

# Development of an Open Source Land Records System for Urban Centres in Ethiopia

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Land records in Ethiopia are kept in paper format and are generally unorganised



IULHFMS (Integrated Urban Land Holding File Management System) project

July 2015 - October 2016

Focus on 3 cities in Ethiopia:  
Mekele, Bahir Dar and  
Dire Dawa

Goals: reorganisation and  
digitalisation of land records,  
file analysis, map analysis,  
system development

The core function of the system is the encoding of (scanned) documents from the archive files



Eight basic document types:

- Title deed certificate
- Agreement
- Suspension and cancellation
- Mortgage
- Means of acquisition
- Payment receipt
- Building permit
- Compensation and valuation

List of file documents

| ID   | Reference number | Source  | Document type              | File number | Entered by | Entry date |         |
|------|------------------|---------|----------------------------|-------------|------------|------------|---------|
| 2748 | 321/07           | 1 (001) | Title deed and certificate | 19300       | abeta1     | 04/05/2016 | Refresh |
| 2750 | 273/16           | 2 (001) | Agreement                  | 19300       | abeta1     | 04/05/2016 | Edit    |
| 2759 | 3400/06          | 5 (004) | Means of Acquisition       | 19300       | abeta1     | 04/05/2016 | Delete  |
| 2763 | 273475           | 6 (001) | Payment receipt            | 19300       | abeta1     | 04/05/2016 |         |

New document View images

Enter new document type:

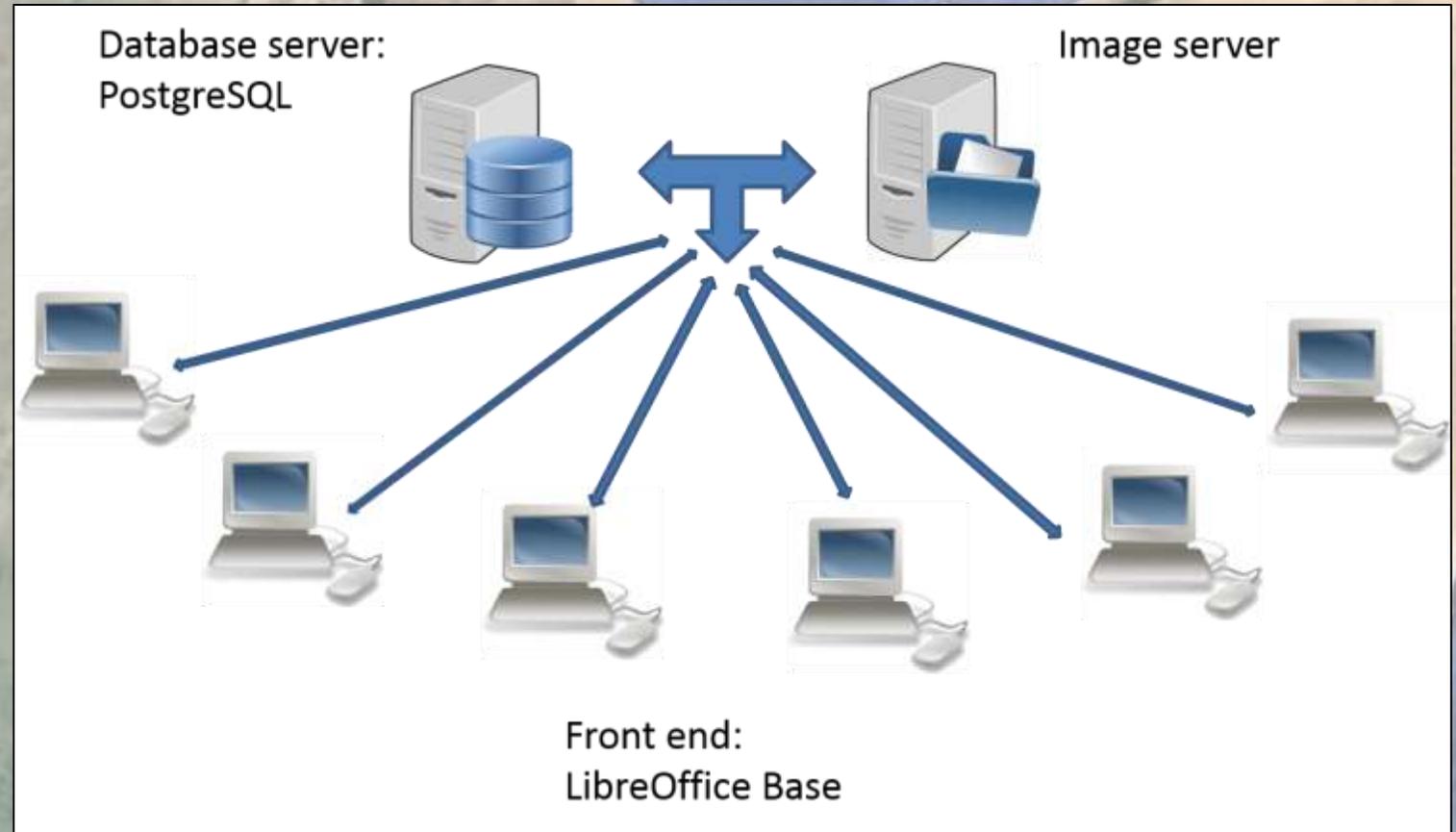
Add new document

- Title deed and certificate
- Agreement
- Suspension and Cancellation (injunctio)
- Mortgage
- Means of Acquisition
- Payment receipt
- Building permit
- Compensation and valuation



## Components:

- PostgreSQL database as data store
- Image server to store scanned images
- LibreOffice Base as front end; links to PostgreSQL and the image server

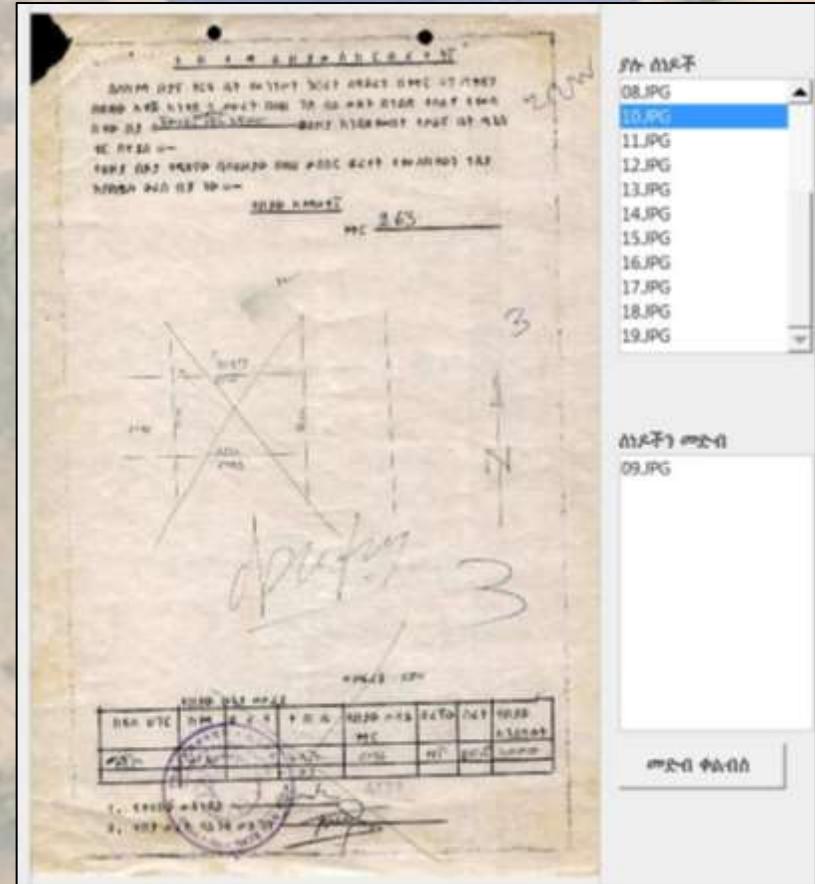




Door to door verification and assigning of unique parcel identification numbers (UPIN)



The land records are digitalised using scanners and digital cameras, and organised by parcel number.



Lists of parcel numbers and file numbers were uploaded into the system, so that the images could be correctly linked to the land records.

# User tools

- View all images of a parcel/file
- Add and edit documents for a parcel/file
- Assign / unassign images to files
- View and print reports
- Change password

List of file documents

| ID   | Reference number | Source | Document type                    | File number | Entered by | Entry date |
|------|------------------|--------|----------------------------------|-------------|------------|------------|
| 2749 | 325/07           | 1      | (001) Title deed and certificate | 19500       | abebel     | 04/05/2016 |
| 2755 | 37/07            | 2      | (002) Agreement                  | 19500       | abebel     | 04/05/2016 |
| 2759 | 3450/06-         | 5      | (004) Means of Acquisition       | 19500       | abebel     | 04/05/2016 |
| 2763 | 273475           | 6      | (005) Payment receipt            | 19500       | abebel     | 04/05/2016 |

Refresh Edit Delete

New document

View images

Enter new document type:

Add new document

Available documents

- 01.JPG
- 02.JPG
- 04.JPG
- 05.JPG
- 06.JPG
- 07.JPG
- 08.JPG
- 09.JPG
- 10.JPG
- 11.JPG
- 12.JPG
- 13.JPG

Documents to assign

Assign

Assigned documents

- 03.JPG

Unassign



## Supervisor tools

- Link scanned images to the database
- Add / remove users
- Assign UPIN records to users, to be encoded
- View encoded records by user and by date (monitoring)

**Supervisor tools**

Assign UPINs

City: [dropdown] Sub-city: [dropdown] UPIN per user: [input] [Assign global] [Assign user]

| Owner      | User     | UPIN |
|------------|----------|------|
| Inpennio   | Gentrade |      |
| Sata_sifio | casula   |      |
|            | comora   |      |
|            | traco    |      |

[Select All]

Add/remove users

User name: [input] [Add] [Remove]

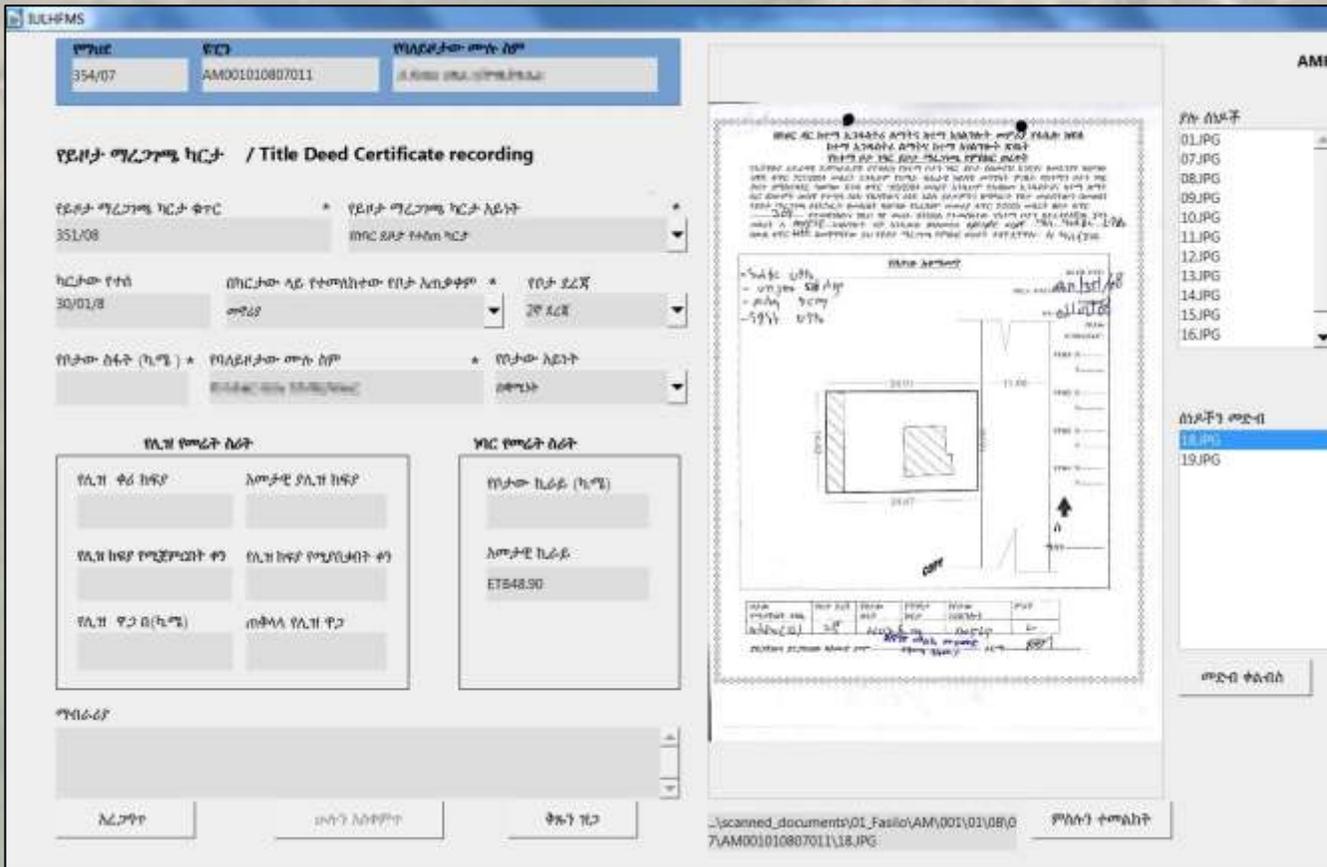
View documents by user and date

User name: [dropdown] Date: [dropdown] [View]

Import images

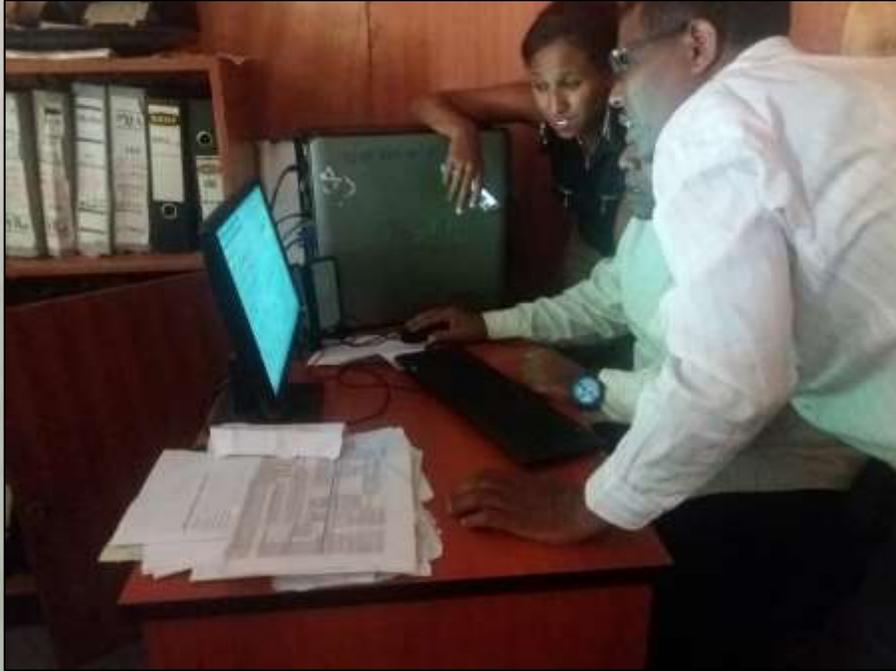
[input] [Browse] [Import]

[Save]



The interface was localised to support Amharic and Tigrinya, and handling of dates in Ethiopian calendar format

## Outlook and evaluation



IULHFMS operational in Bahir Dar, Mekele and Dire Dawa

Expected to be installed in 95 cities and 800 rural woredas in Ethiopia

In a WB review of land systems in Ethiopia, IULHFMS received the highest ranking and was considered the best option going forward to support systematic registration

Open source systems are a viable alternative to high end proprietary systems that may be more expensive to maintain.

A satellite-style map of the Mediterranean region, showing the sea in blue and the surrounding land in various shades of green, brown, and tan. The text is overlaid in the center-left area.

**አመሰግናለሁ – THANK YOU - KIITOS!**