## Traffic Management System

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### Abstract
This project deals with creating a railroad traffic management system. This system will contain two rail stations and the operations between these two stations will be regulated by the traffic management system. Any number of trains may be allowed on the tracks but the management system will have to monitor this as well. This system will consider departures, arrivals, auxiliary tracks, routing, scheduling, communication controls, etc. to make sure the traffic is regulated.

### Subject Terms
traffic management
Traffic Management System

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Traffic Management System

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About The Project

1. Traffic Management System
2. Modernization and Module Architecture
3. Goals
4. Modifying the Software
5. Changing the Target Hardware
Outline

1. About The Project
2. Requirements of the System
3. Specifications of System
4. Design Specifications
5. Implementation
6. Testing and Maintenance
7. Conclusions
Specifications of System

1. Hardware Architecture
2. Boundaries of the Problem

Load/Unload Platform

<table>
<thead>
<tr>
<th>Train ID</th>
<th>Arrival</th>
<th>From</th>
<th>Depart</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>3040</td>
<td>0700</td>
<td></td>
<td>0720</td>
<td>Stat B</td>
</tr>
<tr>
<td>7676</td>
<td>0800</td>
<td></td>
<td>0830</td>
<td>Stat B</td>
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<td>1030</td>
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<td></td>
<td>1120</td>
<td>Stat B</td>
</tr>
<tr>
<td>4426</td>
<td>1200</td>
<td></td>
<td>1210</td>
<td>Stat B</td>
</tr>
<tr>
<td>6535</td>
<td>1300</td>
<td></td>
<td>1320</td>
<td>Stat B</td>
</tr>
</tbody>
</table>
Requirements of the System

1. Routing
   - Network Control System
     (progress individual routes and tracks)
   - Scheduling
   - Communication Control

2. Train System Monitoring
   - Locomotive analysis and Reporting System
   - Energy Management System
   - On-Board Display System
   - Data-management Unit
   - Train Location Tracking

3. System and Software Requirements
   (Various Scenario for Processing Daily Train orders)
Implementation

1. Language C++
2. To be completed in Fall 95
3. System RISC-6000
4. Packages to use:
   CADRE/teamwork
   SRI Testing Package
Design Specifications

Message
  A

TrainStatus
  Message
    Location
      Message
    Speed
      Message
Stop
  Message

TrainPlan
  Message
    Pickup
      Message
    Clearance
      Message
Track Work
  Message

Wayside Device
  Message
    Switch
      Message
    Signal
      Message
Testing and Maintenance

1. Tracking the Bugs and Correcting
2. Adding more modules
3. Software Re-use (property of OOD)
Conclusions

1. Object-Oriented Design Allows
   Adding new Functionality
   Allows Software Reuse Property

2. Studied the Requirements and
   Specifications of the project

3. Experiences helps to
   design and implement of other similar projects

4. Hardware Independent Design