

# Improving Rapid Application Development Environments Through Coordination

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Everybody Loves Rapid Application Development Environments (RADs)  
Examples include Matlab, Mathematica, Maple etc.

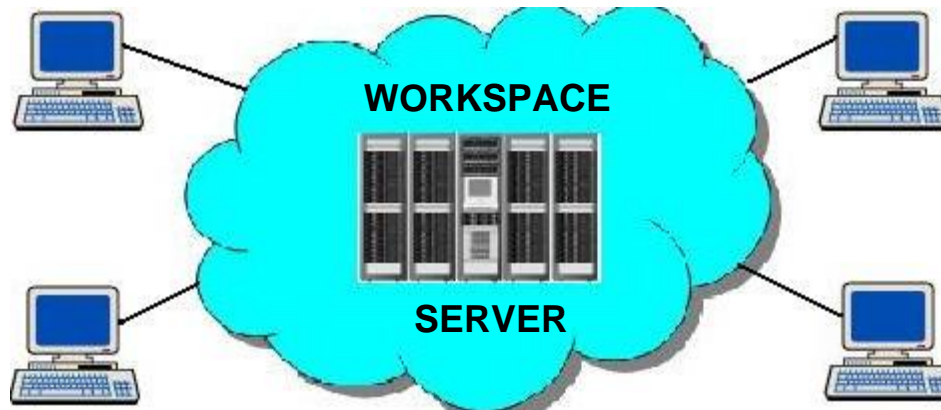
But

- Large datasets and/or computations often are required for algorithm design and optimization
- RAD computations generally are too slow
- Data may be naturally distributed and not easily moved to a central location
- Building increasingly complex RAD applications may be difficult

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## Our Distributed RAD Strategy:

- Use RAD-compatible “global shared WORKSPACE” to develop and run distributed/parallel RAD applications



## SCAI's NetWorkSpaces™:

- Looks and feels like a conventional WORKSPACE in the base RAD
  - Net(Workspaces): Shared, globally accessible over a network
  - (NetWork)Spaces: Coordination provided by “Linda-like” semantics e.g., Lindaspaces (SCAI), Javaspaces (SUN), Tspaces (IBM), etc.

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- Network RAD processes can share data and coordinate themselves
  - Completely general distributed/parallel applications are enabled
  - Distributed network RAD processes can be uncoupled in time and space
    - “Anonymous communication” dramatically increases developer productivity in implementing and maintaining distributed applications
  - Move RAD processing to the data instead of moving the data to the processing
    - Saves time and network bandwidth by NOT moving data
    - Gains access to new data
  - Pervasive RADs: Enables pervasive participation in distributed RAD applications

**For more details, see our poster and/or e-mail: [networkspaces@lindaspaces.com](mailto:networkspaces@lindaspaces.com)**