

LLB4 (strict FF) Compute the strict First-Fit LLB.

SFF assignment Compute a Simultaneous-First-Fit ensemble assignment.

GFF assignment Compute a Global-First-Fit ensemble assignment.

Coloring Compute a sequential coloring of the ensemble graph for the current assignment.

Regular coloring Compute a sequential coloring of the regular ensemble graph. This forces identical ensembles of different nodes to have the same color. Also, this operation can be a lot faster than computing a standard coloring because the regular ensemble graph is usually much smaller than the standard ensemble graph.

Maxclique Compute the size of a maximum clique in the ensemble graph (yields lower bound for coloring).

Regular maxclique Compute the size of a maximum clique in the regular ensemble graph (yields lower bound for regular coloring).

Statistics... Displays some useful statistics about the graph, as well as the current requirements, ensemble assignment and coloring. The latter items are displayed both for the whole graph and for the currently marked area, if any. (See also the remarks below.)

Results... Report recent results of the tools invoked so far.

Clear results Clear the results history.

Use marked/all Toggle the status of the ‘**apply FF/LLB to**’ tool option.

The ‘**Statistics...**’ command reports number of nodes and edges, density, number and total size of required services, number and total size as well as total/maximum slack and total/maximum over-supply of the ensembles, and the number of colors.

The *slack* of an ensemble is defined to be the difference between the maximum ensemble size and the actual size of the ensemble, which measures the amount of free bandwidth which could be allocated to additional services (see also the definition of the σ_M parameter in Section 8). If the ensemble assignment is colored, then for computing the total slack each ensemble counts with the number of distinct colors which have been assigned to it; otherwise it only counts once (giving the same figures as with a regular coloring). The total ensemble size is computed in an analogous fashion. Thus the reported total slack number specifies the bandwidth which in total could be allocated to new services without having to change the coloring (or any coloring, if the slack has been computed for an uncolored assignment). If this number is large (which often happens with SFF-assignments or strict assignments in general), then it may be possible to find a “better” assignment which employs the wasted bandwidth to pack services tighter. However, one should also check