

FROM: Allison Alder, Software Developer, and Kaylie DeHart, Software Developer
SUBJECT: Use and Handling of Feed Method

Due to the need to enforce the rules of the game Evolution, the dealer component must selectively call the feed method under certain circumstances, and check the output for possible foul play.

As the player component could be replaced with a remote user-player in the future, it is important to set these guidelines now.

To protect the game from cheating players, we looked at the given specifications and requirements and created a set of rules for both calling and using the output of the feed method.

The feed method is only called on the player's turn if there are food tokens available in the watering hole and if the player has to make decisions regarding the feeding of its hungry species board(s). To speed up player turns where no decision making is required, the dealer automatically completes turns where the player only has one feedable species that is not a carnivore.

In order to use the output of the feed method, the dealer must check that the move is valid. If the player returns a carnivore, the dealer must check that the player's species is actually a carnivore, if the carnivore is hungry and if it can attack the identified species. If the player returns a non-carnivorous species the player must check that there is enough food in the watering hole to feed that species the amount of food tokens it wants/needs. The dealer must also always ensure that the player is trying to feed one of its own species, not another player's or a non-existent species.

If the output of the feed method is valid, the dealer will either initiate a regular herbivore feeding, a fat-tissue feeding, an attack, or move on to the next player if none of the player's remaining species may be fed. If a carnivore doesn't receive it's required amount of food on the first feeding, it may attempt to attack again in a separate feeding instance.

In conclusion, the dealer must follow these sequencing constraints and enforce the rules of the game in order to call the feed method to prevent players from cheating.