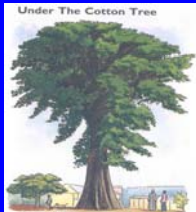


Cairo, April 2005

Under the Cotton Tree: Situs Addressing System in Africa



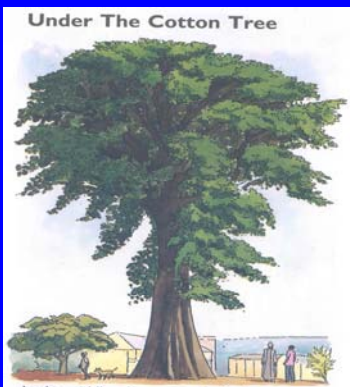
Remy Sietchiping
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Addis Ababa-Ethiopia

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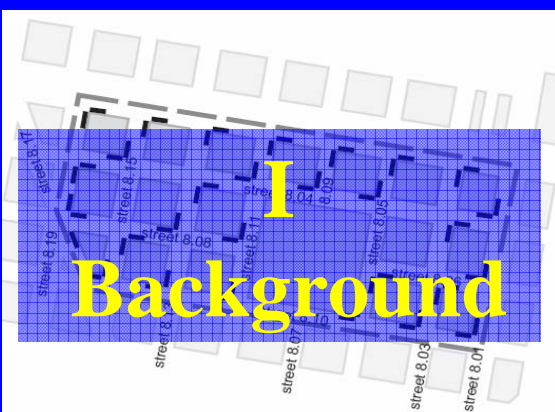
Under the Cotton Tree



We have been waiting under the Cotton Tree!



Background



Address?

Address is a primary means to identify (access) and locate a **unique** object

Type of addresses

- **Mailing Address**
 - 02 El Gezira El Wosta Stret, Zamalek, Cairo
 - P.O. Box 3426, Nairobi, Kenya
- **Geographic Address**
 - 38° 52' 01" N
 - 77° 02' 19" W
- **Situs or Physical Address**

Situs address?

refers to the **precise, complete, permanent and unique location** of any **spatial object** (e.g., thoroughfare, parcel and property) using a system of **identification** such as name, number or descriptor

Aim

Develop a framework to implement a functional addressing system in Africa:

User-driven addressing system

Getting There Without Getting Lost?

II Current situation of addressing system in Africa

2.1 Direction clichés

Fuzzy direction

E-mail: Cvsubmit@ethiojobs.net or in person to our office located on Debre Zeit Rd (near Lancia, directly opposite to Emuassy of Ireland, black and white gate.)

Landmark/reference point



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2.2 Streets unknown



- Streets without names & numbers
- Duplicity, overlapping, redundancy and inconsistency in street naming and numbering



2.3 'Official' vs 'Popular' names

Popular +
Official

Address: - From Dembel City Center go 50 meters along Meskel Flower (Gabon) Road. We are on the right-hand side. Tel: 1504 14 / 504618 (09) 644618



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2.4 Direction & location: local knowledge

- Relying on memory and local knowledge
- Landmark (reference point: *Cotton Tree*)
- No sign posting: use of expression such as 'opposite to, behind, next to, 30m from..'
- No building numbering (identifier): 'Red and green gate', 'ask the shop keeper on your left', etc.



III

Benefits of a functional addressing system for Africa

3.1 Economic development

- Improve **taxation** system (properties, residential and business and income) and generate revenue (e.g. Burkina Faso and Guinea)
- Achieve a cost-effective **data collection**
- **Save resources** for locating addresses or navigating in cities (time, money, etc.)



3.1 Economic development (cont'd)

- **Downstream economic activities** (e-mapping, e-land, e-cadastral, street directory, maps), location-based services (navigation systems), insurance, etc.
- New job creation and **poverty reduction**
- **Tourism**



3.2 Business development

- Easy location and **target** customer
- Expand **telecommunication** activities (e.g., 3G mobile communication)
- Develop location based-services and businesses



- Improve advertising strategies (cost-recovery)



3.2 Business development

- Fleet management and vehicle **navigation**
- Improve **mailing** (e.g., courier services, home delivery) and billing system
- Facilitate companies **record** management



3.3 Utilities improvement

e.g., power/electricity, water and gas

- **Save cost** in services delivery
- Improve customer billing and **cost-recovery**
- Facilitate **service and utilities management and maintenance** (Mozambique)
- Ameliorate **services planning**



3.4 Governance

- Improve planning and decision-making process
 - **Information is power!!!!**



3.4 Governance (Cont'd)

- Ameliorate **census** enumeration
- Speed-up the implementation of **e-government**
- Facilitate and improve **electoral** system
- **Citizen** participation



3.4 Governance (Cont'd)

- Maintain accurate legal documents (e.g., individual identification cards, electoral records, property records, deeds, vehicle registration and driving licenses) ...with permanent addresses



- Improve the sense of belonging for the local population

3.5 Health, security & emergency services

- Easy and quick location = expedite emergency responses in case of fire, medical emergency and law enforcement



Save life and properties, reduce crime, etc.

Health management (Mozambique)



3.6 Urban management

- Improve urban planning and management
- Eliminate duplicity, redundancy overlapping and inconsistency in city data and resources management (e.g., collection and use)
- Harmonizing & Sharing = save \$\$\$\$
- Improve regional planning
 - Slum upgrading: e.g. Mauritania



Some Activities Ahead

- Convene an expert group meeting this weekend in Addis Ababa (23-24 April 2005)
- Submit an addressing policy framework to CODI (25-28 April 2005)
- Revise the background document on addressing
- Produce an addressing workbook
- Implement pilot project

Conclusion

- There is a vacuum of a rationally understood (and used of) addressing system in many African countries
- Locating addresses and navigating in African cities are very difficult without a grounded local knowledge: standardizing navigation in Africa

Conclusion (Cont'd)

- Overwhelming (economic) evidences to urgently develop and implement a functional addressing system
- Need to guide African countries in developing and implementing a functional addressing system

Thank You!

IV Addressing in Africa: challenges and prospects

ECA/DISD expertise...

Addressing system in Africa: Challenges

- Data and security
- Land, tenure, taxation and properties
- Local practices: landmark, local location and navigation
- Plots, building or parcel without direct access to a thoroughfare: **Slums and rural areas**
- Practical issues (implementation)
- Finances issues
- Technology
- Literacy and awareness campaign
- Skill training and staffing
- Politics and democratic process
- Etc.

4.1 data (standard)

- How to integrate addressing system into National Spatial Data Infrastructure and National e-Strategies?
 - Core dataset
- Type and format?
- Collection/production (standard, metadata)?

4.1 data (standard) Cont'd

- Requirements, availability, accessibility, sharing, use (copyright, privacy) and custody?
- How to assure accuracy, updating and upgrading?
- Dissemination methods (clearinghouse, geoinformation networks, web-mapping facilities)?
- Etc.

4.2 Land and addressing

What would be the impact of existing cadastral, tenure, land record and property right on the addressing system?

4.3 No thoroughfare & addressing

- How to conceive an addressing system that takes into account plots, building or parcel without direct access to a thoroughfare (e.g., in slums and unplanned areas)
- How to account for multiple **dwelling/households in one 'compound'?**



4.4 Practical recommendations

Suggestion on practical issues such as:

- street and property naming and numbering formats
- sign-posting
- material to use, and
- thoroughfare classification

4.5 Landmark and local practices

How to incorporate well-known landmarks as a core component of addressing system?

e.g., Mexico Square in Addis Ababa

4.6 Politics and democratic process

- How to design an addressing system which is free from political self-interest? (e.g., manipulation of electoral roll)
- How to ensure that a permanent address system cut across political programs/agendas?
 - This would avoid renaming street after, for instance, a 'regime change'.

4.7 Financial issues

- Cost and budget?
- Affordability and cost recovery?
- Services with fees or without (e.g., e-land, and use address database)?
- Generate revenues from Advertisings



4.8 How to implement rural addressing



V

Addressing good practices: pointers

Lessons learned and matters under consideration...

5.1 Community involvement: essential

- Adopt a bottom-up approach
- Maximum involvement of local population in the addressing project
 - e.g., development of gazetteer, sign-posting, use of local material and maintenance.



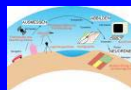
5.2 Uniqueness

- Unique name and number for each property, dwelling and thoroughfare



5.3 Make use of geoinformation technology

- Use geospatial technologies (e.g., for efficient database management)



Database should be flexible enough to allow updates, changes, deletes, etc.

- Incorporate addressing system within the national spatial data infrastructure

5.4 Multipurpose addressing system

- Multipurpose system (multi-stakeholder usage)
- Foster e-government and e-management



5.5 Sign posting

- Confusion-free (e.g., name, number and sign)



5.6 Names or numbers?



5.7 Street as name + number?



5.8 Numbering

- Consistent, independent of the region, suburb/municipality
- Consecutive
- An association of **odd** and **even** numbering system is encouraged



5.9 Properties of sign posting

- At each intersection
- Associated with landmark when applicable
- Fluorescent
- Middle of the Road

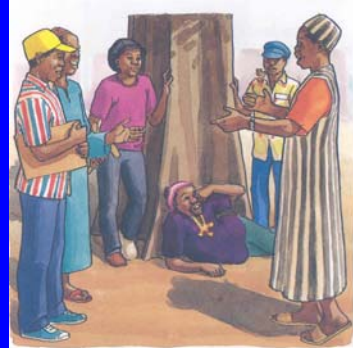


5.10 Bilingual if necessary (e.g. English)



VI Conclusion

Are we still going to wait and meet under the Cotton Tree?



6. Conclusion

- There is a vacuum in addressing system in many African countries
- Locating addresses and navigating in African cities are very difficult without a grounded local knowledge

6. Conclusion (Cont'd)

- Overwhelming economic evidences to urgently develop and implement a functional addressing system
- Guide African countries in developing and implementing a functional addressing system

Thank You!

Annex 1
Geoinformation and addressing

Justification

- Demonstrate the role of geospatial technologies in addressing system
- Opportunity to use GIS to design and implement functional addressing system

Geoinformation database and addressing

- Serve to design a flexible framework for a functional addressing system. Some of the key roles of GIS include:
- Serve as the repository (database) for all rural urban and land addresses and metadata information
- Automate, manage and maintain the street and property identifier (SPI)

Geoinformation database and addressing (cont'd)

- Automate, manage and maintain the street and property identifier (SPI)
- Cross-reference of parcel properties (e.g., parcel identifier, exact physical address; based on coordinate reference, point of interest or landmarks (address alias)

Geoinformation database and addressing (cont'd)

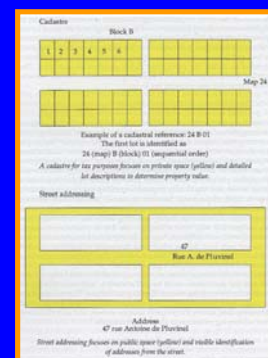
- Design and maintain the spatial data infrastructure
- Deal with the cross platform issue (e.g, interoperability)
- Generate positional or geographical address
- Etc.

Technology

(e.g., software hardware):

- Access, availability, skills, e-government, etc.
- How to ensure that a comprehensive framework (database management system) is put in place for recording and updating address database?
- How to control error propagation within a shared and multi-users database?
- What are the components of a comprehensive addressing system for African countries?

Addressing and Cadastral



Addressing system?

- Mechanism for creating a mental association between the physical location of a building, plot, dwelling, business and similar premises and an abstract code that represents it, providing its unique identification.