

MSI

*Research Infrastructure for Integrated
Quality of Service Management in Multimedia
Computing Environments*

A. Elmagarmid, A. Ghafoor, T. Korb, K. Park, E. Spafford

Purdue University

MSI – Architectural Overview

QoS Management

Specification
Translation
Negotiation

Applications: Telemedicine, Vet, POL

Distributed Multimedia Documents

Multimedia Databases

Operating Systems/Storage

Networks/Middleware

SECURITY

2

Research Outcome

To develop an infrastructure that will integrate key information technologies which include database and storage management, OS, networking and security in order to provide a comprehensive end-to-end QoS management framework for distributed multimedia applications.

3

Educational Outcomes

- *Training graduate students and researchers (16 GRAs, 5 Postdocs)*
- *Yearly summer workshop/internship program for students from HBCUs.*
- *New courses introduced as part of RI and related grants.*

4

Leveraging of RI Grant

- *Federal Agencies: NSF, ARO.*
- *State: 21st Century Grant.*
- *Industry: IBM, NCR/Walmart, HP, Telcordia, Siemens, Intel, Cisco.*
- *Purdue: CERIAS, PRF.*

5

Wish List...if we had more money

- *Better technical and administrative support.*
- *Professional staff for outreach and tech transfer.*

6

Barriers....

- *Simplified software licensing agreements.*
- *Better access to real data for experiments.*
- *Access to University network infrastructure including dark fiber.*
- *Need for authentication/authorization infrastructure both within campus and*
- *external collaborators (internet middleware initiative).*
- *Adequate space needs.*

7

NSF Interdisciplinary Programs

- *Existing programs are essential because they fulfill diverse needs.*
- *Possible change is to increase RI budgets to distinguish them from MRI.*
- *Existing balance among RI and individual grants is appropriate.*

8