Rapid Applications Development at GDE Systems

USC-CSE RAD Executive Workshop
11 March 1998
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Agenda

- Company Overview
- RAD Approaches at GDE Systems
- RAD Acquisition Issues
RAD Approaches at GDE Systems

- Increased OTS vs Custom Development
- Shared Architecture / Services Across Programs
- Process Maturity Initiatives
Increased OTS vs Custom Development

System 1 - 1985 Startup
- Award to FAT - 6 Years
- Custom HW - 43 cards
  - Special purpose cards used in imagery workstations
- Custom SW - > 99%
  - Custom - 1MLOC - 1MLOC
  - Custom SW provides essentially all functionality in new system

System 2 - 1995 Startup
- Award to FAT - 1.5 Years
- Custom HW - None
  - 1 special purpose card bid, but ultimately not required
- Custom SW - < 5%
  - Custom - 0.5MLOC - 2MLOC
  - 35 total OTS components, 6 with major functionality; custom SW prov "glue"

Shared Architecture / Services
Supports RAD and Reuse

Mission Specific Applications
GDE Systems
Core Technologies Framework

Product Line Domain Specific
EXnet
Common Services (File Access, DB Access, Workflow...)

COTS Framework
Process Maturity Initiatives

SEI Software CMM Level 3
SEI Systems CMM Level 2
SEI People CMM Level 2

RAD Acquisition Issues

- Integration of OTS products
  - System maintenance cost/schedule less predictable
  - Requirements must be negotiable
- Formal reviews
  - RAD requires rapid decision making - IPTs
  - Contracts continue to require formal reviews requiring additional effort and schedule (SRR, PDR, CDR)
- Lack of Beta test sites for incremental release
  - RAD benefits from user feedback to support design iteration
  - Commercial environment use WEB effectively for Beta testing
  - Premature use of prototypes for production can be detrimental to a program's user community support