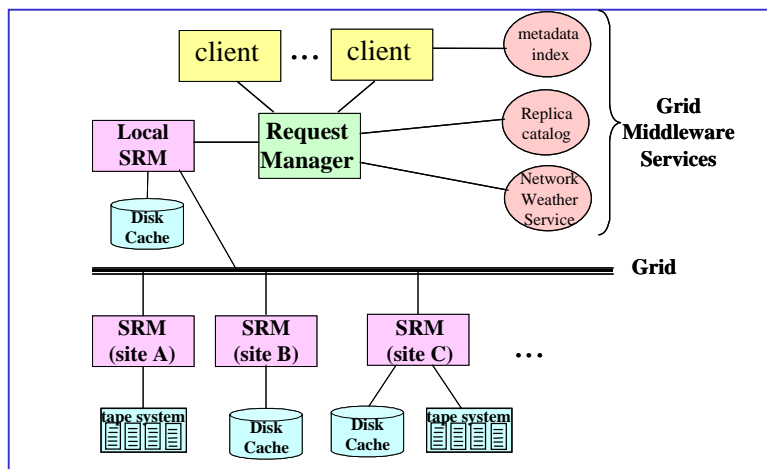




# Storage Resource Management for Data Grid Applications



## Collaboratory Middleware



## The Novel Ideas

- SRMs provide Grid Middleware to manage storage resources
  - Complement management of compute and network resources
  - Large files transfer can form the bottleneck
- Coordinate distributed disk caches by “pinning” of files
  - Use “smart” replacement policies
- Manage seamless access to tape storage
  - automate staging and archive requests in background
  - insulate client from hardware & network failures

## Impact and Connections

- IMPACT
  - Provides essential component of Grid Middleware
  - Will enable the dynamic coordination of compute and storage resources
  - Support storage management for long lasting simulation and analysis tasks in a distributed environment
  - Manage job recovery from storage system and network failures, facilitating uninterrupted operation
- CONNECTIONS
  - Particle Physics Data Grid
  - Earth Science Data Grid
  - Globus Grid projects

## Milestones/Dates/Status

	Mon Yr	DONE
• Design and develop SRM prototypes		
- Design functionality and interfaces	Oct 2001	done
- Implement prototype Disk RM	Jan 2002	
- Implement prototype Tape RM	Feb 2002	
• Deploy in PPDG STAR project		
- Initial installation at LBNL	Mar 2002	
- Initial installation at BNL	Jun 2002	
• Robustness design and development		
- design	Jan 2003	
- development of robust SRMs	Jun 2003	
- deployment	Jan 2004	

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