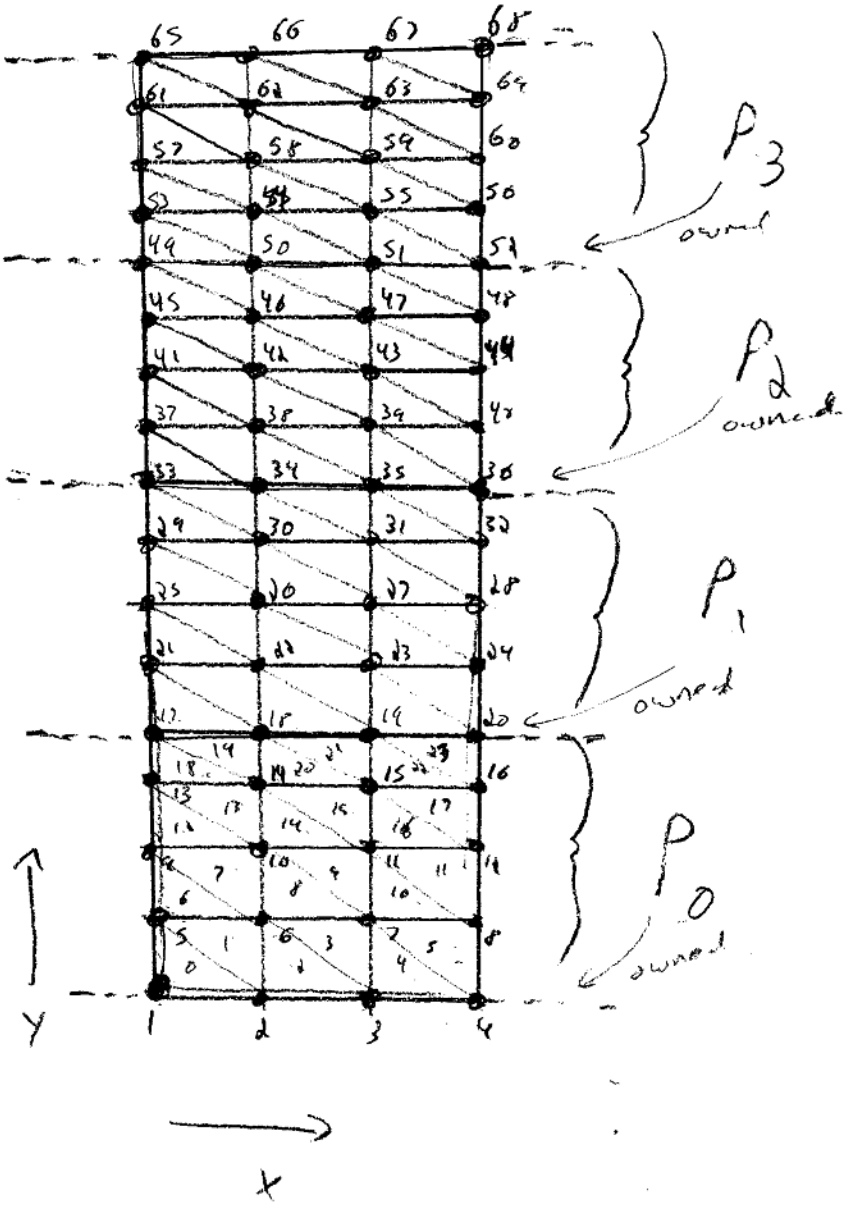
My simple 2-D triangular parallel mesh generator:

Example:

$NP = 4$ processors

$n_x = 3$

$n_y = 4$



- Number of nodes owned by a process
  numip = $(n_x+1)(n_y)$ [on proc = $0, \ldots, NP-2$]
  = $(n_x+1)(n_y+1)$ [on proc $NP-1$]
- Number of nodes shared from other processors:
  numcp = n_y+1 [on proc = $0, \ldots, NP-2$]
  = 0 [on proc $NP-1$]
- Number of elements on a processor: numelems = $2(n_x)(n_y)$
- Number of edges