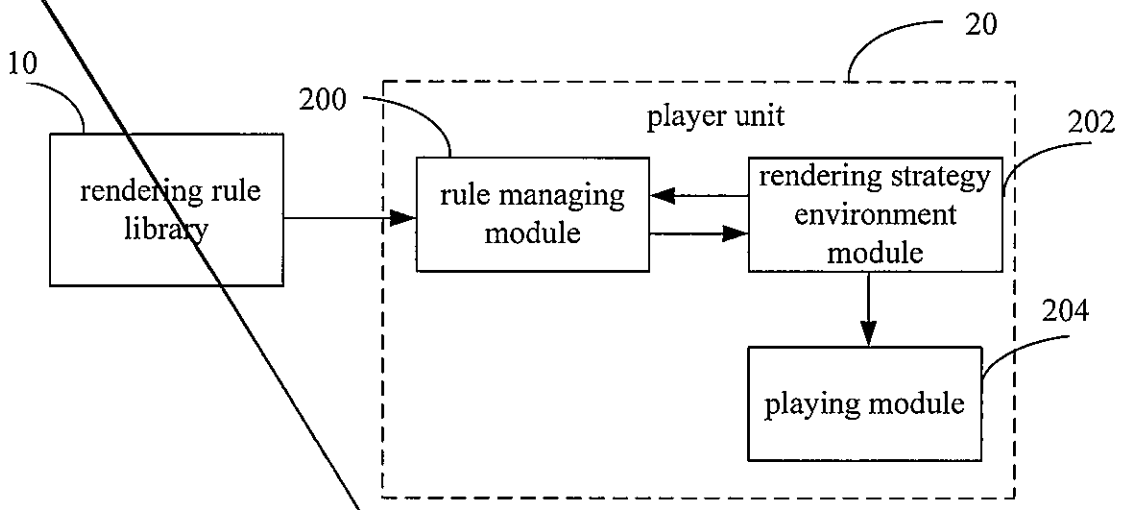

10
20
200
player unit
202
rendering rule library
rule managing module
rendering strategy environment module
204
playing module

FIG.1

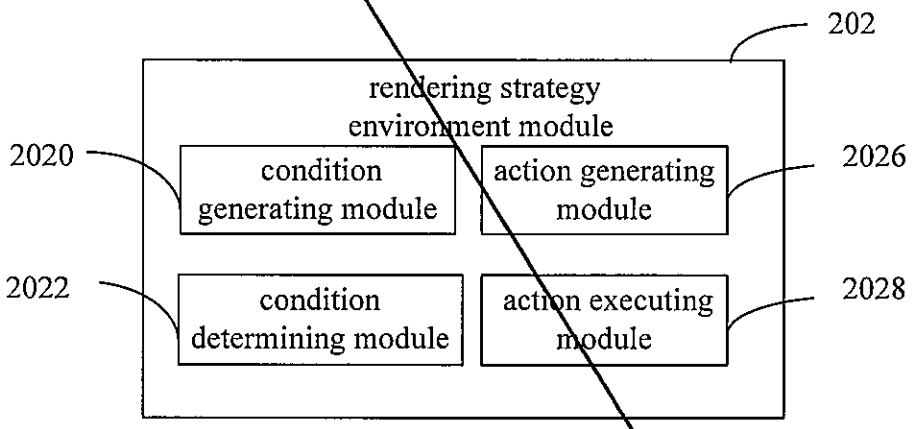

202
rendering strategy environment module
2020
condition generating module
action generating module
2026
2022
condition determining module
action executing module
2028

FIG.2

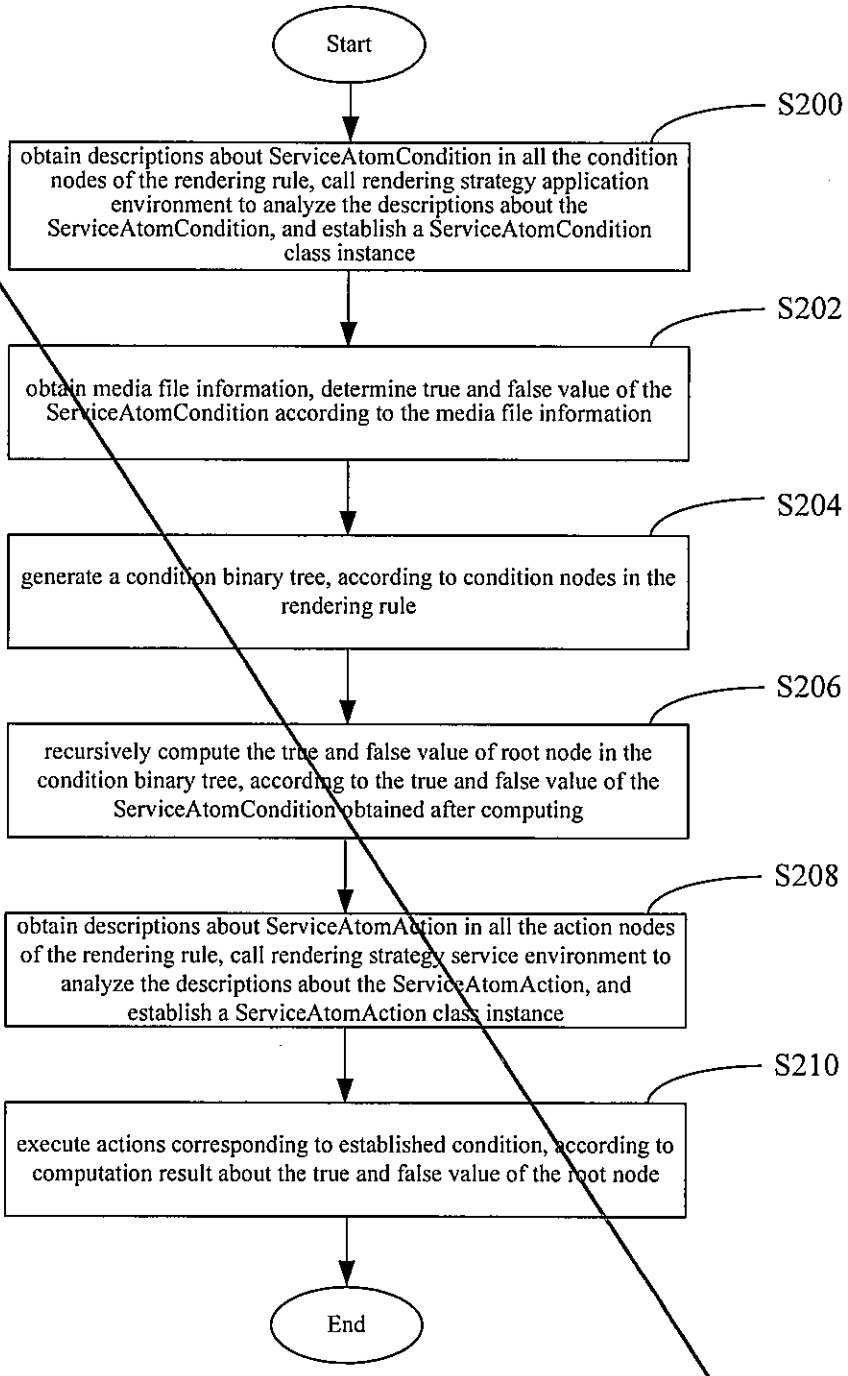

Start
S200
obtain descriptions about ServiceAtomCondition in all the condition nodes of the rendering rule, call rendering strategy application environment to analyze the descriptions about the ServiceAtomCondition, and establish a ServiceAtomCondition class instance
S202
obtain media file information, determine true and false value of the ServiceAtomCondition according to the media file information
S204
generate a condition binary tree, according to condition nodes in the rendering rule
S206
recursively compute the true and false value of root node in the condition binary tree, according to the true and false value of the ServiceAtomCondition obtained after computing
S208
obtain descriptions about ServiceAtomAction in all the action nodes of the rendering rule, call rendering strategy service environment to analyze the descriptions about the ServiceAtomAction, and establish a ServiceAtomAction class instance
S210
execute actions corresponding to established condition, according to computation result about the true and false value of the root node
End

FIG.5

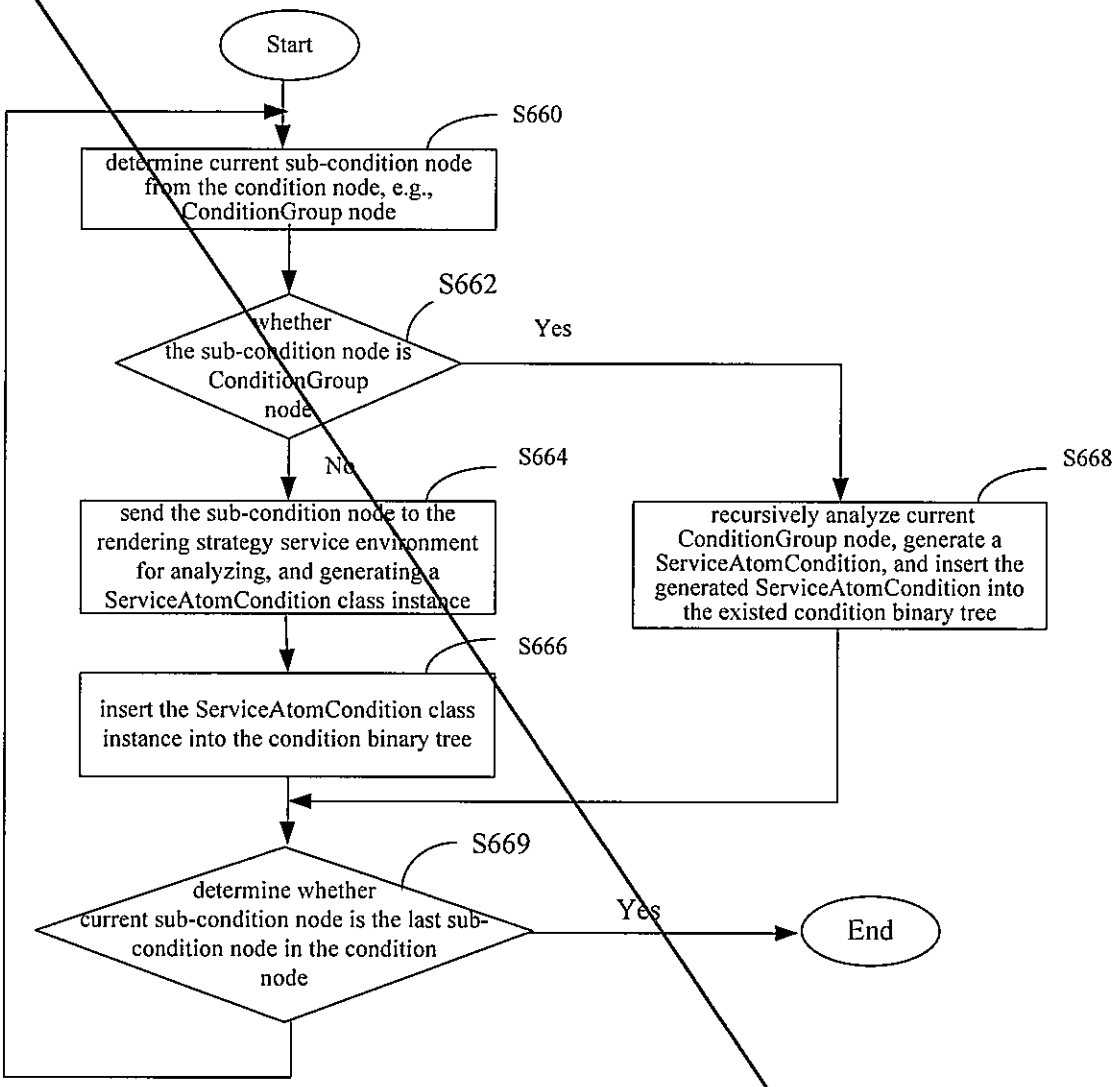

Start
S660
determine current sub-condition node from the condition node, e.g., ConditionGroup node
S662
whether the sub-condition node is ConditionGroup node
Yes
No
S664
send the sub-condition node to the rendering strategy service environment for analyzing, and generating a ServiceAtomCondition class instance
S666
insert the ServiceAtomCondition class instance into the condition binary tree
S668
recursively analyze current ConditionGroup node, generate a ServiceAtomCondition, and insert the generated ServiceAtomCondition into the existed condition binary tree
S669
determine whether current sub-condition node is the last sub-condition node in the condition node
Yes
End

FIG.7

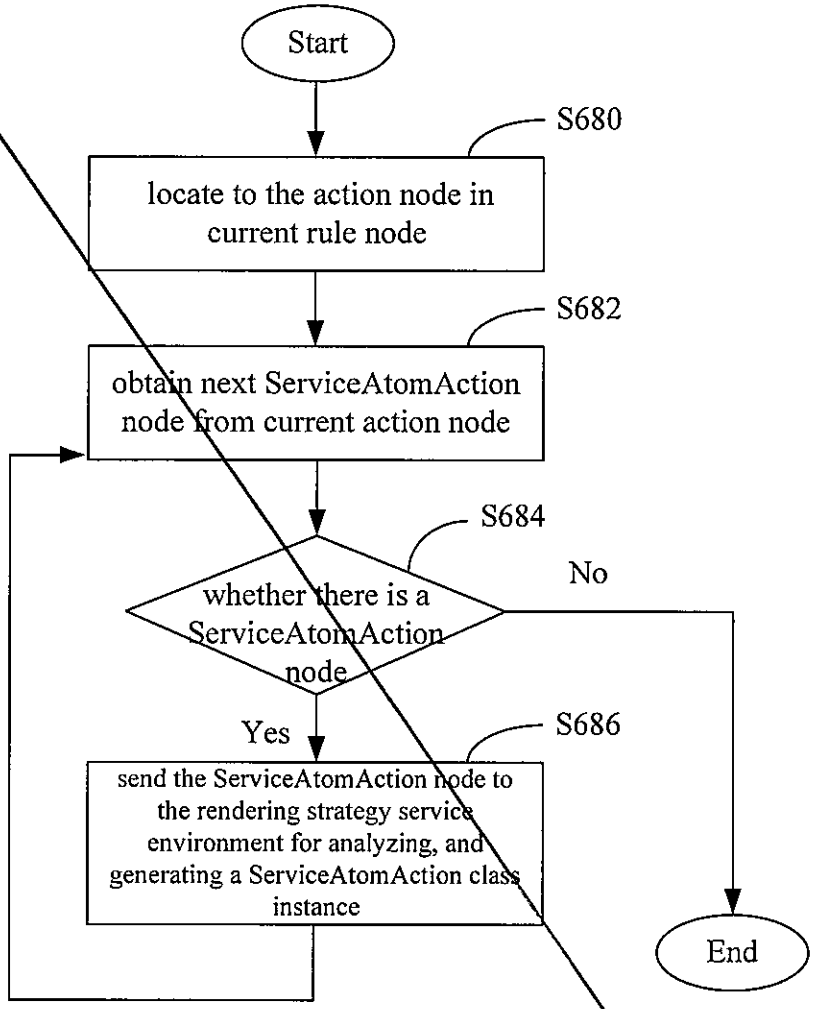

Start
S680
locate to the action node in current rule node
S682
obtain next ServiceAtomAction node from current action node
S684
whether there is a ServiceAtomAction node
No
Yes
S686
send the ServiceAtomAction node to the rendering strategy service environment for analyzing, and generating a ServiceAtomAction class instance
End

FIG.8

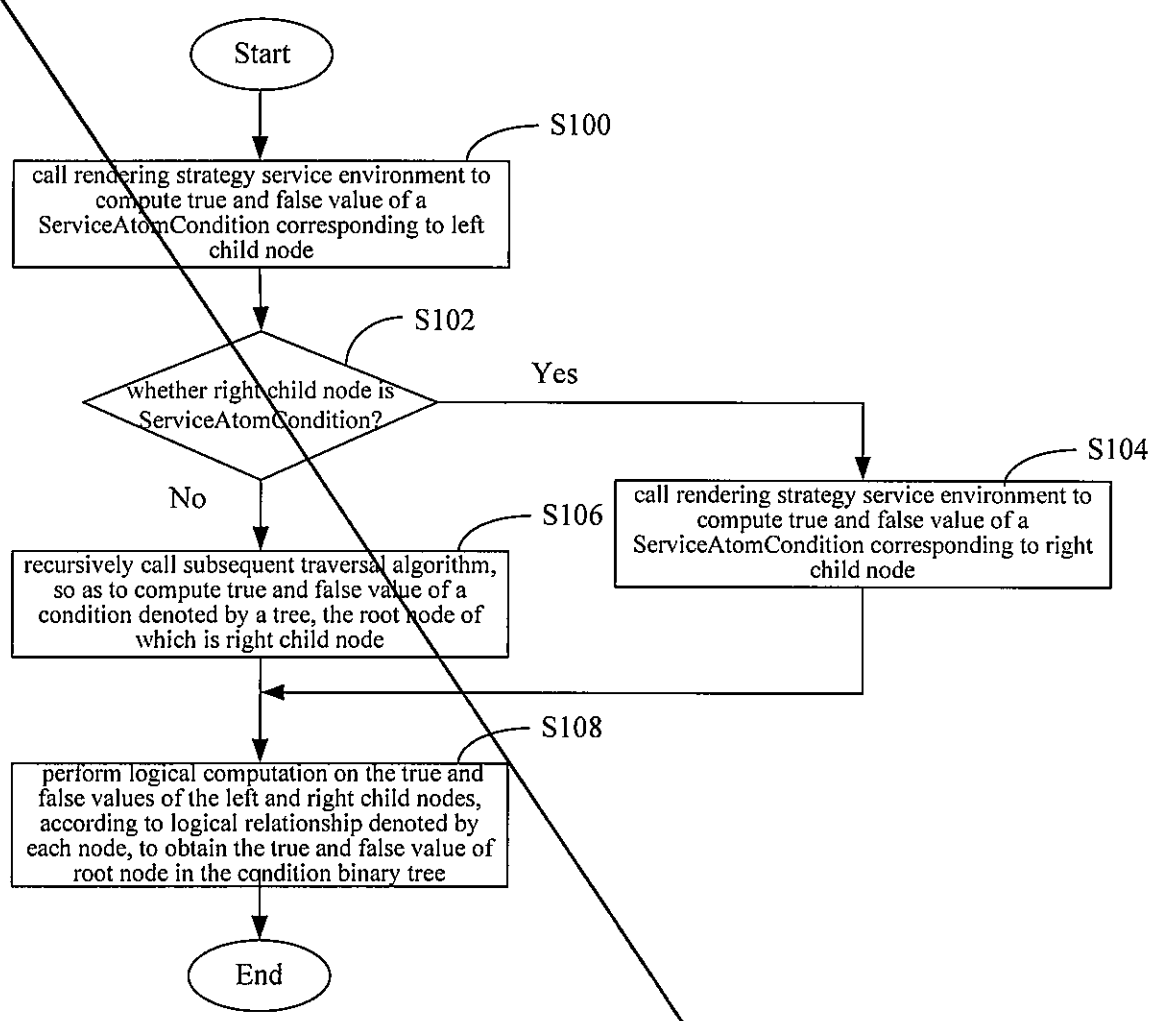

Start
S100
call rendering strategy service environment to compute true and false value of a ServiceAtomCondition corresponding to left child node
S102
whether right child node is ServiceAtomCondition?
Yes
No
S104
call rendering strategy service environment to compute true and false value of a ServiceAtomCondition corresponding to right child node
S106
recursively call subsequent traversal algorithm, so as to compute true and false value of a condition denoted by a tree, the root node of which is right child node
S108
perform logical computation on the true and false values of the left and right child nodes, according to logical relationship denoted by each node, to obtain the true and false value of root node in the condition binary tree
End

FIG.10

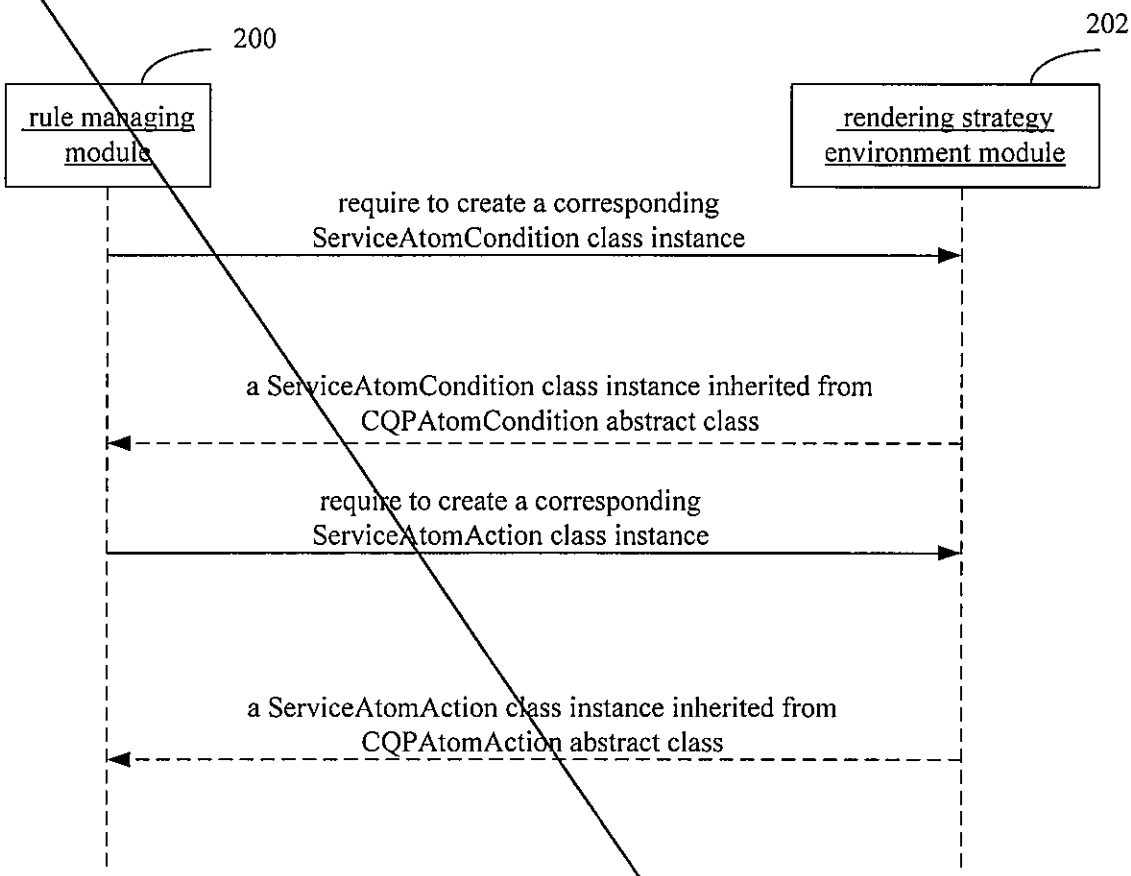

200
202
rule managing module
rendering strategy environment module
require to create a corresponding ServiceAtomCondition class instance
a ServiceAtomCondition class instance inherited from CQPAtomCondition abstract class
require to create a corresponding ServiceAtomAction class instance
a ServiceAtomAction class instance inherited from CQPAtomAction abstract class

FIG.11

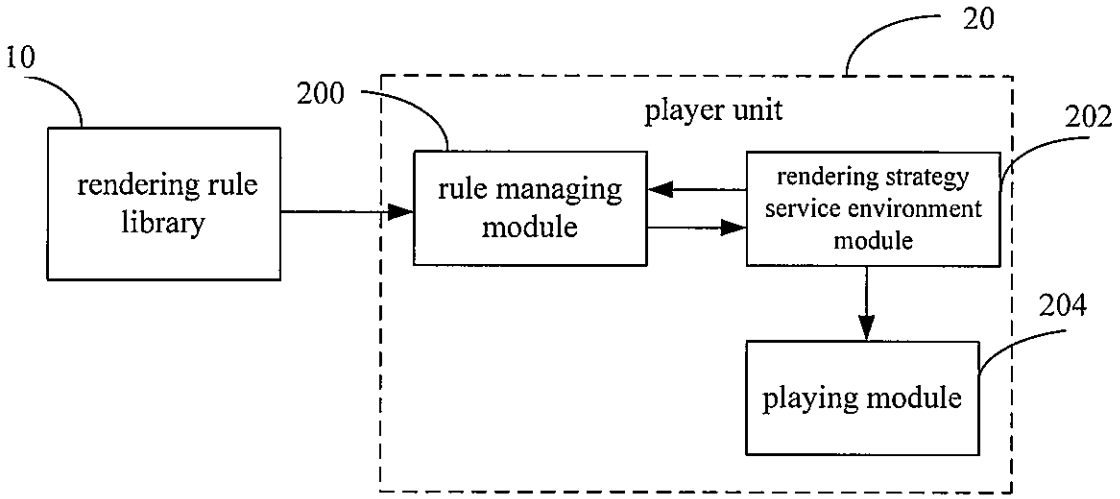

20
10
200
player unit
202
rendering rule library
rule managing module
rendering strategy service environment module
204
playing module

FIG.1

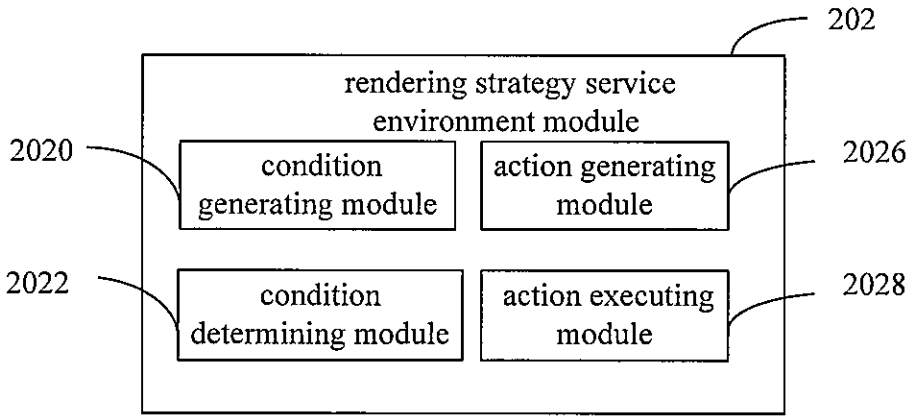

202
rendering strategy service environment module
2020
condition generating module
action generating module
2026
2022
condition determining module
action executing module
2028

FIG.2

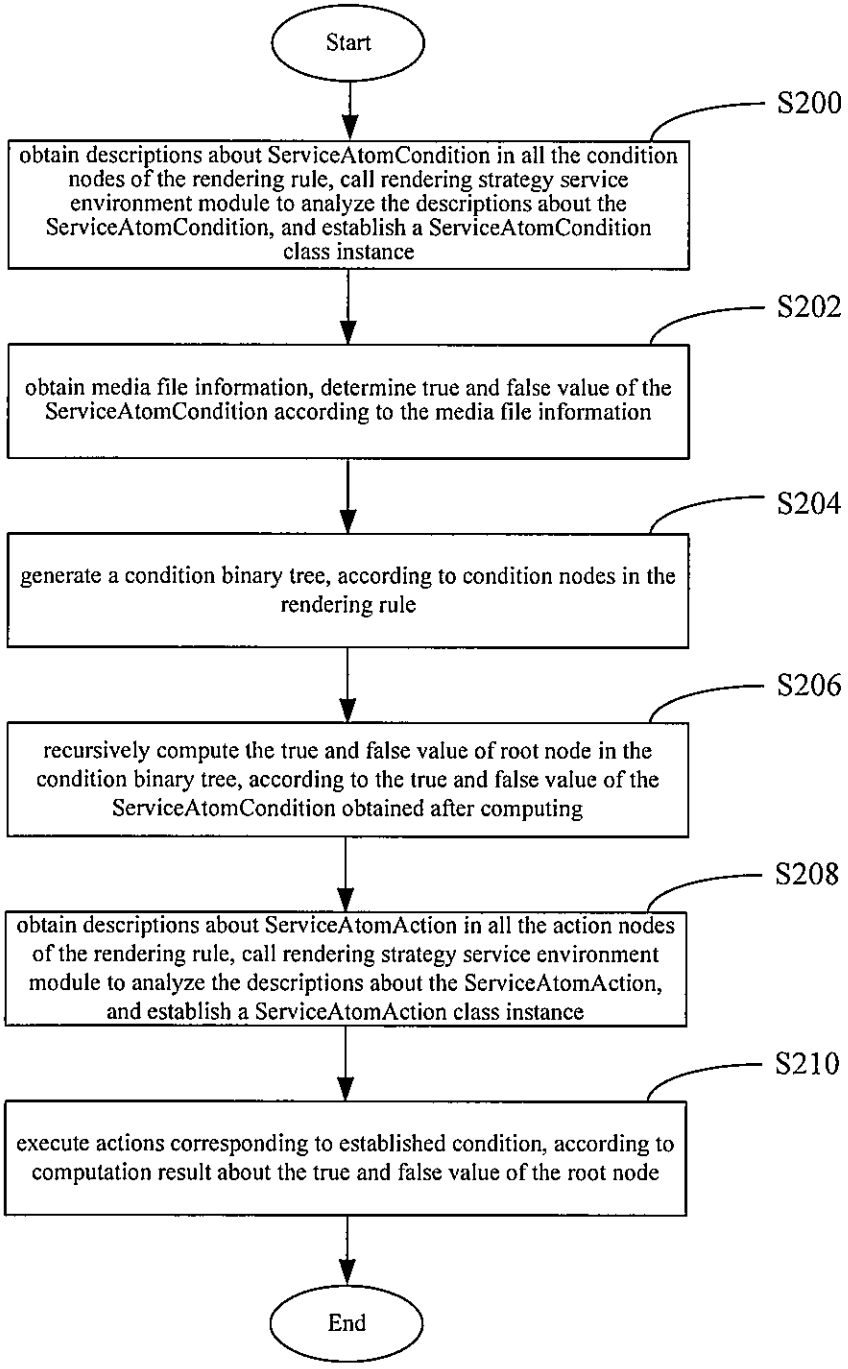
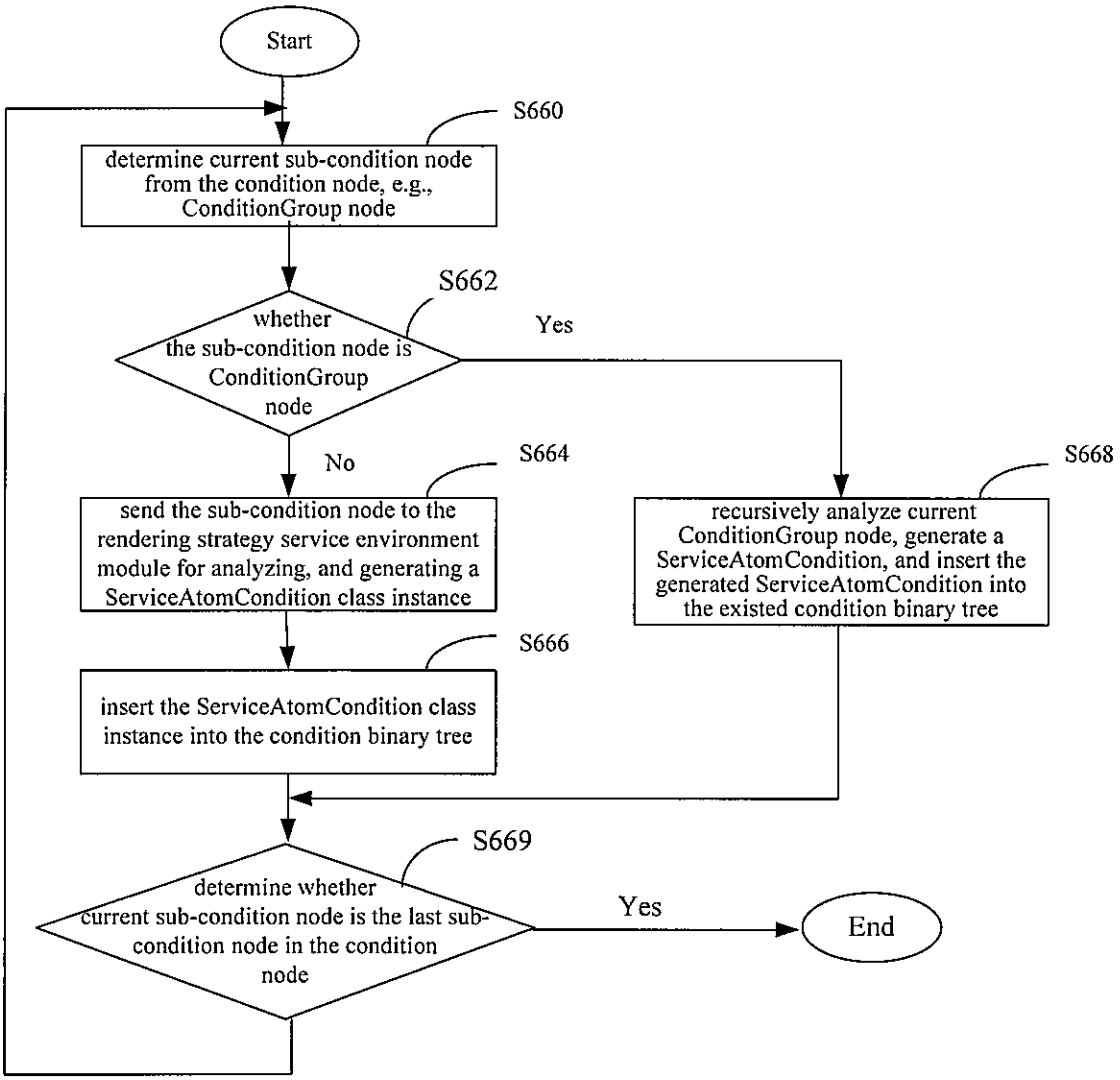

Start
S200
obtain descriptions about ServiceAtomCondition in all the condition nodes of the rendering rule, call rendering strategy service environment module to analyze the descriptions about the ServiceAtomCondition, and establish a ServiceAtomCondition class instance
S202
obtain media file information, determine true and false value of the ServiceAtomCondition according to the media file information
S204
generate a condition binary tree, according to condition nodes in the rendering rule
S206
recursively compute the true and false value of root node in the condition binary tree, according to the true and false value of the ServiceAtomCondition obtained after computing
S208
obtain descriptions about ServiceAtomAction in all the action nodes of the rendering rule, call rendering strategy service environment module to analyze the descriptions about the ServiceAtomAction, and establish a ServiceAtomAction class instance
S210
execute actions corresponding to established condition, according to computation result about the true and false value of the root node
End

FIG.5


Start
S660
determine current sub-condition node from the condition node, e.g., ConditionGroup node
S662
whether the sub-condition node is ConditionGroup node
Yes
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S664
send the sub-condition node to the rendering strategy service environment module for analyzing, and generating a ServiceAtomCondition class instance
S668
recursively analyze current ConditionGroup node, generate a ServiceAtomCondition, and insert the generated ServiceAtomCondition into the existed condition binary tree
S666
insert the ServiceAtomCondition class instance into the condition binary tree
S669
determine whether current sub-condition node is the last sub-condition node in the condition node
Yes
End

FIG.7

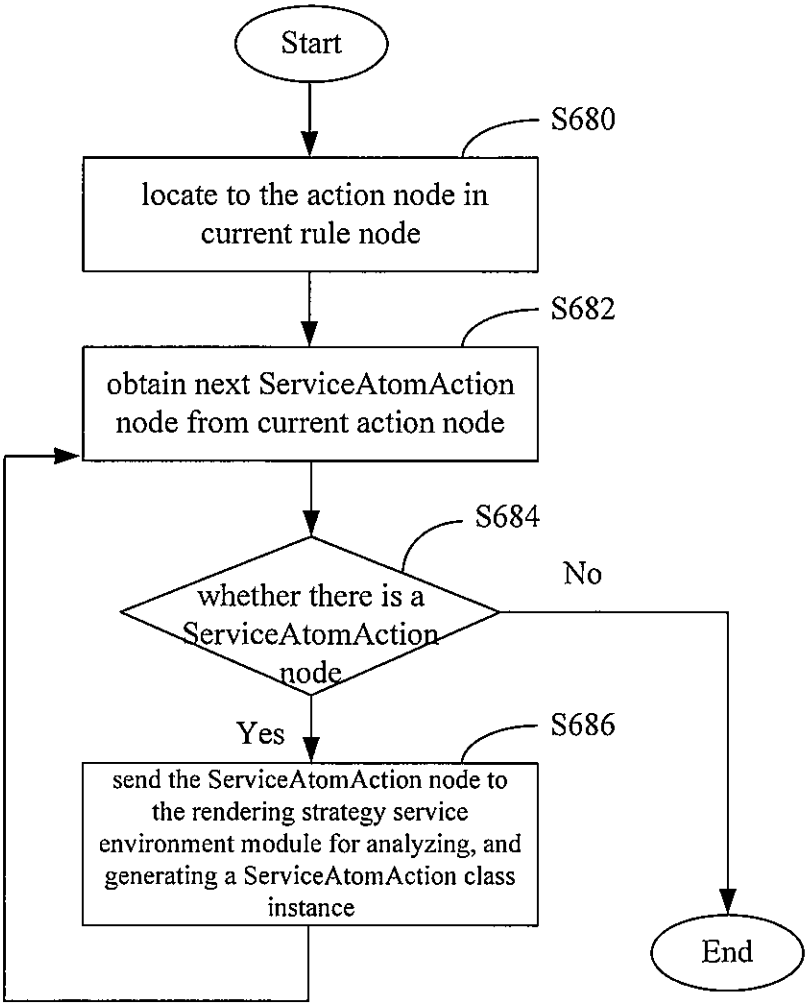
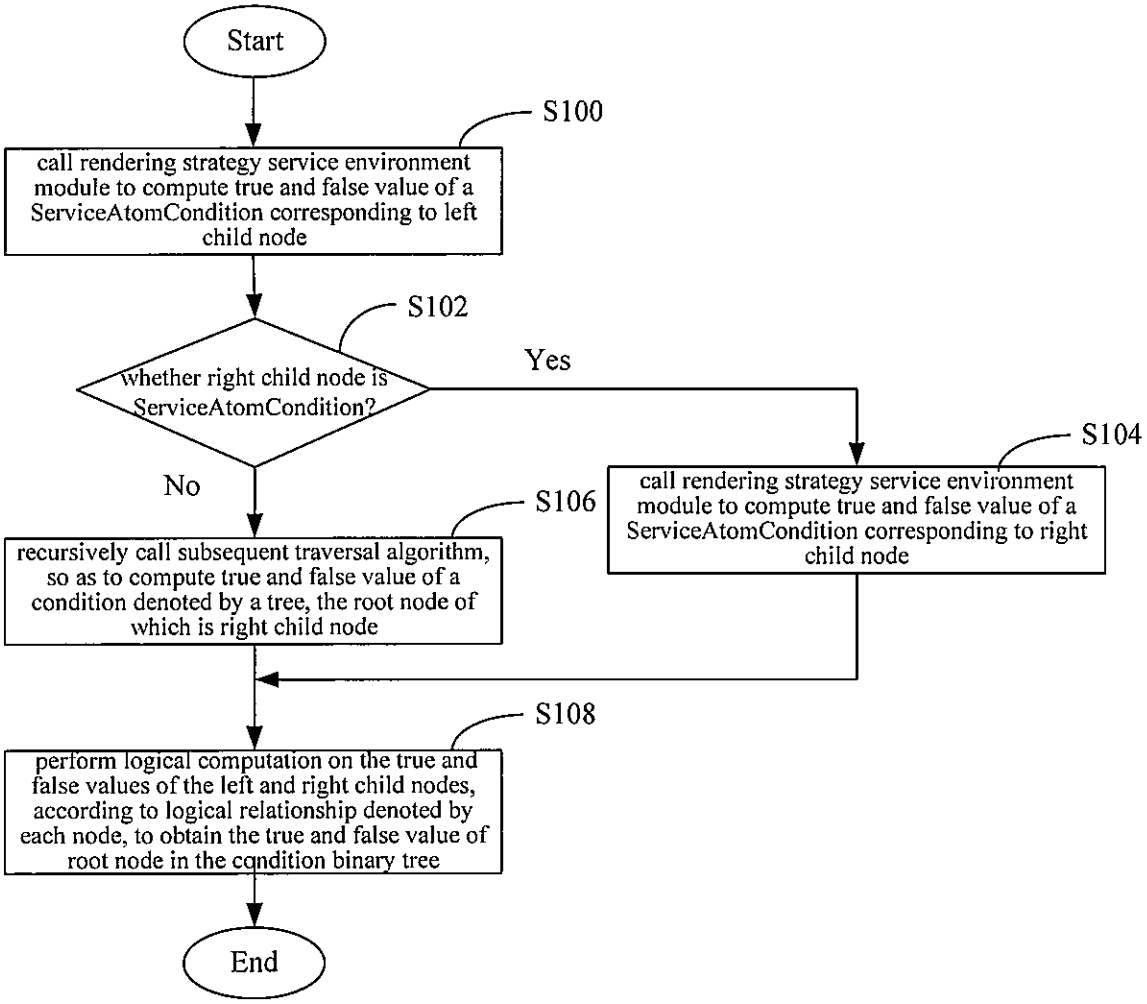

Start
S680
locate to the action node in current rule node
S682
obtain next ServiceAtomAction node from current action node
S684
whether there is a ServiceAtomAction node
No
Yes
S686
send the ServiceAtomAction node to the rendering strategy service environment module for analyzing, and generating a ServiceAtomAction class instance
End

FIG.8


Start
S100
call rendering strategy service environment module to compute true and false value of a ServiceAtomCondition corresponding to left child node
S102
whether right child node is ServiceAtomCondition?
Yes
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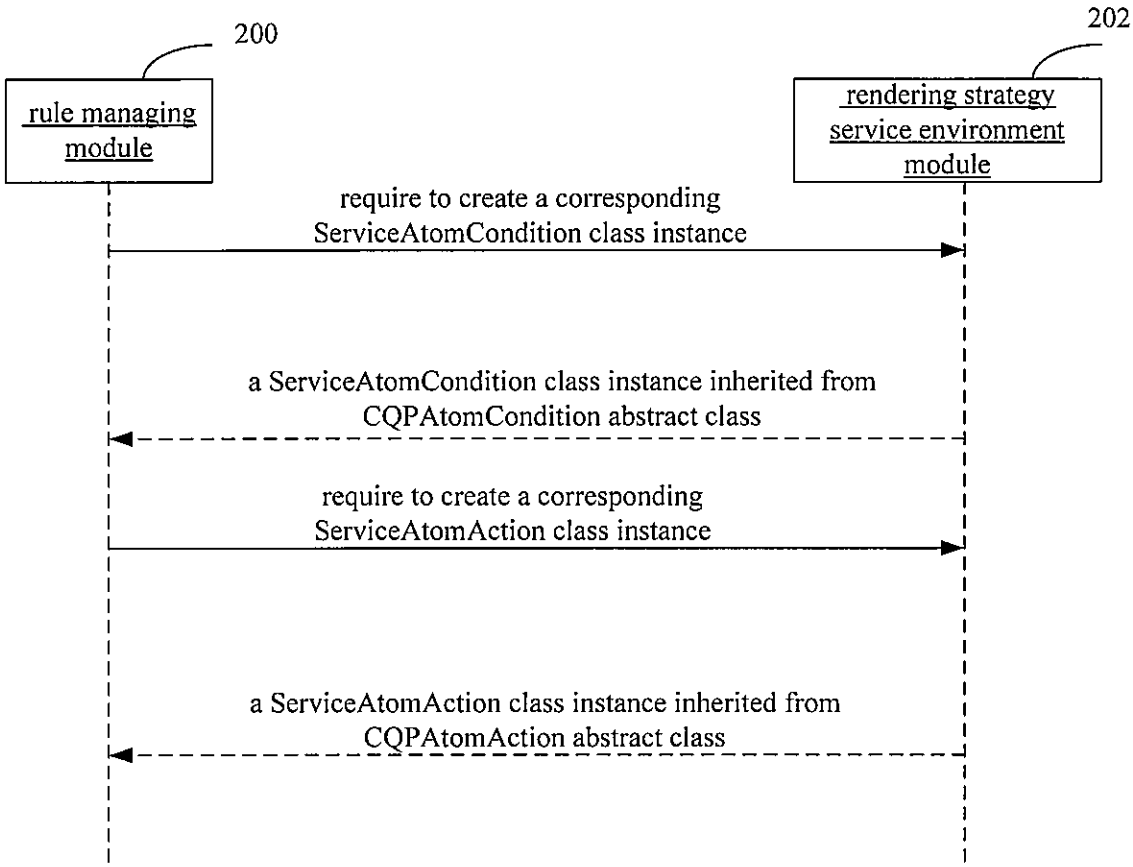
S104
call rendering strategy service environment module to compute true and false value of a ServiceAtomCondition corresponding to right child node
S106
recursively call subsequent traversal algorithm, so as to compute true and false value of a condition denoted by a tree, the root node of which is right child node
S108
perform logical computation on the true and false values of the left and right child nodes, according to logical relationship denoted by each node, to obtain the true and false value of root node in the condition binary tree
End

FIG.10


200
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rule managing module
rendering strategy service environment module
require to create a corresponding ServiceAtomCondition class instance
a ServiceAtomCondition class instance inherited from CQPAtomCondition abstract class
require to create a corresponding ServiceAtomAction class instance
a ServiceAtomAction class instance inherited from CQPAtomAction abstract class

FIG.11