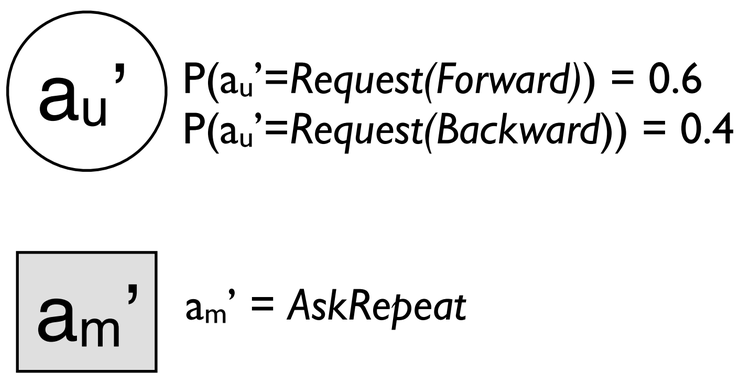
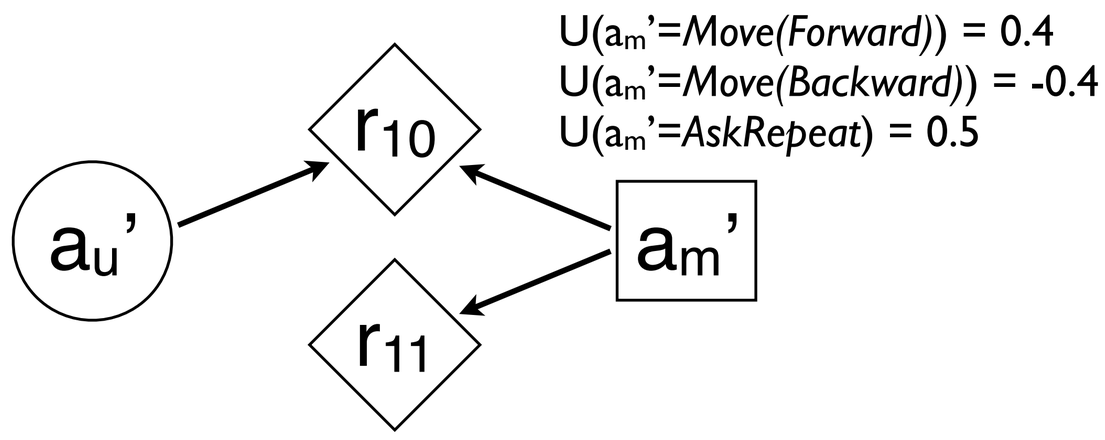
New dialogue act processed by NLU component

a_u'

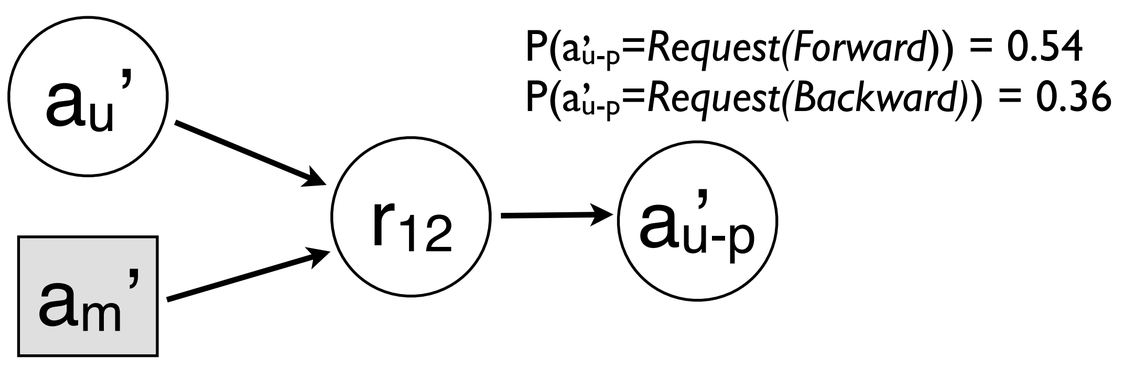
$P(a_u'=Request(Forward)) = 0.6$
$P(a_u'=Request(Backward)) = 0.4$

Step 1: insertion of new variable a_u



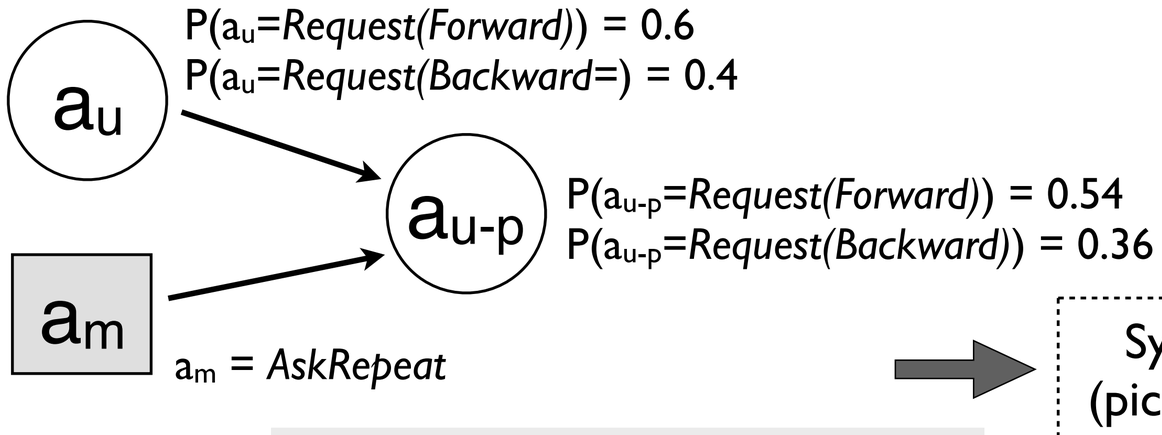


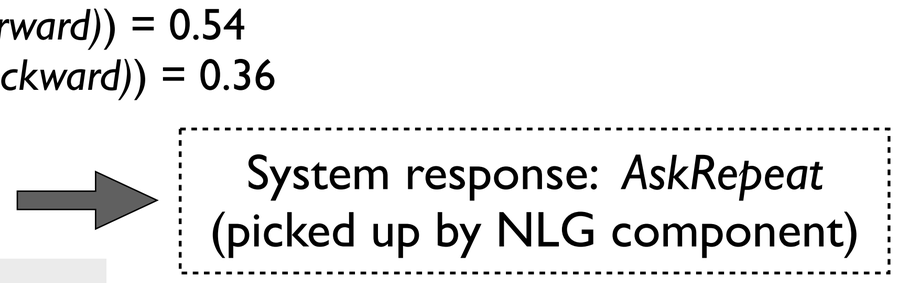
Step 2: triggering utility model m_1



Step 3: selection of optimal action

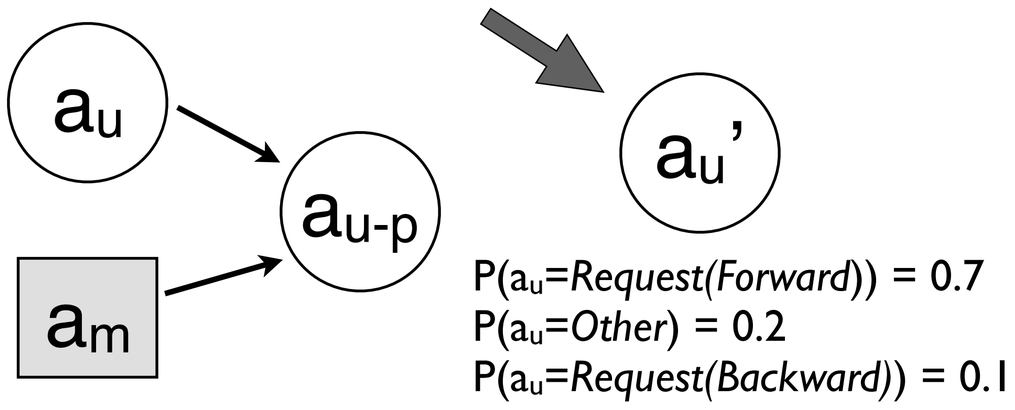
Step 4: triggering prediction model m_2

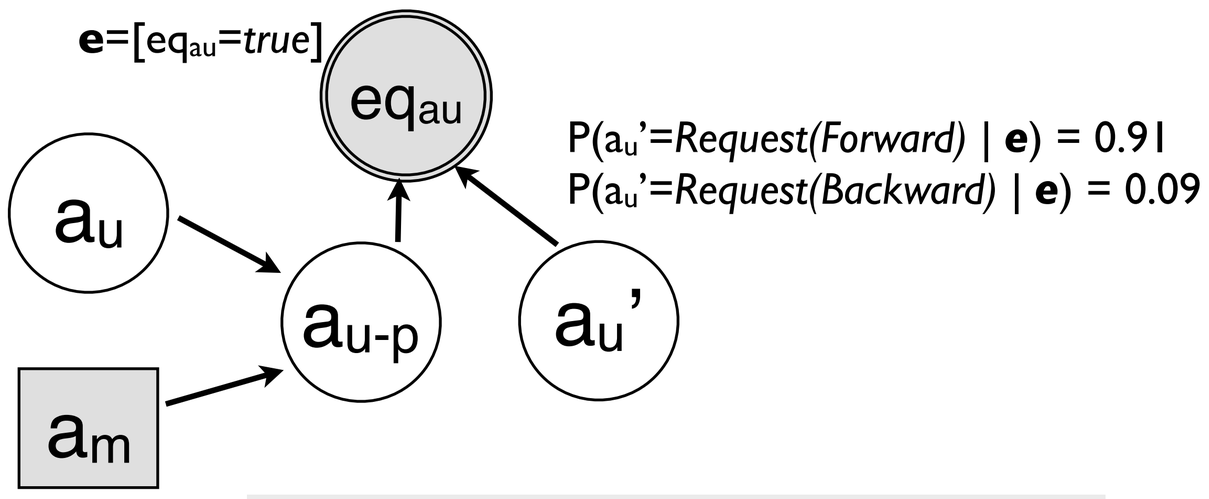




Step 5: state pruning

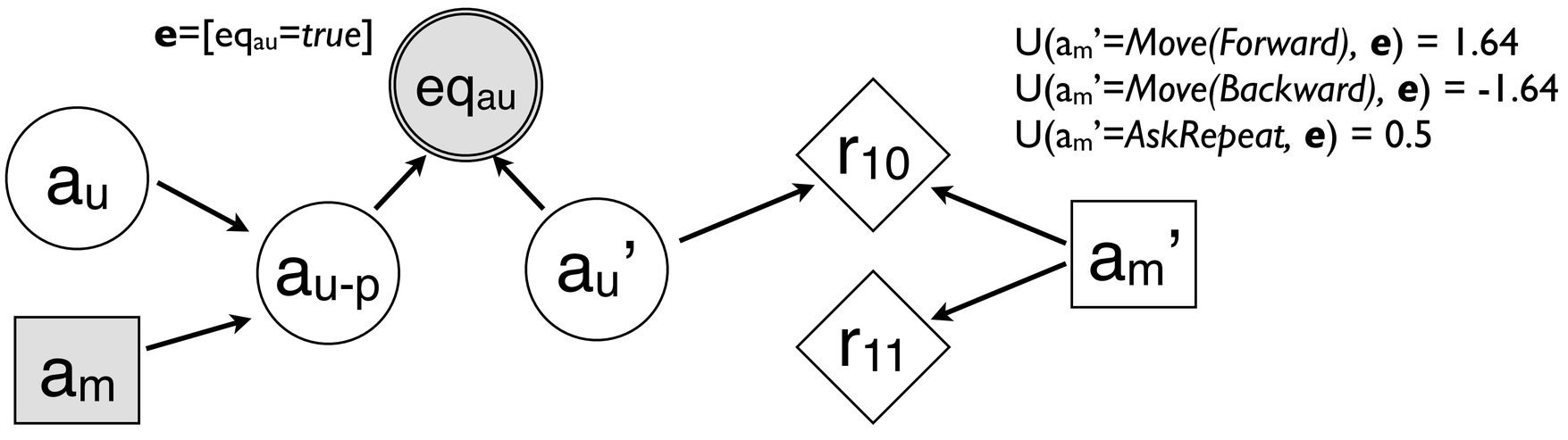
New dialogue act processed by NLU component



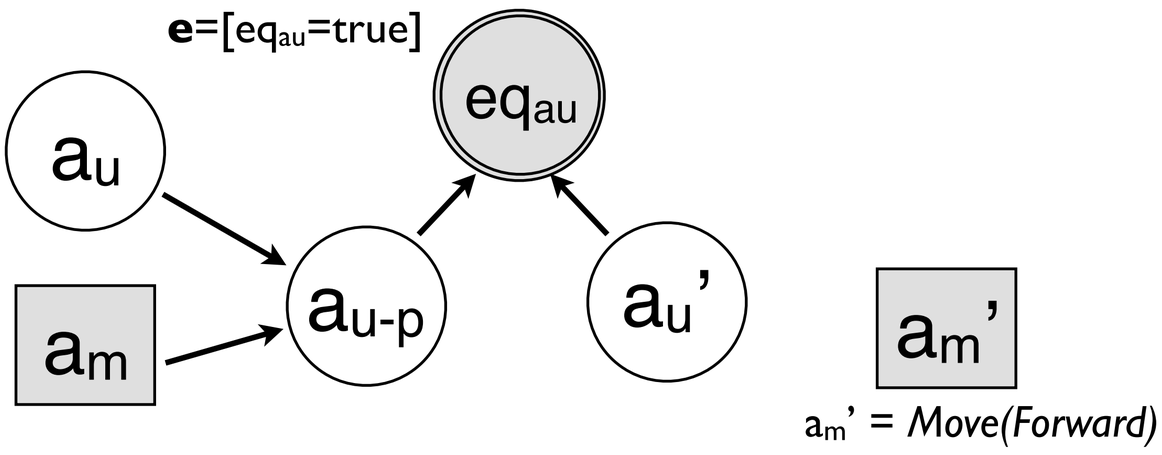


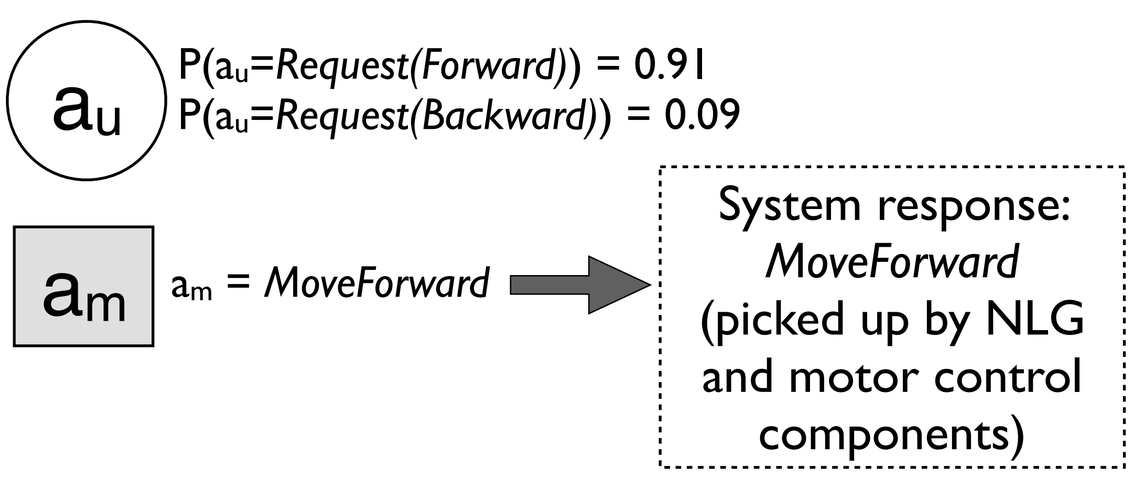
Step 6: insertion of new variable a_u

Step 7: insertion of equivalence node between prediction and observation



Step 8: triggering utility model m_1





Step 9: selection of optimal action

Step 10: state pruning