INTERFACE OF GEOGRAPHIC INFORMATION SYSTEMS AND

TRAFFIC SOFTWARE

by

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ABSTRACT OF THE THESIS

Interface of Geographic Information Systems and traffic software

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Traffic at an intersection is the day to day problem. To optimize the signal timing and traffic control, Synchro is used. To overcome limitations of Synchro, we develop a software interface that locates the intersections actual on the map, while the traffic optimization is being carried out in Synchro. The focus of the thesis is to develop a map with the help of given database, run geo spatial query to show intersections on the map and data flow, i.e. how data is moving through different steps. I introduced a web-based architecture for this software, to run the software from the World Wide Web. The potential users are solely New Jersey Department of Transportation personnel and the authorized traffic consultants. There is up to the minute work about Synchro that is also provided. How one develops a map and performs geo spatial query is described next in the thesis. The data flow, importing – exporting from Synchro, how it is performed and the user interface design is also discussed. I conclude the thesis with conclusion and future work along with appendices.
Acknowledgement

I am very thankful to Dr. Manish Parashar and Dr. Kaan Ozbay for their support throughout my career at Rutgers, the State University of New Jersey in performing this research work. This documentation is focusing on the interface of GIS based mapping and a traffic software Synchro. The challenge in this project is that it is a real world project, sponsored by NJDOT (New Jersey Department of Transportation). The software is going to be used by NJDOT personnel and traffic consultants.
# TABLE OF CONTENTS

**Chapter 1: Introduction**  
1.1 Problem Statement 1  
1.2 Objective 1  
1.3 Motivation 1  
1.4 Overview of the System 3  
1.5 Technical Approach and Contributions 5  

**Chapter 2: Systems Architecture**  
2.1 Systems Requirements 7  
2.2 Overview of Synchro 7  
2.3 Synchro Data 9  
2.4 Modelling with Synchro 11  
2.5 Use Cases 15  
2.6 Conceptual Diagram 23  
2.7 Description of Architecture 24  
2.8 System Sequence Diagram 26  
2.9 Design Details 27  

**Chapter 3: Developing map and map objects**  
3.1 Developing a Map 28  
3.2 Modular GIS Environment (MGE) 29  
3.3 Developing Features with MGE Segment Manager (MGSM) 32  
3.4 Showing Intersections on the Map 42  

**Chapter 4: Data Flow**  
4.1 Universal Traffic Data Format (UTDF) 44  
4.2 Importing Data from Synchro 45  
4.3 Exporting Data to Synchro 46  
4.4 Flow Diagram 48  

**Chapter 5: User Interface**  
5.1 Displaying Data to the Form 49  
5.2 User Interface 49  
5.3 Data Flow 50  
5.4 How Does the Software Function 51  

**Chapter 6: Conclusion**  
6.1 Results: Form Comparison of Synchro Vs. Our Application 54  
6.2 Proposed Web Architecture 60  
6.3 Performance 65  
6.4 Future work 65  

**Appendices**  
Appendix I: Manual 66
Appendix II: Read Me File 69
Appendix III: Troubleshooting 87

References 90
LIST OF FIGURES

Figure 1: Global view of the system 4
Figure 2: Use Case: Opening the Geoworkspace map 16
Figure 3: Use Case: Opening User Window 18
Figure 4: Use case: Importing Data from Synchro 20
Figure 5: Use Case: Exporting Data to Synchro 22
Figure 6: Collaboration diagram 23
Figure 7: Abstract Machine model 25
Figure 8: System Sequence diagram 26
Figure 9: MGE System protocol stack 30
Figure 10: MGSM work flow 36
Figure 11: Flow diagram 48
Figure 12: User Interface 50
Figure 13: Main Menu Form 52
Figure 14: Display of Lane Data 53
Figure 15: Lane Data from Synchro 55
Figure 16: Lane Data from Interface with GIS 55
Figure 17: Phasing Data from Synchro 56
Figure 18: Phasing Data from Interface with GIS 56
Figure 19: Timing Data from Synchro 57
Figure 20: Timing Data from Interface with GIS 57
Figure 21: Volume Data from Synchro 58
Figure 22: Volume Data from Interface with GIS 58
Figure 23: Layout Data in Synchro 59
Figure 24: Layout Data in Interface with GIS 59
Figure 25: Proposed web architecture 60