Period I: V2R Phase

The RSU periodically broadcasts the packets of popular file $\Gamma = \{\gamma_0, \ldots, \gamma_{M-1}\}$, and the OBUs in Ω keep receiving data from the RSU when they pass through.

Period II: V2V Phase

With the initially possessed packets given by (**??**) and (**??**), the OBUs periodically perform the following three stages:

Stage I: Network Splitting

The OBUs perform the splitting scheme in Table **??** every K slots, and the network may split into smaller subnetworks.

Stage II: Coalition Formation

For each subnetwork, the OBUs perform the coalition formation algorithm in Table **??** to obtain the final partition Π_{final} in the current slot.

Stage III: Data Broadcasting

For each subnetwork, the OBUs in coalition S broadcast the packets resulting from the greedy algorithm proposed in Section III, where $S \in \Pi_{final}$ is the coalition with the highest service rate given by (**??**).