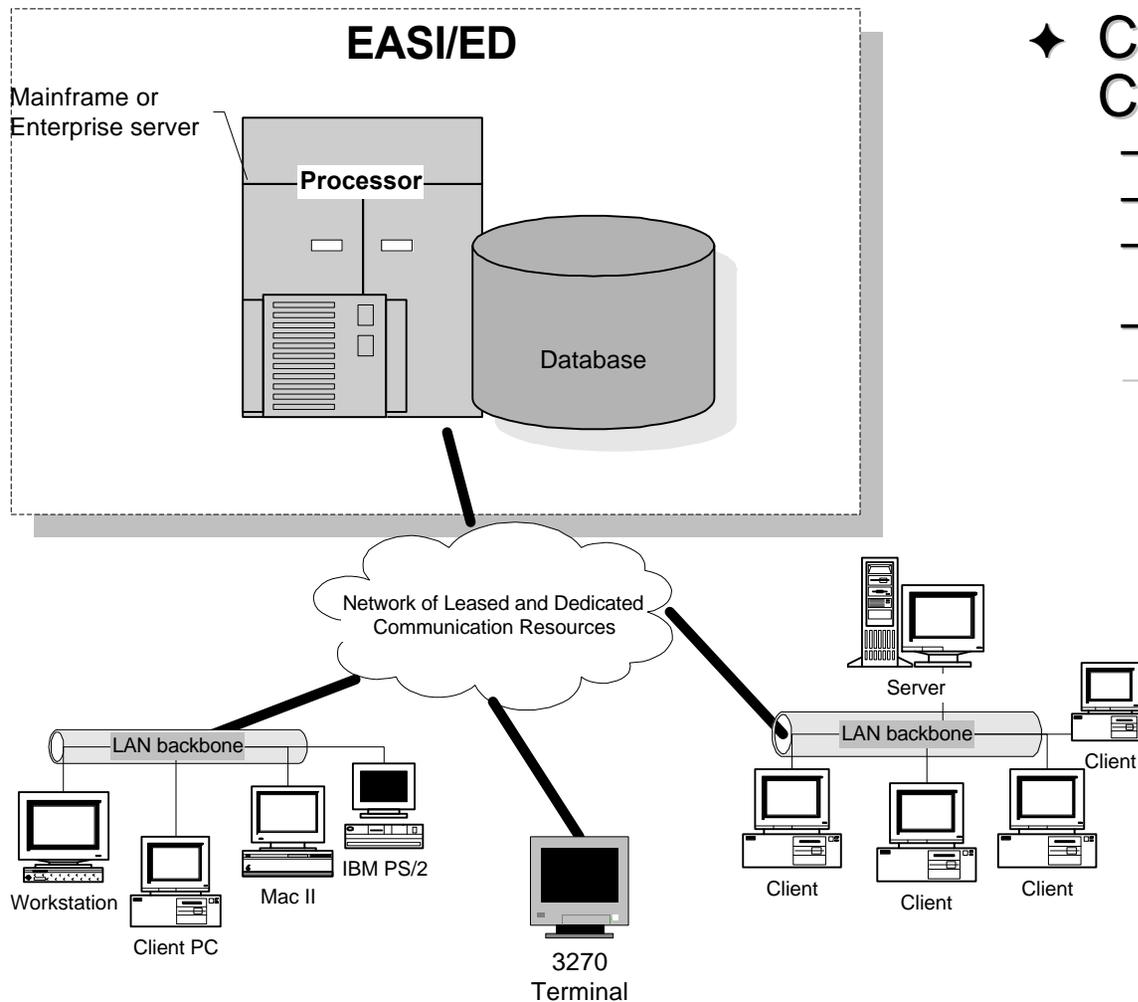


APPENDIX F

ALTERNATIVE ARCHITECTURES

This appendix provides an overview of the alternative architectures that were originally considered as part of the analysis described within this report. Architecture alternatives described within this appendix are based on the processes and data distribution strategies described within Section 2 of this report. There are seven architectures outlined within this appendix. Four candidate architectures were selected from this list for further analysis and evaluation. These candidate architectures are described in detail within Section 5 of this report.

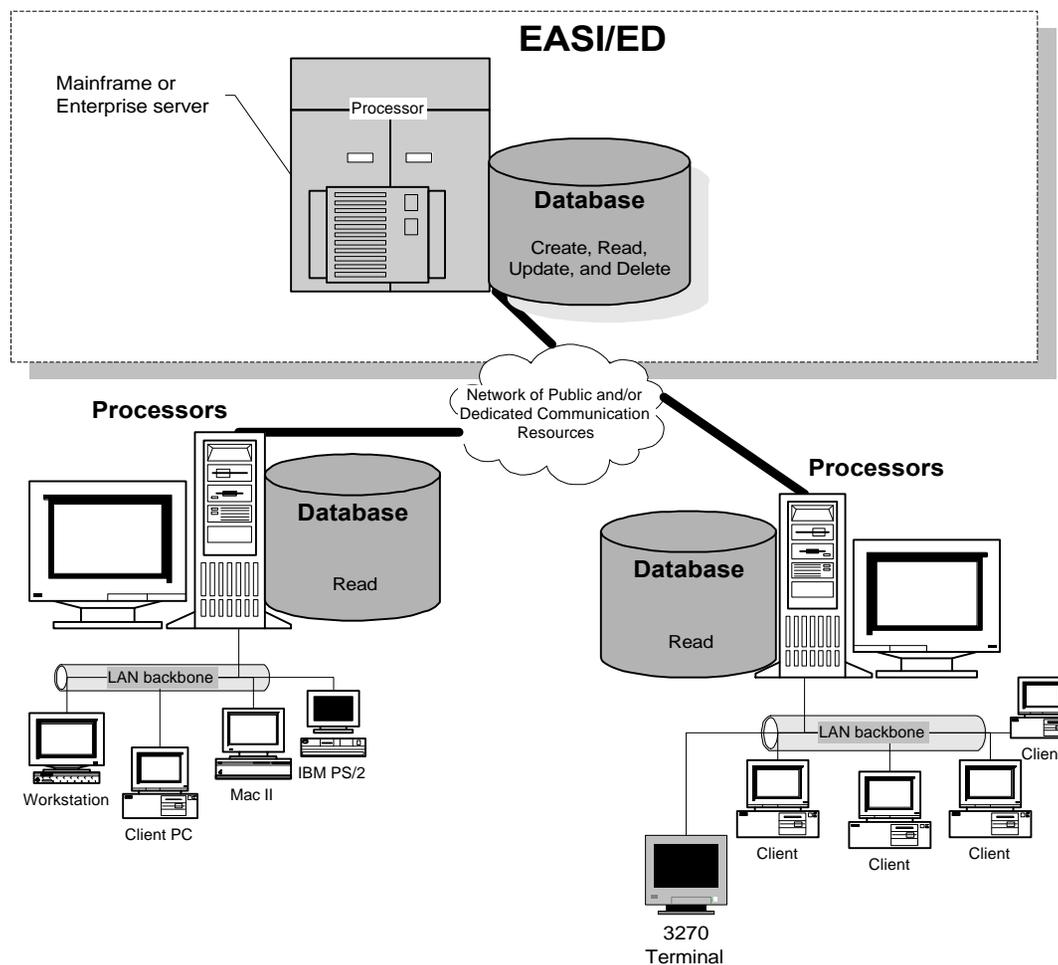


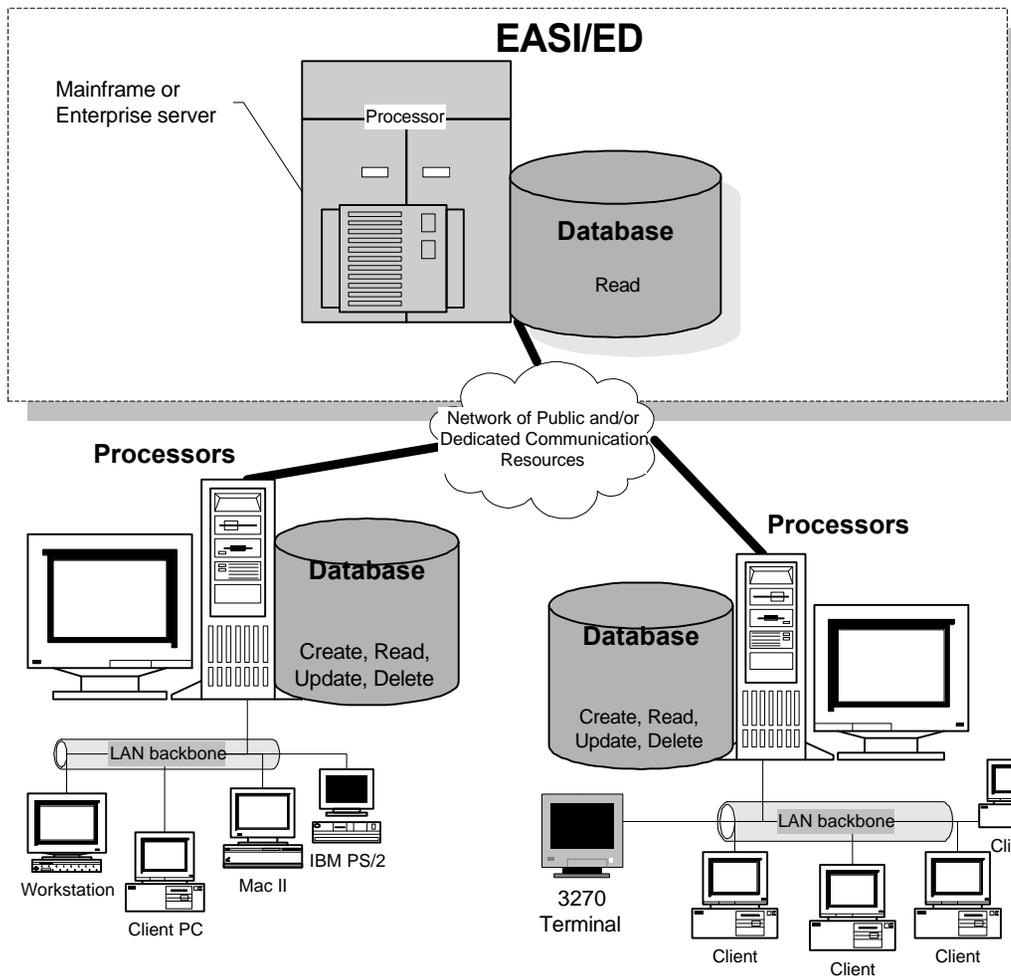
◆ Centralized Processing/ Centralized Data

- Least flexible data and processing strategies
- Single point for catastrophic failure
- Least usable (usability rated most important evaluation criteria for target system)
- Most secure and manageable alternative
- Least expensive alternative

◆ Centralized Processing/ Replicated Data Publication

- Requires that “trading partners” provide system components
- Facilitates distributed, autonomous decision support operations
- Data synchronization is complex and difficult to maintain
- Coordination with “trading partners” difficult & resource intensive - possibly prohibitive



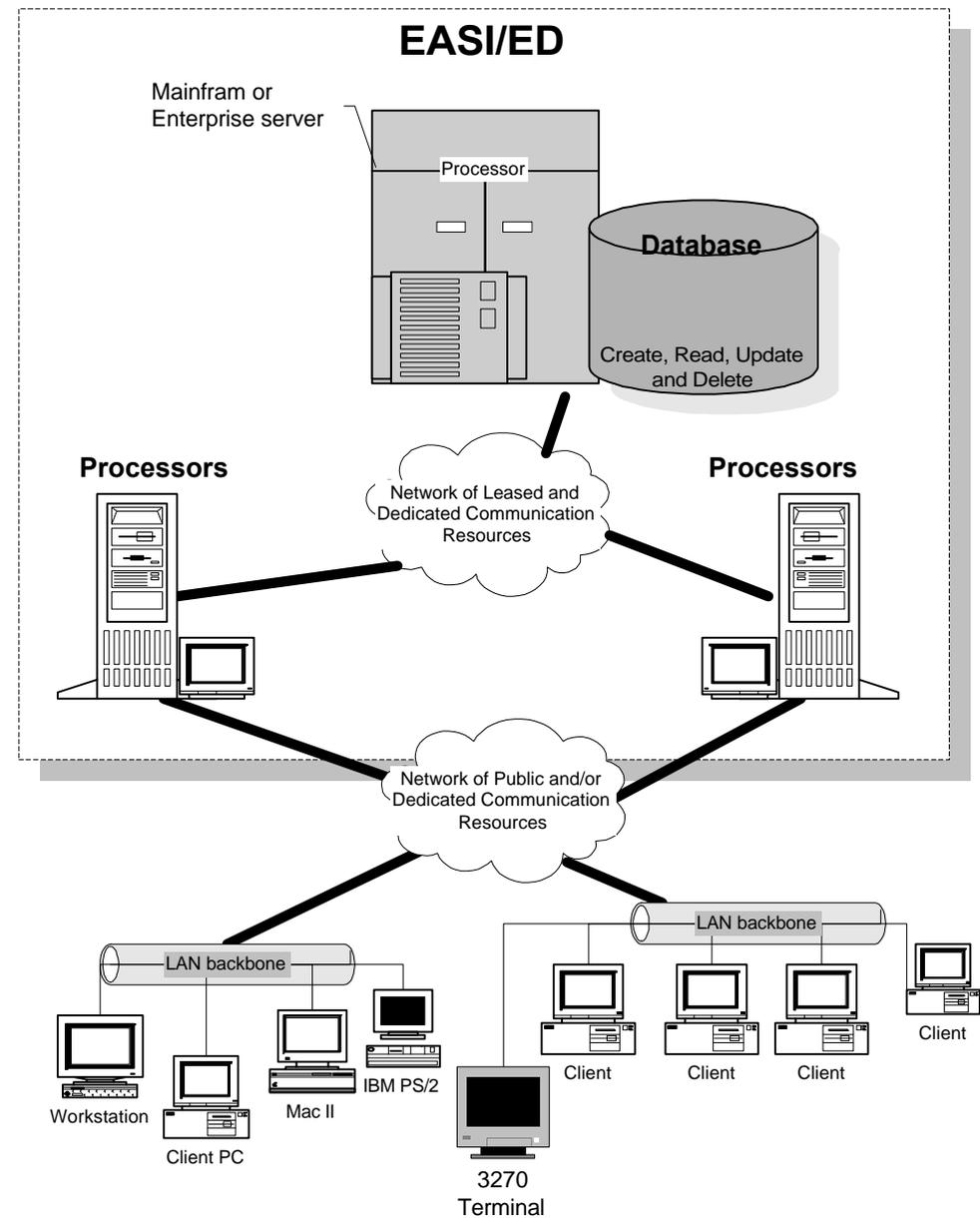


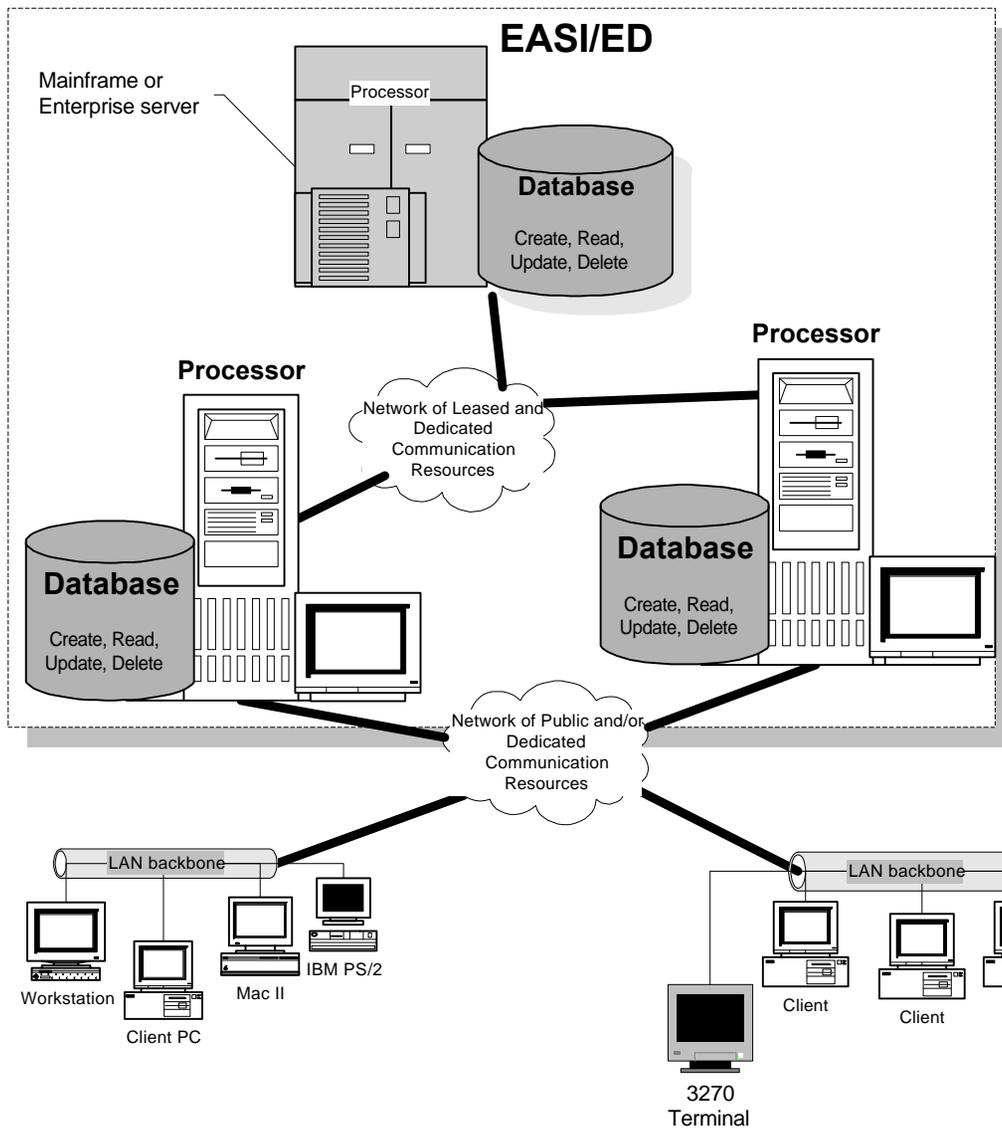
◆ Centralized Processing/ Replicated Data Consolidation

- Coordination with/between “trading partners” difficult & resource intensive - possibly prohibitive
- Requires that “trading partners” provide significant portion of system
- Significantly reduces required system resources for ED
- Data not owned and managed by ED

◆ Distributed Processing/ Centralized Data

- Inflexible data strategy
- Improved processing flexibility (scalability)
- Increased technical and system management complexity
- Distributed processes dependent upon single data resource
- Distributed processing autonomy constrained by data strategy



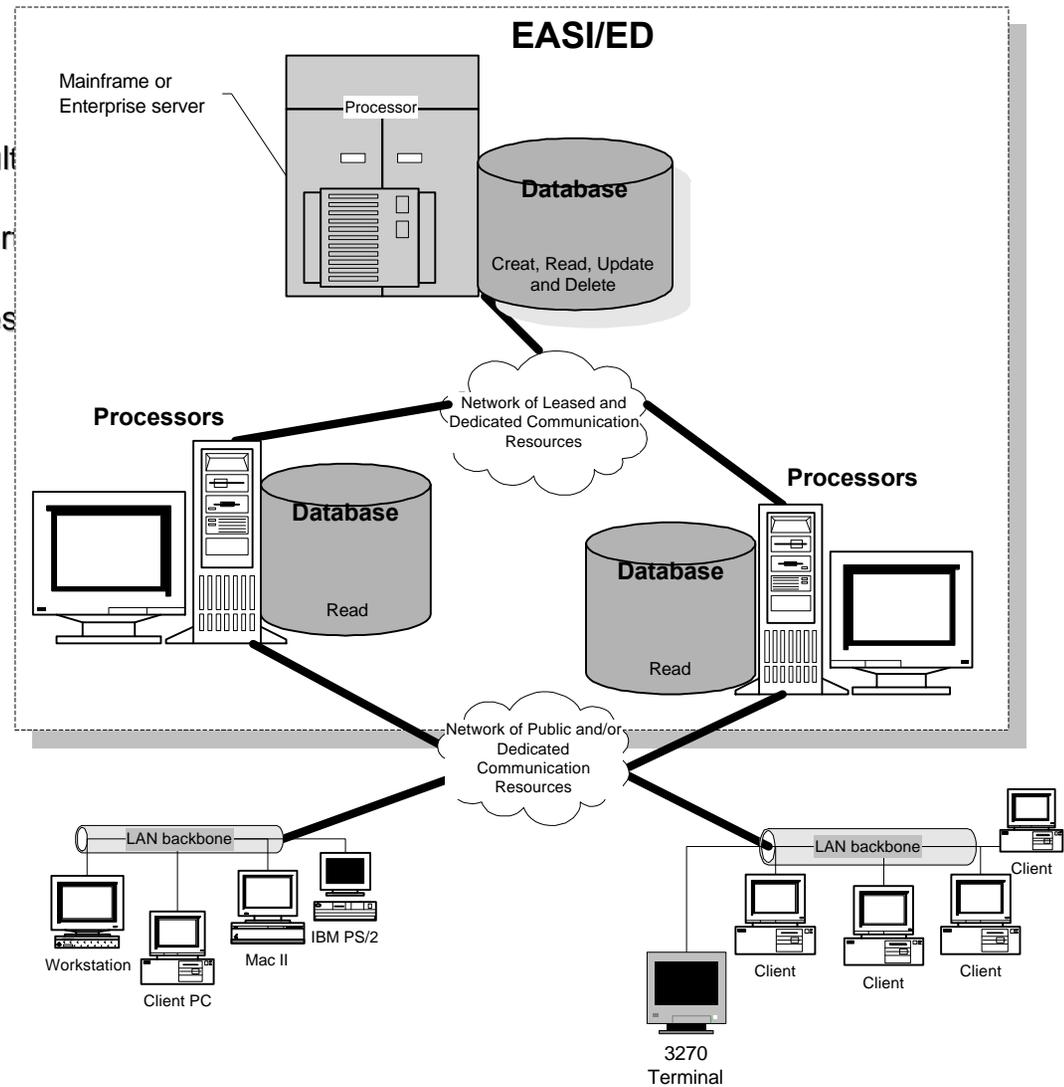


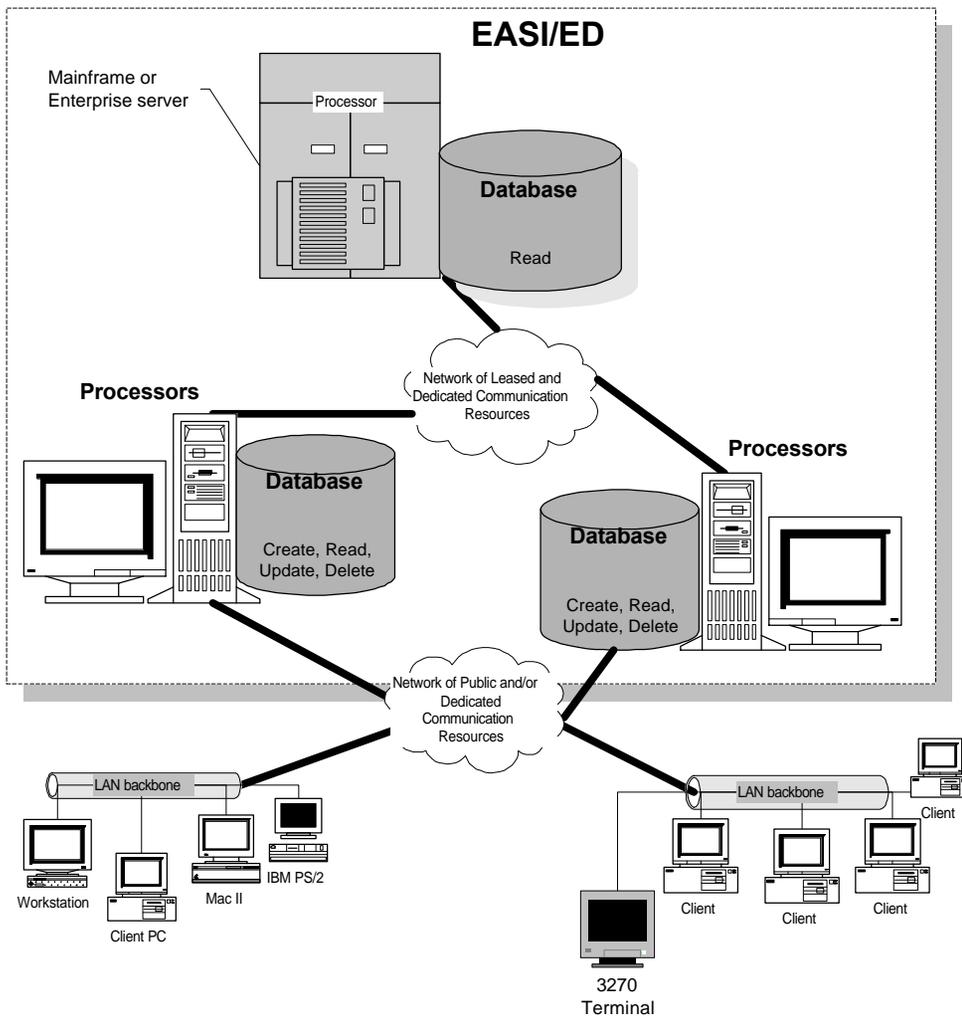
◆ Distributed Processing/ Distributed Data

- Most complex data strategy
- Highly usable and accessible
- Significant data and system management complexity
- Resource intensive
- Facilitates enhanced, distributed data management
- Improved data synchronization
- Performance constraining by distributed data integrity mechanisms

◆ Distributed Processing/ Replicated Data Publication

- Data synchronization is complex and can be difficult to maintain
- Facilitates distributed, autonomous decision support operations
- Process strategy is scalable and flexible - leverages specialized technologies
- Enhanced data availability and system usability
- Complex distributed system management





◆ Distributed Processing/ Replicated Data Consolidation

- Data synchronization is complex and can be difficult to maintain
- Facilitates distributed, autonomous data management
- Process strategy is scalable and flexible - leverages specialized technologies
- Enhanced data availability and system usability
- Complex distributed system management