



FIG WORKING WEEK 2012

May 6–10 2012  
Rome, Italy

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SELCUK UNIVERSITY  
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES  
DEPARTMENT OF GEOMATIC ENGINEERING

**A Network Analyst Design For Providing The Shortest Intervention Time Of The Emergency Vehicles As Like Ambulance And Fire Fighting To The Emergency Events, A Case Study Konya**

**PROBLEM?**



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With the growing population in urban center traffic trouble is getting more important issue for human safety. Because of intensive traffic flow, problems about planning of the streets and wrong parked vehicles are causing delays when emergency situations as like fire, traffic accidents and ambulances. When emergency services are delayed, fatal results are occurs within seconds. This situation is shows that emergency vehicles must know all attribute information about road segments.

*F.SARIL.A.ERDI*

A WEB BASED GEOGRAPHICAL INFORMATION SYSTEM DESIGN FOR MONITORING URBAN GROWTH, CASE STUDY BOSNA-HERSEK DISTRICT IN KONYA

**PROBLEM?**

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**PROBLEM?**

CRITERIAS	SPEED OF VEHICLE	TURNING
<b>Parking Status</b>	Slower	More difficult in two-side parked streets
<b>Width of Street</b>	Slower in narrow streets	More difficult in narrow streets
<b>Signalization</b>	Slower	-
<b>Crossroads</b>	Slower	More difficult in crossroads
<b>Speed Blockers</b>	Slower	-
<b>Pedestrian crossing</b>	Slower	-
<b>Rail road crossing</b>	Slower	-
<b>Traffic Density</b>	Slower	More difficult in intensive traffic

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**SOLUTION**

Networks are very important in determining routes in urban area. Especially in emergency events, it is vital to reach to the event area immediately. In urban area there are some obstacles which make vehicles slower as like traffic flow, street width, crossroads, and rail cross roads, speed limiters and street structure. Normally, it is impossible to change the structure of streets. Because of this, vehicles must find the fastest way to reach to the emergency event area.

For the purpose of predicting the obstacles and providing emergency vehicles to reach emergency area as soon as possible, in this study, a network analyst has realized by considering obstacles and reasons which makes vehicles slower.

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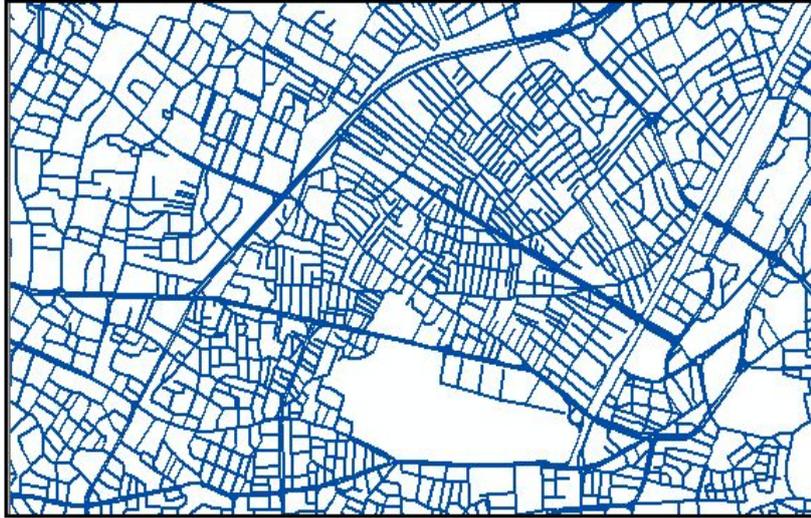
**SOLUTION****NETWORK DIGITIZING***F.SARLA.ERDI*

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## SOLUTION



## NETWORK ROADS



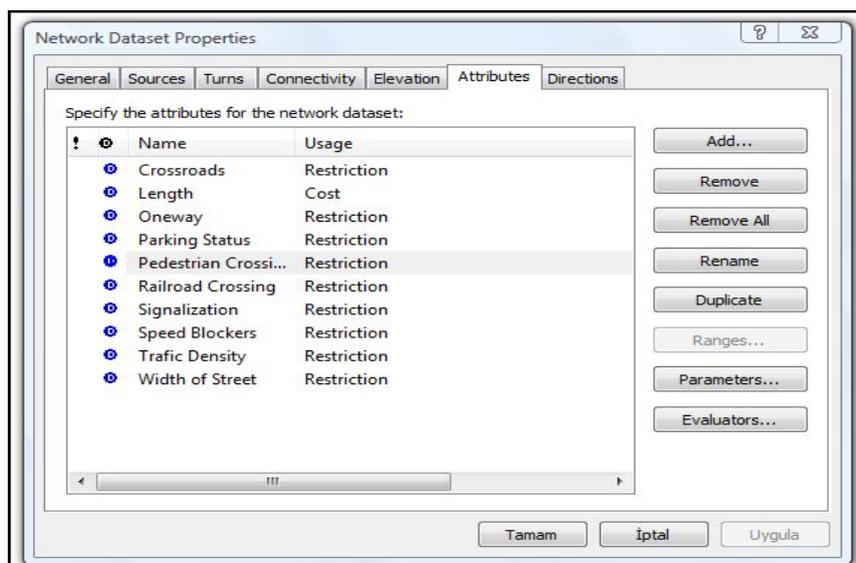
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## SOLUTION

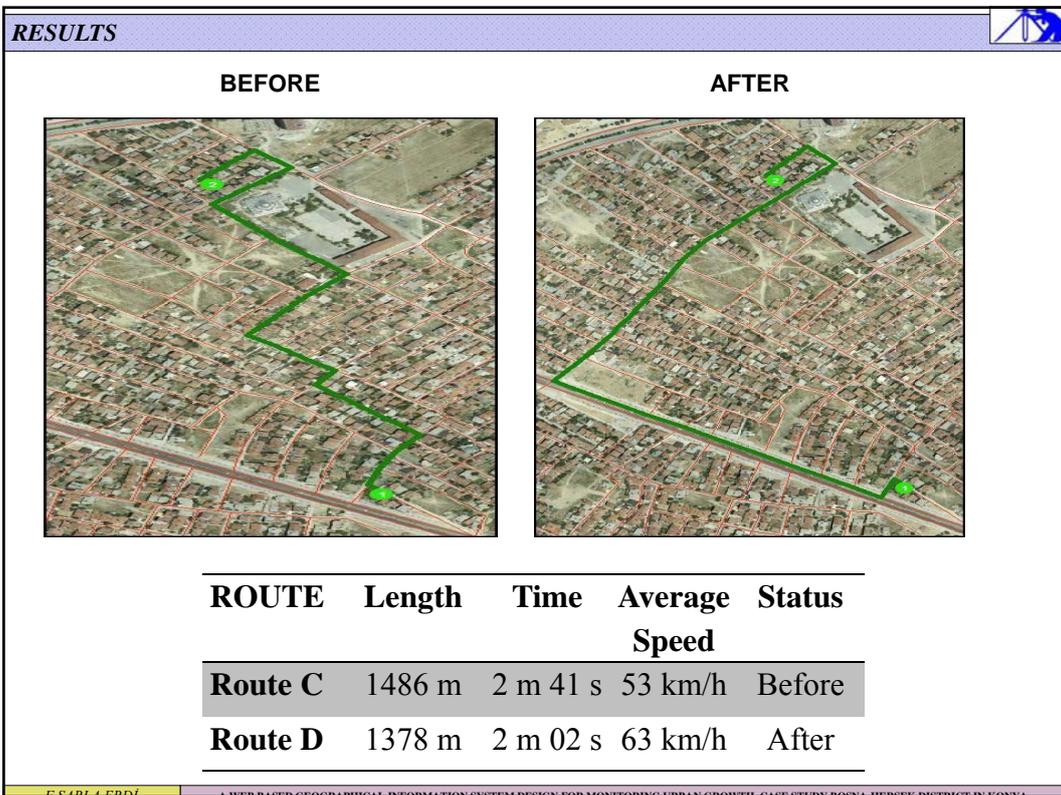
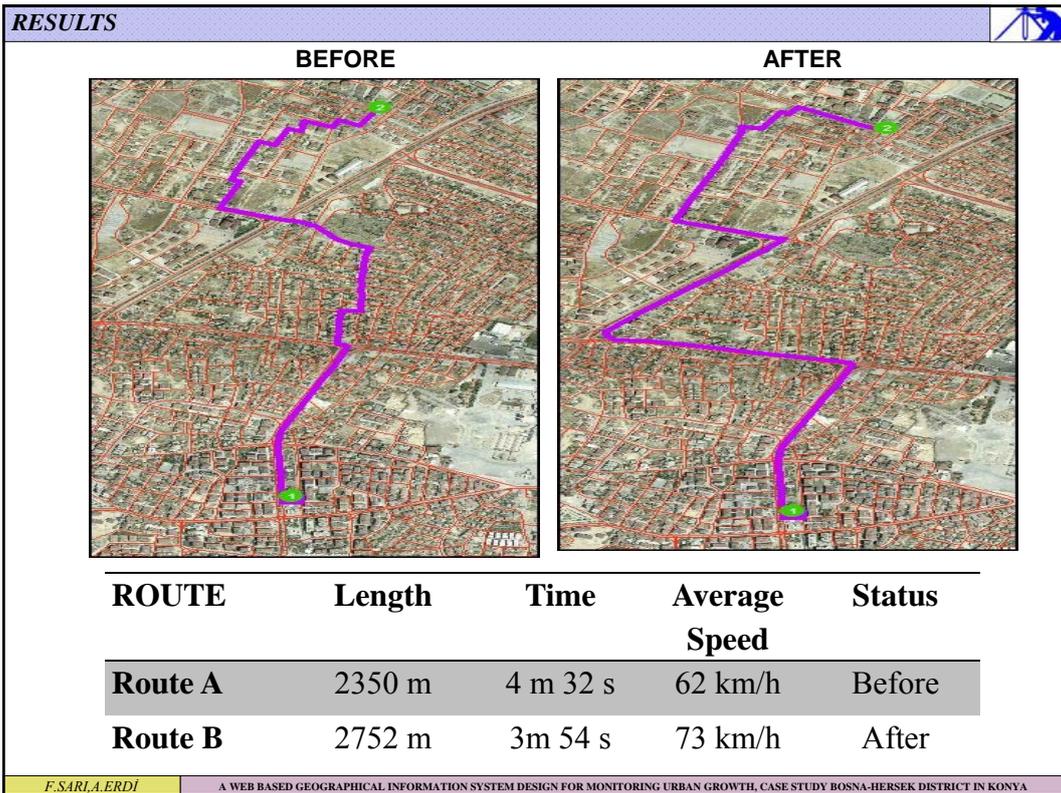


## CRITERIAS



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**CONCLUSIONS**

- Intervention time is getting shorter to the emergency events,
- Especially in vital accidents, losing human life will be decreased as well as possible,
- In fire status, rapid intervention is too much important to save human life and physical savings
- With analyzing the time of vehicles, it is possible to analyze the fire center and hospitals. Thus, new service area facility can be used to determine where new fire center and hospitals should be build.
- For urbanization planning, the roads status can be determined.
- Alternative routes can be determined with this application to find alternative routes in urban area.
- With analyzing most used routes, it is possible to put forward new needing of streets as like additional signalization or overpass buildings.