Pure Aloha

ALOHA can be a system to coordinate and arbitrate access to shared communication network channels. Norman Abramson of the University of Hawaii and his colleagues developed it in the 1970s, the first system for terrestrial broadcasting. Still, the system has been implemented in a satellite communication system. Shared communication systems like ALOHA need a way to deal with conflicts that occur when two or more methods are scheduled to transmit on the channel simultaneously. In the ALOHA system, the node will send it as long as there is data to be sent. If another node transmits simultaneously, a collision will occur, so the transmitted frame will be lost. However, the node can listen to intermediate transmissions, including its communications, and determine whether a structure has been sent. In pure ALOHA, the transmission time is continuous. Whenever a station has a frame available, it will send the frame. If a collision occurs and the frame is destroyed; as a result, the sender will randomly wait for a while before retransmitting.
ALOHA can be a media access control (MAC) protocol to transfer knowledge over shared network channels. With this protocol, multiple data from multiple nodes circulates in various channels for transmission. In pure ALOHA, the transmission time is continuous. As long as a station has a frame available, it will ship the frame. If a collision occurs and the frame becomes corrupted; as a result, the sender waits its random time before retransmitting.

- When the network station needs to send a frame, it will send it immediately and wait for confirmation.
- If the sender receives an acknowledgment, the sender can send subsequent frames.
- If there is no confirmation, the sender thinks the frame has been distorted and retransmits the equivalent frame after a random time to avoid a collision.

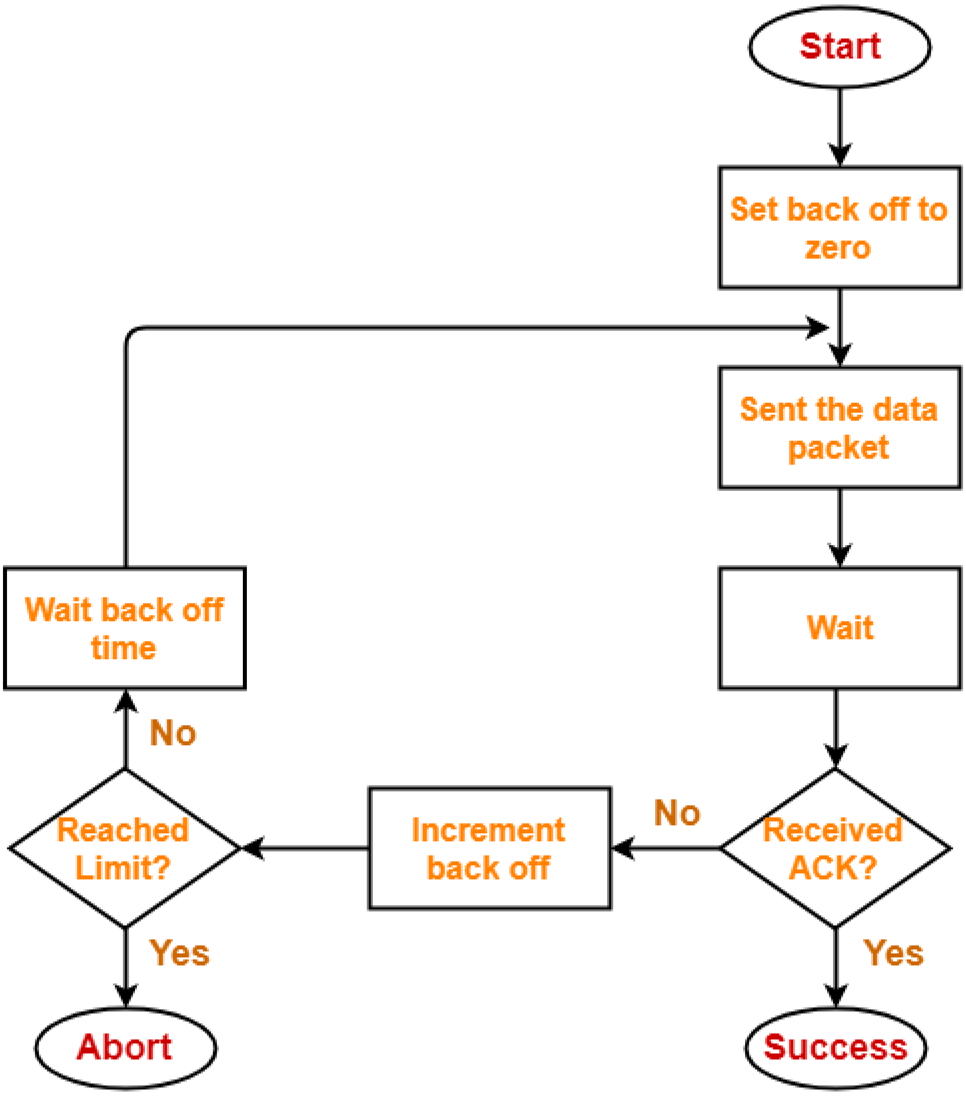

Figure 1: Flow Chart Pure Aloha

Pure ALOHA protocol frames are often sent at any time, so the probability of collision will be very high. Therefore, to avoid frame collisions, no other structures should be sent within your TRM. We will explain this with the help of the brittle period concept, as shown in the figure. Let a frame be transmitted at time t0 and t is the time necessary for its transmission. If another station sends a frame between t0 and t0 + t, then the top of the structure will reach the frame forwarded earlier.

In the same way, if another station resends a frame between the interval t0 + t and t0 + 2t, it will end as a garbage frame due to a collision with the coordinate system. Therefore, 2t is the vulnerable interval of the frame. In case the frame encounters a crash, the frame will be retransmitted after a random delay. Therefore, for the probability of successful transmission, no additional frames should be transmitted within the vulnerable interval of 2t.