In the future, computer processing power will mainly grow by increasing the number of cores; software will need to go parallel.

Process flowsheet are not always suitable for parallelization; worst case:

- lucky case:
- real world case (poly3):

How can we exploit parallelism to accelerate process flowsheeting?

We can tear additional streams to shorten the critical path.

We can then use standard task scheduling algorithms such as CP/MISF to assign the unit operations to different cores.

Applying tearing to real-world flowsheets, the speed-ups on 4 cores increase on average from 50% to 80% of theoretical.