

# Open64's Role in the Many Core Era

## *Fred Chow's views*

For serial programs:

- Runtime optimization becomes highly feasible

For threaded programs:

- Preserve optimization effectiveness in presence of threads

Promote threads in programming:

1. Automatic parallelization
  - *limited to simple loops*
2. Support language extensions or new languages
  - *OpenMP*
  - *CUDA*
  - *OpenCL*
  - *UPC*
  - *CoArray Fortran*
3. Performance analysis/advisory tools

