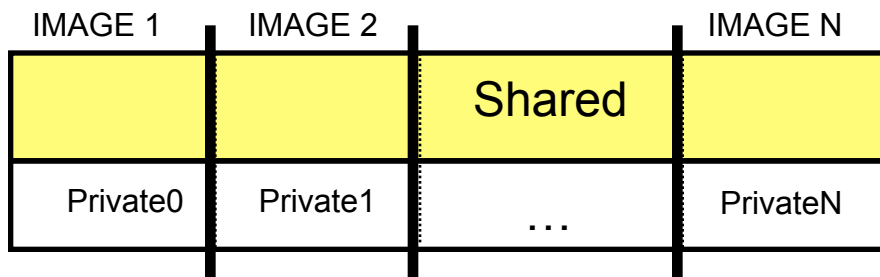


Programming Model

- SPMD programming model
- Coarrays: two-level memory model



Language Status

- In Fortran 2008 Draft Standard
- Dec 08: F08 CAF features in Cray ftn
- g95 compiler supports coarrays
- Emerging Rice CAF compiler
 - teams with rank-based indexing
 - team allocation, collectives, events
 - soon: topologies, copointers, locks

Language Features

- Multi-dimensional arrays
- One-sided get/put communication


```
real :: x(n,n)[*]
x(:,1) = x(:,n)[me + 1]
```
- Synchronization: sync all, sync images, sync memory, critical, locks
- Inquiry: num_images, this_image

Codes

- www.co-array.org
 - jacobi iteration
 - class library for blocked LA
- www.hipersoft.rice.edu/caf
 - NAS benchmarks, Sweep3D
 - HPC Challenge benchmarks
- Applications
 - LANL's POP, Sandia's S3D