Empirical study on dyad act-degree distribution in some collaboration networks[1] HUI CHANG, Yangzhou University, PEI-PEI ZHANG, Jiangsu University, YUE HE, Wuxi No.1 Middle School, DA-REN HE, Yangzhou University, China — We (and cooperators) suggest studying the evolution of the extended collaboration networks by a dyad-act organizing model. The analytic and numeric studies of the model lead to a conclusion that most of the collaboration networks should show a dyad act-degree distribution (how many acts a dyad belongs to) between a power law and an exponential function, which can be described by a shifted power law. We have done an empirical study on dyad act-degree distribution in some collaboration networks. They are: the train networks in China, the bus network of Beijing, and traditional Chinese medical prescription formulation network. The results show good agreement with this conclusion. We also discuss what dyad act-degree implies in these networks and what are the possible applications of the study. The details will be published elsewhere.

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