


The logo for MobiT, featuring the word "MobiT" in a sans-serif font. "Mobi" is in dark blue and "T" is in red. The logo is positioned in the upper right area of a slide that has a light green decorative shape on the left side.

**MobiT**

Mobile Transportation  
Assistant

A thick, dark blue horizontal bar with rounded ends, positioned below the text "Mobile Transportation Assistant".The logo for MobiT with a question mark, featuring the word "MobiT" in a sans-serif font. "Mobi" is in dark blue and "T" is in red. A question mark is placed to the right of "T". The logo is positioned in the upper right area of a slide that has a light green decorative shape on the left side.

**MobiT ?**

- 
- A thick, dark blue horizontal bar with rounded ends, positioned above the bullet point.
- It is a service designed to guide people ,who wants to reach to a location using complex transportation net of a big city.

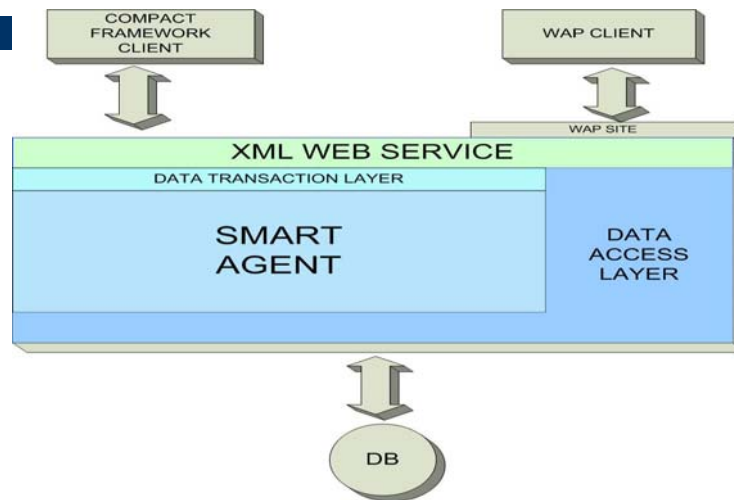
## Features

- Pocket PC and WAP access
- Customized results with criteria selection.
- Personalized results and self optimization using feedback mechanism

## Technologies

- SQL Server 2000
- XML Web Services
- C#
- Mobile Controls

## System Architecture

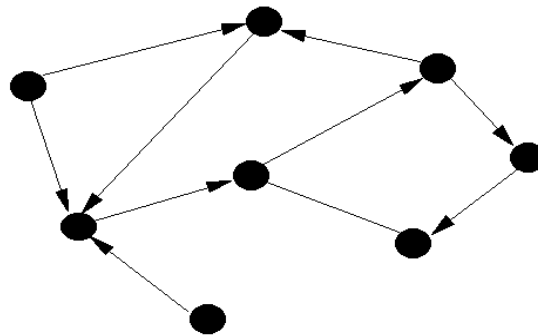


# MobiT

Smart Agent

## Traveling System Modelling

- Graph Architecture



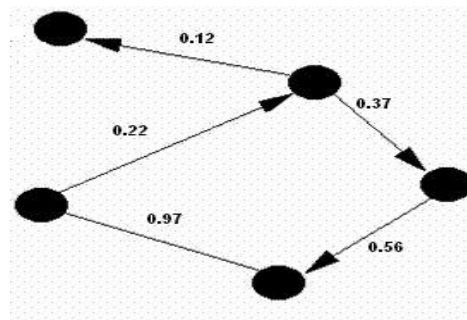
## Traveling over Graph

- Depth First Search Algorithm

- Similar to transportation
- Dynamic

## Artificial Neural Network Usage - 1

- Edge costs over graph



## Artificial Neural Network Usage - 2

- Determining Costs
  - User Criterias
    - Time, Cost, Comfort, Sight, Reliability...
  - Properties of Paths
    - Line costs
    - Connection costs

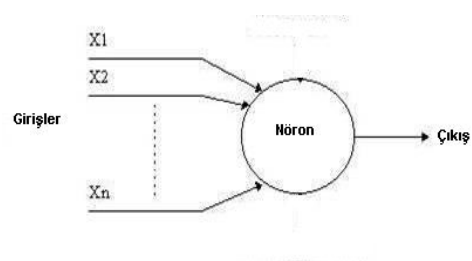
## Artificial Neural Network Usage - 3

- Why?
  - Lots of parameters
  - Difficulties of finding a function
  - Learning capability
  - Personalizing

## Artificial Neural Network Structure - 1

- Artificial Neuron

- Inputs
- Weights
- Activation Cost
- Output

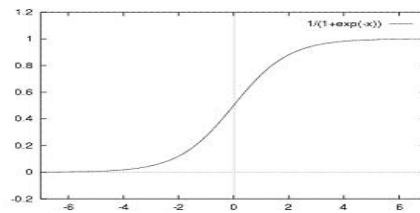


## Artificial Neural Network Structure - 2

- Sigmoid Activation Function

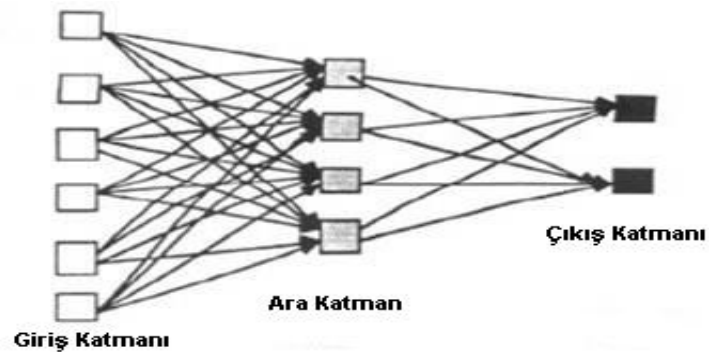
$$f(x) = \frac{1}{1 + e^{-ax}}$$

– Continuous Output



## Artificial Neural Network Structure - 3

- Feed-Forward Network Topology



## Artificial Neural Network Structure - 4

- Learning with Back Propagation Algorithm
  - Getting desired outputs
  - Calculating errors at output layer
  - Propagating errors to previous layers
  - Reassigning errors according to errors

## Artificial Neural Network Structure - 5

- Using Momentum in Learning
  - Avoiding local optimums
  - Trying to keep its direction