I. SIMULATION RESULTS

For fairness comparison, we adopt two baseline algorithms, named *FedAvg* and *FedProx*. Specifically, FedAvg is a classic algorithm in FL and has strong adaptability. FedProx can be viewed as a generalization and re-parametrization of FedAvg, and it is recognized as a very good FL algorithm. It solves the problem of non-IID data in FL to a certain extent. Due to time limited, we only performed a simple experimental simulation on the CIFAR-10 data set. More simulation results will be updated in final paper.

In the first simulation, we present the accuracy impacted by communication rounds. As shown in Fig. 1, the proposed FedWA algorithm achieves higher accuracy than both FedAvg and FedProx algorithms. In the second simulation, we present the communication rounds required to achieve the desirable accuracy. Specifically, we vary the target accuracy from 30% to 55%. Fig. 2 and Table I show that our proposed FedWA algorithm reaches the target much more earlier than others.
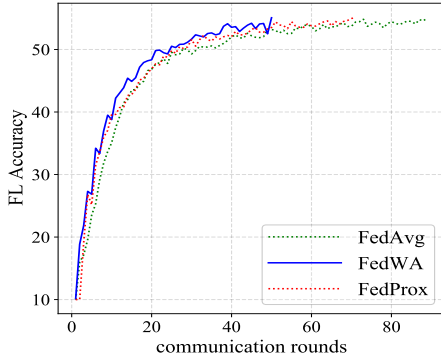

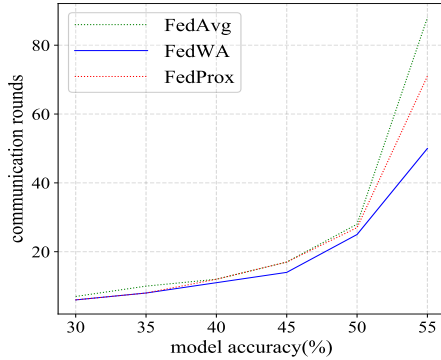Fig. 1. Comparison on the accuracy with $\delta = 0.4$.

TABLE I
NUMBER OF COMMUNICATION ROUNDS TO REACH A TARGET ACCURACY
FOR FEDMA, FEDAVG AND FEDPROX

	δ	**CIFAR-10**
FedAvg	0.4	89
FedProx	0.4	71
FedMA	0.4	50

Fig. 2. Comparison on the communication rounds under different accuracy requirements with $\delta = 0.4$' CIFAR-10 dataset .