# AGI: ACTIONS

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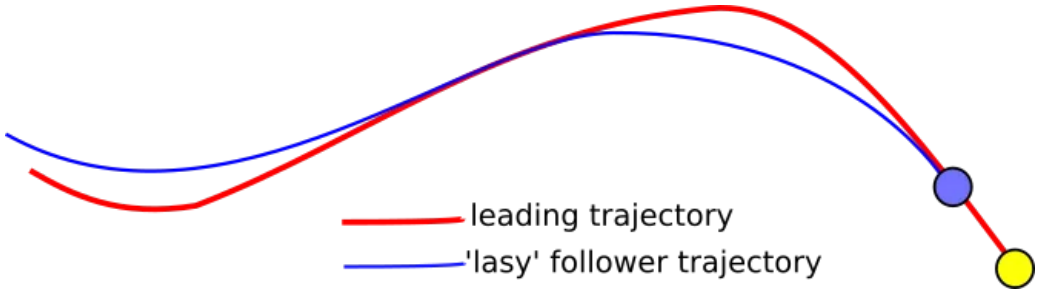
Ultimately, all activities of the AGI system serve to make optimal decisions about what should be done. The desired actions should be chosen from those capable of performing by the effectors with which the system is equipped. In turn, the set of available sensors and actuators significantly depends on the mission (purpose) of the system (see Generality ). Nevertheless, general aspects allow the classification of effectors and the use of information about the type of an effector to make decision-making algorithms more versatile.




The chapter Computational problem vs computational service describes the fundamental difference between a computational ***task*** and a computational ***service***: the ***task performing ends at the moment of finding the desired solution*** (or detecting its absence) while the ***service continues until it is interrupted by something***. The situation is similar for effectors. Some actions are finished when the ***requested action is completed***, and the effector goes into the waiting mode for the command to perform the following action; others realize a ***process that continues until directed otherwise***.

Examples of ***self-terminating actions***:

- point the camera in a given direction
- get a single snapshot of the environment
- turn off the lighting

Examples of ***permanent activities***:

- write video to hard drive
- follow the leader at a given distance
- keep the temperature at a given level

The second important aspect is the ability of the effector to generate logical ***events***. In the case of a self-terminating action, this can be an event that ***notifies the completion*** of the requested action (successful or failure); in the case of permanent activity, this can be an ***arbitrary event from among the possible for a given type of effectors***.

Obviously, both decision-making and the process of communication with effectors depend significantly on the type of effector (self-terminating or permanently acting).

The most apparent aspect of the dependence of the logic of decision-making by the AGI system is the ***need to respond to emergency events generated by the effectors***. Requirements for reliability and safety, as a rule, can be provided only by specifying ***rules for responding to emergency situations*** by the developer, that is, ***behavior for responding to relevant events;*** the rules for responding to events do ***not replace decision-making***, but only ***change the description of the current situation***. In turn, this means, firstly, the technical ***ability to include into congenital knowledge set the rules of response to such event***, and secondly, the inclusion of timely ***detection of relevant events*** in the universal decision-making algorithm and switching to the mode of ***performing predetermined reactions*** to these events.