

Is it possible to propose a model without the need of a manager?

We can use a smart contract with a manager or without a manager. Both things have trade-offs. For current system manager has some responsibilities like set car dealer, call purchase car function to purchase the proposed car, etc. Some of the functionalities of this system are against the distributed system like even if the business approves the new car if the manager won't call the necessary function the business can't buy it and the manager is who deployed the contract and can't be changed later. An alternative way to this is consensus on every decision. For example, we already check the votes when we purchase car so we don't need the manager to call that function. Even if a random participant calls that function if that car didn't approve it will not work. On the other part if we have voting in everything we will need more state variables or other processes so this will affect gas consumption and maybe can cause 51% attacks with more than half of the participants.

For functions that directly work when manager calls can be used with voting system or with necessary checks. If we don't have any manager the set car dealer function will be voting based. The purchase car, set driver, fire driver functions will be callable by any participant because these functions check votes to approve the statement. Anyone can propose a driver so anyone can call this function. Also, anyone can call release salary, pay car expenses and pay dividend functions because these functions already check the time so if the time does not exceed these functions won't work.

Muhammed Emre Kösen

21727498