflow manager of claim 10, wherein the protocol characteristic relates to the timing corresponding to the input or the output, and

wherein based on the protocol characteristic corresponding to the input, the protocol characteristic specifies an amount of time before data is available after a pull.

17. The workflow manager of claim 10, wherein the protocol characteristic relates to the latency of the input or the output, and

wherein the protocol characteristic specifies a maximum time for a response to a push request or a pull request.

18. The workflow manager of claim 10, wherein the protocol characteristic relates to the size of the input or the output, and

wherein the protocol characteristic specifies a maximum size of a push request or a response to a pull request.

19. A non-transitory computer-readable medium storing computer code that is configured to, when executed by at least one processor that implements a workflow manager of a media system, cause the at least one processor to:

obtain, from a descriptor corresponding to a network based media processing (NBMP) workflow, or a task included in the NBMP workflow, a syntax element indicating a protocol characteristic of a protocol corresponding to an input or an output of the NBMP workflow or the task,

derive the NBMP workflow based on the task; and

manage at least one media processing entity according to the derived workflow,

wherein the protocol characteristic relates to at least one from among a nonessentiality, a timing, an order, a number, a latency, and a size associated with the input or the output of the NBMP workflow or the task.

20. The non-transitory computer-readable medium of claim 19, wherein the descriptor is one from among an input descriptor corresponding to the NBMP workflow, an output descriptor corresponding to the NBMP workflow, an input descriptor corresponding to the task, or an output descriptor corresponding to the task.