IF $t < T$ do the loops of **Multi-Level LP** and **coarsening by Edge**

Partition result of $\widetilde{G_0}$

Multi-Level LP

coarsening by **Edge**

$t < T$

Multi-Level LP

Partition result of $\widetilde{G_1}$

Different Types of Coarsening

$t < T$ coarsening by **Edge** — As input of Multi-Level LP

$t = T$ coarsening by **Node** — As input of METIS

$\widetilde{G_0} = G$

$P(\widetilde{G_0})$

$\widetilde{G_1}$

$P(\widetilde{G_1})$

$\widetilde{G_2}$