The Geo-spatial address registration system model for Turkey

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PURPOSE OF STUDY

In this study we purposed to design an address model for 81 cities and 957 district municipalities have to establish this system.

In this context; by means of a pilot region study, our aim reveal problems and prepare the necessary infrastructure for the effective establishment of the systems by preparing a comprehensive report.

The system is necessary for optimum management of cities and for making accurate decisions.
1- What is the numbering?
   a- The Importance of numbering
   b- Application Forms and Issues

2- Address concept
   a- Importance Of Address in Urban Management And in Urban Information System
   b- Address Problems in Turkey

3- Spatial Address Registration System(SARS)
   a- SARS Requirements and Importance
   b- Basic Components and Pilot Study

4- Conclusions and Recommendations
What is the numbering?

Definition 1- Naming of roads and numbering of buildings is called numbering.

Definition 2- To create the basic components of the address data that we use so often in our Daily lives, All of the work that carried out within the context of legal legislation is called numbering.

LEGAL LEGISLATION

10.04.1927 Date and 1003 “Law is about Numbering of Buildings and the naming of streets.”

- 10.04.1930 Date and 1580 “municipal law”
- 27.06.1984 Date and 3030 “law for metropolitan municipalities”
- 21.03.1963 Date and 11361 Published to Official news “Numbering Regulation”
- 25.04.2006 Date and 5490 “law on the civil registration services”
- 31.07.2006 Date and 26245 Published to Official news “Regulation in relation to Address and Numbering”
The Importance of Numbering

e - MUNICIPIALITY / e- STATE

URBAN INFORMATION SYSTEM

MAKS

ADDRESS

NUMBERING

✓ Legal Problems
✓ Technical Problems
✓ Problems encountered in application
IN URBAN INFORMATION SYSTEM, THE ADDRESS DATA IS REQUIRED TO ESTABLISH RELATIONSHIP BETWEEN PROPERTY (IMMOVABLE) BENEFICIAL OWNER DEPEND ON FORMING NUMBERING SYSTEMS.
Current Situation in Numbering Studies

- Allocation Numbers
- Naming of Street
- Multi Door Numbers
- Discrimination of Street, Street and Boulevard
- Identification of Street Starts and Ends
- Use of Base Map
- Confusion Of Between Old System and New System ...
Current Situation in Numbering Studies

- In the law, “other addresses” and “settlement” Address concepts
- In numbering description “simplicity” / Lack of technology
- Address Standard Problem
- Confusion that will emerge with fixed identification numbers
- Allocation map issue
- Lack of address maps
- Mismatch with EU norms
- Address Change Issues
- Update Problems
- Deficiencies of Budget
- Heavy Duty of Local Government
- Staff Problems
- Profit Share Distribution That Population-Related in Local Administrations
Because of address problems, property tax from %17 of and environmental cleaning tax from %23 of property (immovable) can not be make collections in Turkey. (Universal)

Tax that constitute %33 of gross national product in our country that attention of declarations that send for allocation, Due to lack of address, it is a big problem late Access or never Access with regard to the country economy.
3- Spatial Address Registration System «SARS»

The Systems which are associated the basic layers of the city as the road and the building with standard format address data, databases which have been created with specificity information belong to these layers, which are made required questioning and analysis, which are held whole address inventory of the city is named as SARS.

INITIAL POINT OF URBAN INFORMATION SYSTEMS, THE SARS SOULD BE CREATED.

In order to be integrated address information which held textural attributes in address registration system and geographical coordinates, «Spatial Address Registration System» have been began as part of law on the civil registration services 5490 no by general directorate of population affairs in our country.
MAKS WORKFLOW

Base maps, Efficient Updating System

Dynamic Numbering System

Strong Address Infrastructure

an Information System
Purpose of SARS

- Address data that be textual attribute is brought a spatial dimension.
- Executive administrations have urban information system which be geographic information system-based preparation services that will allow them to keep update of spatial national address database which will be created with system integration.
- In order to spatial data share and this data which shared to keep constantly updated, create the infrastructure of data update.
- Enabling system to generate efficient outputs, documents related with tax, utility management and other services.
- Citizens can more quickly and accurately get Access address components and building documents.
Pilot Study- GORELE

Görele  Spatial Address Registration System Project

GO-SARS
Office Environment:
- matching graphic-verbal of Parcel; Building, street / street, door no, work place no, person
- District road network was established
- Cadastral parcels were digitized
- Neighborhood borders were identified
- The building data was taken from the base map and the necessary layers were obtained.

Land environment:
- A pilot study was conducted for see the problems which are encountered.
- The street names of the districts were taken and compared with the base map.
- Building, road photos and itinerary were identified.
- Attributes of buildings and roads were gathered.
- Floor situation of buildings was analyzed from satellite images and were tried to reach the knowledge whether the numbering is sequential
Problems Encountered In The Field

- Problems Which Encountered in Street Names
- Problems Which Encountered in Door Numbers
- Problems Which Encountered At Workplace Entrances
Problems Which Encountered in Street Names

- determine a itinerary
- Incompatibility of street names
Problems Which Encountered in Door Numbers

- Buildings which be frontage against two Street on the corner.
- In the numbering of clustered scattered buildings
- Assigning the same number to two houses or Buildings without any number were seen
Problems Which Encountered at Workplace Entrances

- Especially one of the biggest challenge was in corner buildings’ numbering, much of them had duplicate or wrong numbers.
- When numbering was done, entrances was given number instead of letter or any wasn’t given number.
- If there are two workplace entrances, they are considered like two separate buildings and they are numbered separately.
CONCLUSIONS
Numbering studies which are made within the scope of the Regulation on Address and Numbering should be given due importance in accordance with law on the civil registration services.

Base Mapping and Information Technologies should be used optimally in numbering studies, Numbering Systems which exceed the number concept and produce more effective solutions should be established.

According to the terms of the construction plan, Allocation maps should be created posthaste as based on the parceling plans created on the minimum scale.

Numerical sketch should be prepared for field studies and it should also be used effectively in updating processes.
The lack of qualified personnel which be the most important problems which encountered in practice should be eliminated. Staff which have a handle on legislation, educated should be used.

In terms of ensuring effective management within the city, ‘Street index’ or ‘address maps’ should be prepared open to the use of the public.

Public participation for street name changes should be provided. Frequently name and number changes should not be done or if name and number changes done, other public institutions and organizations should be informed.

‘Address Reference Files’ containing which street number distribution should be prepared.

Finally efficient update property of system enables municipalities economic structure with avoiding extra budgets for unnecessary updates.
Thank you for listening