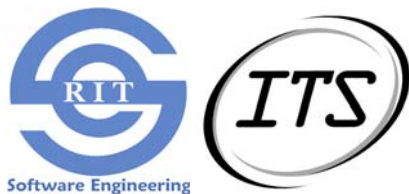# ITS Graphical Report Maker Project

Phase Gate Presentation:
Develop

3 May 2004
Department of Software Engineering
Team JACT

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Agenda

- Project Description and Scope
- Milestones of Phase
- Issues Log
- Updated Schedule
- Next Phase Gate
- Poster Presentation / EoP Postmortem
- Questions

Project Description

- Develop a tool set which will allow users to create reports containing self-selected or canned data elements and presenting them in a manner the user sees fit.

- Reports will be displayed on a web browser in standard graphical forms.
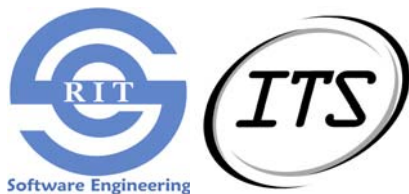
Scope of the Project

- To provide a new medium to generate graphical reports for upper management review and technical analysis.

- To provide the ITS staff the ability to generate graphical reports using the data from the provided database.

- To allow around-the-clock, online access to all reports that have been prepared in advance and executed on-the-fly.
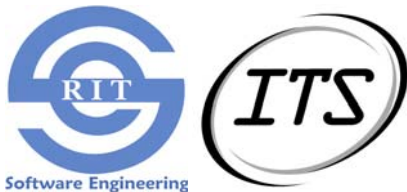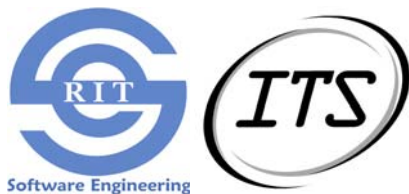
Milestones for Develop Phase

- Deliverables:
 - Code
  - Operations Manual
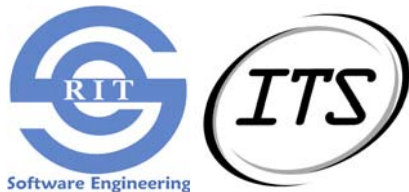
Testing / Implementation

- Development currently following a code-and-test methodology using a console interface.

- Implementation not complete until testing complete.

- Test scripts developed earlier in the project used for console testing now.

User Interface and Operations Manual

- Graphical User Interface put on hold to focus effort on server-side implementation
- Operations Manual waiting on finalization of GUI
- Both expected early next week
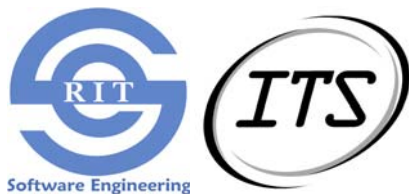
Issues Log

- Accuracy of Development and Testing
- Platform
- Cost
- Scope of the Project versus Time Allowed
- Schedule Overrun

- Team Member Availability
- Design Tradeoffs
- Technology Concerns
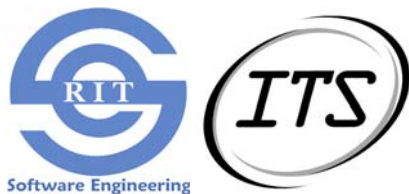- Contact with Customer Support Staff
- Security
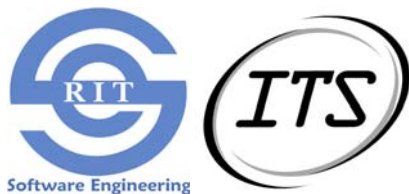
Updated Schedule

- In two phases at the same time: Develop, Test

Phase Gate	Original Date	Updated Date
Develop	April 30nd	May 3rd
Test	May 7^{d}	May 14th
Deploy	May 21th	May 20th

Next Phase Gate

- System fully tested and ready for Deployment

- Test Results:
  - Acceptance Test Plan
  - Operational Testing Scenario

ITS Graphical Report Maker Project

Background

RIT ITS Systems Management is responsible for the generation of real time data, historical data, and graphs plus reports on the capacity, availability and responsiveness of ITS supported services.

Data is used to show ITS systems performance to customers, support staff and RIT leadership to assist in making technical and business related decisions.

Currently ITS utilizes many commercial off the shelf (COTS) products to perform these tasks and even though these tools are adequate for technical and engineering staff use, they lack ability to show system wide status and performance in a method deliverable to end-users and management.

Project Development Process
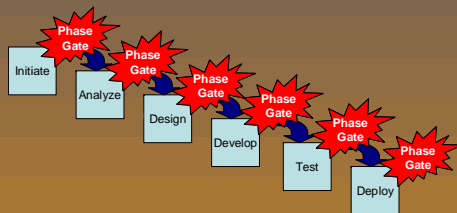
Following the ITS Project Management methodology, the project deliverables were divided up into 6 phases.

At the completion of each phase, a phase gate was held between the customer and the project development team to present current risk management, the deliverables due, and a presentation of the current status.

After a successful phase gate, project management and the development team signed off on the deliverables and proceeded to the next phase.

Project Sponsor: Rochester Institute of Technology - Information & Technology Services
Project Contact: Mark Kimble, Telecommunication Services
Faculty Advisors: Dr. James Vallino, Dr. Stephanie Ludi
Group Members: Adam Buehler, Cheng-Train Chiou, John Myers, Cesario Tam
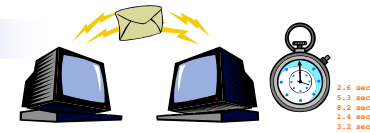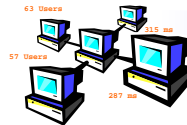
Scope of the Project

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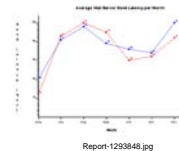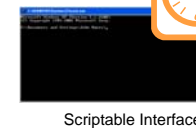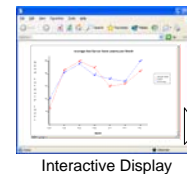To provide the ITS staff the ability to generate graphical reports using the data from the provided database.
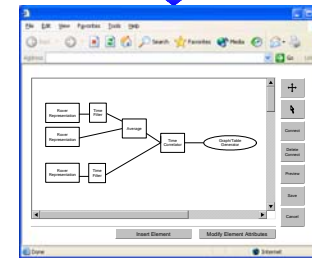
To allow around-the-clock, online access to all reports that have been prepared in advance and executed on-the-fly.

Technology Comparison

Evaluated the following architectural choices:

- Standalone Java Program
- Java Thin-Client using Web Services
- Java Thin-Client using Remote Method Invocation
- Java "Smart Client"
- JavaServer Pages
- Java Applet

Documented tradeoffs and rationale for final decisions (Java Thin-Client with RMI). Our technical assessment will provide ITS with guidance for making similar decisions in the future.

Network Performance Database

Interactive Display

Scriptable Interface

Report-1293848.csv

Report-1293848.jpg

1. Network Performance Data Collection

Using external software packages, various metrics regarding network performance and system status are collected and placed into an ITS controlled database.

The Graphical Report Maker (GRM) system reads this database for up-to-date table information and queries for the latest performance data when creating a new graph.

2. Equation Construction

From a web client interface, the user can create an equation that will be used to query the database and process the raw data into a more usable format.

Equations might have filtering of time stamps into a more accurate state, averaging two metrics at a specific time, or correlating two dependent variables in order to graph properly.

Reports that can be executed must begin with a query to the database and end with an element that produces either a graph or a table of data.

3. Report Execution

The user can generate a graph from any defined report.

The web interface allows interactive changes to a graph's visual characteristics.

The scriptable interface allows external program to generate reports, for instance, at timed intervals.

4. Data Exportation

Once a report has been executed, whichever representation of the data was chosen at report creation time is then exported outside of the system.

The JPEG image of the graph or a table of processed data can both then be displayed on a web page for all to view.

Team Website

- You may track the project status at:
  - http://www.se.rit.edu/~jact

- Questions?