|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Utterance | Values | App condition | Principal | Note |
| Propose | C | isDom  c = mostPref | P2 | R1: risk of infinite loop |
| Propose | CurrentMostPref | isDom | P3 |  |
| StatePreference | (a,b)/ c,a,b ∊ C | isPeer | P1 |  |
| AskPreference | (a,b)/ c,a,b ∊ C | isSub | P1 |  |

**Reject(C):**

* MostPref: compute the agent mostPreferred value for the input criterion.
* CurrentMostPref: Compute the mostPreferred value which has not been rejected yet.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Utterance | Values | App condition | Principal | Note |
| Propose | O | isDom  O = mostPref | P2 | R1: risk of infinite loop |
| Propose | CurrentMostPref | isDom | P3 |  |
| StatePreference | (updateCC) | isPeer | P1 | R2: updateCC  Returns null |
| AskPreference | ( updateCC) | isSub | P1 | R2: updateCC  Returns null |

**Reject (O)**

* UpdateCC: update the current discussed criterion.

**Propose(C):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Utterance | Values | App condition | Principal | Note |
| Accept | C | IsAcceptable(C) | P1+P3 |  |
| Propose | CurrentMostPref | isDom  !isAcceptable(C) | P2 |  |
| Reject | C | isPeer  !isAcceptable(C) | P2+P1+P3 |  |
| StatePreference | (c,x)/  x∉ other(c,x) | isSub  !isAcceptable(C) | P1 |  |

**Propose(O):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Utterance | Values | App condition | Principal | Note |
| Close  Success |  | IsAcceptable(C) | P1+P3 |  |
| Propose | CurrentMostPref | isDom | P2 |  |
| Reject | O | !isAcceptable(C)  isPeer | P2+P1+P3 |  |
| StatePreference | cause | isSub | P1 |  |

* Cause: Compute the least scored value of the proposed option. It allows the submissive agent to justify his reject.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Utterance | Values | App condition | Principal | Note |
| Propose | b | IsAcceptable(b) | P1+P3 |  |
| Propose | ComputeOption | isDom | P2+P3 |  |
| Propose | currentMostPref | isDom  currentMostPref!= null | P2+P3 |  |
| StatePreference | reactToUserPref | StatedValues!=null | P1+P3 |  |
| StatePreference | updateCC | isPeer | P1+P3 | R2: updateCC  Returns null |
| AskPreference | updateCC | isSub | P1+P3 | R2: updateCC  Returns null |

**StatePreference(a,b): I prefere a more than b**

* reactToUserPref:
  + if (\* < b) ∊ Self and (\* < b)∉ other => State (\*, b)
  + if ( a < \*) ∊ Self and (a < \*)∉ other => State (a, \*)
  + if (a<b) ∉ oas => state(a, b)
  + else: let *c* such that (a,c) ∉ oas => State(a,c)
    - let *d* such that (d,b) ∉ oas => State(d,b)