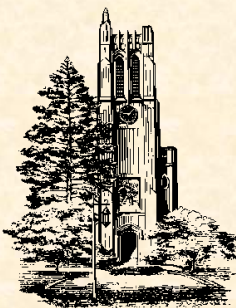## MICHIGAN STATE
U N I V E R S I T Y

Technical Specification / Schedule
Microsoft Application Health Monitor

Team 6: Microsoft
CSE 498, Collaborative Design

Tom Alexander
Andrew Keller
Mathew Mason
Chris Monosmith
Bruno Sommer

Department of Computer Science and Engineering
Michigan State University

Fall 2008

Project Overview

- Three Layers
  - Front end: SharePoint site
  - Back end: Server side services
  - Database: Contains health tracking data
- Plugging into the middle of a three part Microsoft project

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Project Overview

Create/Edit KPI

Application: [▼]

Metric: [▼]

KPI Name: [   ]

Thresholds

Display each icon according to these rules:

Icon		Value	
🟢	when value is	[▼]	[ ]
🟡	when < ## and	[▼]	[ ]
🔴	when < ##		☐ Reverse Order

[Save]

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Functional Specifications

- Windows SharePoint Services (WSS)
- Windows Workflow Foundation (WWF) and Windows Communication Foundation (WCF)
- Used to provide health monitoring and management of WWF applications.
- Three primary components:
  - Database
  - System to add/edit, display, and process KPIs
  - Services to monitor and report changes to database

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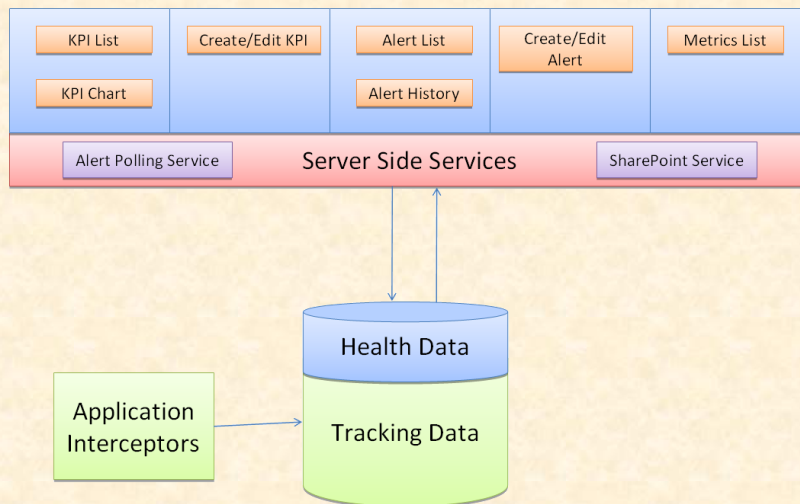
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System Components

- Hardware Platforms
  - Any Windows Server 2003 or above PC
- Software Platforms / Technologies
  - Microsoft Windows Server 2003
    - Microsoft SQL Server 2008 Enterprise
    - Microsoft SharePoint Services 3.0
    - Microsoft Silverlight

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Architecture Illustrated

| KPI List | Create/Edit KPI | Alert List | Create/Edit Alert | Metrics List |
| KPI Chart | | Alert History | | |

Alert Polling Service   Server Side Services   SharePoint Service

Health Data

Application Interceptors → Tracking Data

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Risks

- Unfamiliarity with Silverlight and Sharepoint
  - The web page and associated web parts are to be designed using Silverlight and Sharpoint, yet we know little about those technologies.
  - Do research and tutorials to learn the technologies.
- .NET 4.0 does not exist yet
  - Our project is to be integrated with the as of yet unreleased group of technologies codenamed Project Oslo as part of .NET 4.0… which isn't released yet and therefore we don't have access to it.
  - Unknown. Hopefully having a common test data schema will be enough.

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Project Schedule

1. Become Familiar with SharePoint development
    a) Read tutorials, work through examples, collaborate on design ideas.
    b) Due: 09/17
2. Figure out charting capabilities in Silverlight
    a) Look for libraries for creating charts, ask for permission for use, ask client for recommendations
    b) Date: 09/19
3. Setup SharePoint Site
    a) Integrate SharePoint services into our server and create a new SharePoint site
    b) Date: 09/22
4. Start Development of SharePoint Webparts
    a) Goal: Create Webpart framework for KPI chart
    b) Date: 09/22

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Project Schedule

5. Finish KPI List and Scorecard Webpart
   a) Use existing knowledge of SharePoint webpart development and finish up development of KPI webpart
   b) Date: 09/29
6. Finish Development of create/edit new KPI webpart
   a) Finish creating webpart to create and edit KPIs
   b) Date: 10/03
7. Integrate Webparts into SharePoint page
   a) Take developed KPI webparts, and put them in SharePoint page
   b) 10/05
8. Alpha Demonstration
   a) Display functionality of current system
   b) 10/06

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Project Schedule

9. Finish Alerts Webpart
   a) Finish development of Alerts Webpart
   b) Date: 10/21
10. Finish KPI Chart Webpart
    a) Finish development of KPI chart webpart and make sure it works with the other KPI webparts
    b) Date: 10/29
11. Beta Demonstration
    a) Present semi-finished product
    b) Date: 11/03
12. Finish Development of Metrics Webpart
    a) Finish up the ability to create new metrics in system
    b) Date: 11/15

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Project Schedule

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13. Finish Testing
    a) Make sure system is fully functional and remove bugs from system
    b) Date: 11/30

14. Project Videos
    a) Finish up project videos to present our final product
    b) Date: 12/1

15. Last minute changes
    a) Something doesn't work? Fix it!
    b) Date: 12/4

16. Design Day
    a) Present our Health Monitoring Application
    b) Date: 12/5

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