ELECTRONIC NEWSLETTER ON
REASONING ABOUT ACTIONS AND CHANGE

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Today

Today, we feature two additional questions by Paulo Edouardo Santos to Murray Shanahan re his ETAI submitted article.

ETAI Publications

Discussion about received articles

A Logical Account of the Common Sense Informatic Situation for a Mobile Robot

by **Murray Shanahan**

Comment from: **Paulo Eduoardo Santos**

Dear Murray Shanahan,

As you suggested, I am sending those questions to ETAI:

1. On page 5 we read the definition of the following circumscription policy:

> *Given a conjunction of Happens and Initially formulae N, a conjunction of Initiates, Terminates and Releases formulae E (...), we are interested in:*

$$CIRC[N sc Happens] \wedge CIRC[E sc Initiates, Terminate, Releases] \wedge U \wedge EC$$

My question is: Why didn't you circumscribe *Initially* and *Happens* in parallel in the first conjunctive term of the expression above (since we should expect to have, as true in the time 0, only the explicitly stated facts and nothing else.)?

2. The second question concerns the same subject. On page 9 we have the predicate *AbSpace* defined in terms of *Initially*:

$$AbSpace(w) \leftarrow Initially(Occupies(w, g))$$

Further on we read:

> *The predicate AbSpace needs to be minimised, with Initially allowed to vary.*

The circumscription policy w.r.t. this idea is described on the top of page 10 :

$$CIRC[O \wedge M; AbSpace; Initially] \wedge \ldots$$

Question: Why do we have to circumscribe *Abspace* letting *Initially* vary, and not circumscribe only *Initially* (or both *Initially* and *Abspace*)?

Cheers,
Paulo

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