The Social Tenure Domain Model

Christiaan Lemmen, The Netherlands
International Symposium "Progressing towards U-Cadastre"
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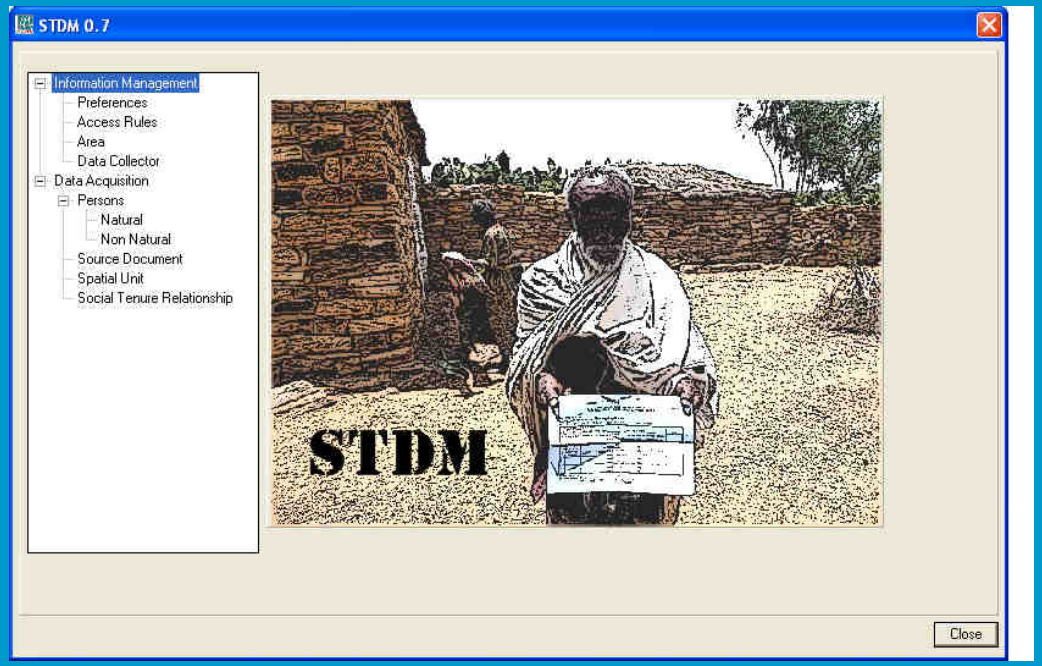

FIG

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The Agenda

- Social Tenure Domain Model
- Data Acquisition in Ethiopia
- Data processing
- Prototype
- Relation to Land Administration Domain Model
- Conclusion

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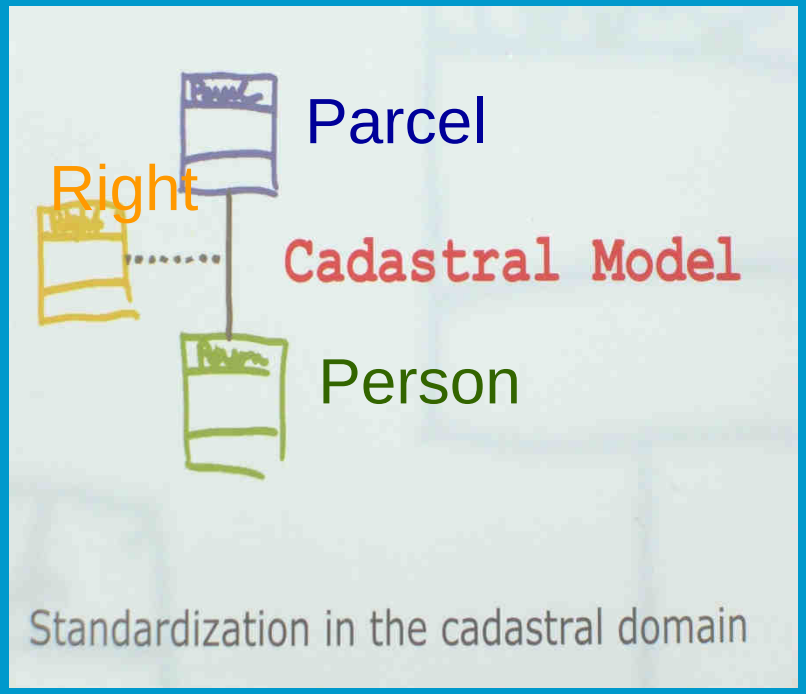
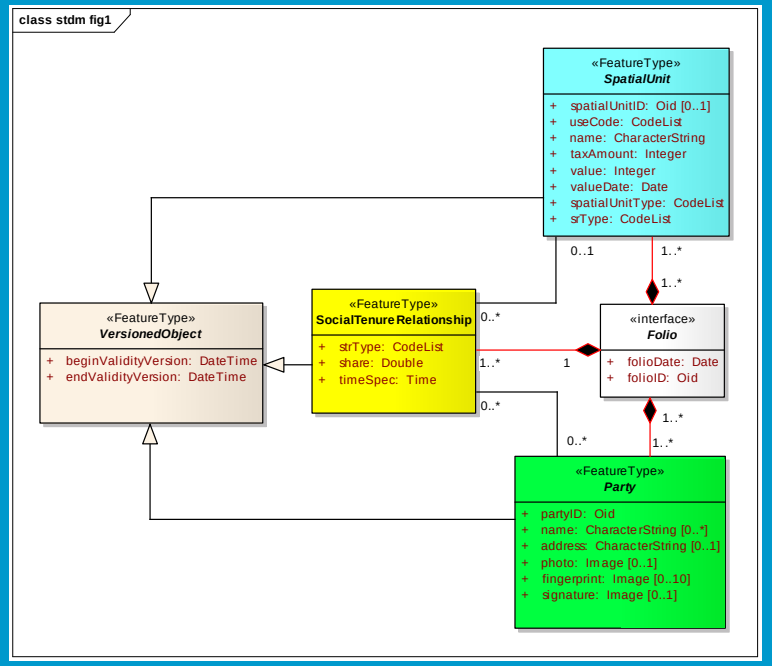
The Social Tenure Domain Model

Party ⟺ Social Tenure Relationship ⟺ Spatial Unit





STDM - broaden the scope of land administration

- pro poor land tool
- land information management framework that would integrate formal, informal, and customary land systems and integrating administrative and spatial components
- facilitate recording all forms of land rights, all types of rights holders and all kinds land and property objects / spatial units regardless of the level of formality

Range of Party/Person – Types

- Group with non-defined membership
- Group
- Group of groups
- Natural Person
- Company
- Municipality
- Co-operatives
- Married couple
- Ministry
- Etc << can be extended

Social Tenure (Right) – Continuum

- Ownership
- Apartment - Right
- Co-operations
- Occupation
- Tenancy
- Possession
- Miri – Milk – Waqf
- Restriction Types
- State Property
- Etc << can be extended

- Non-formal and informal rights
- Customary Types
- Indigenous Rights
- Tenancy
- Possession
- (Certificate of) Comfort
- Disagreement
- Overlap
- Uncontrolled Privatisation
- Conflict situations
- Etc << can be extended

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(Social) Credit Right – 'Continuum' "where"

- Micro Credit
- Group Loan
- Individual Loan
- Loan on a Constructed Residence
- Mortgage
- Etc << can be extended

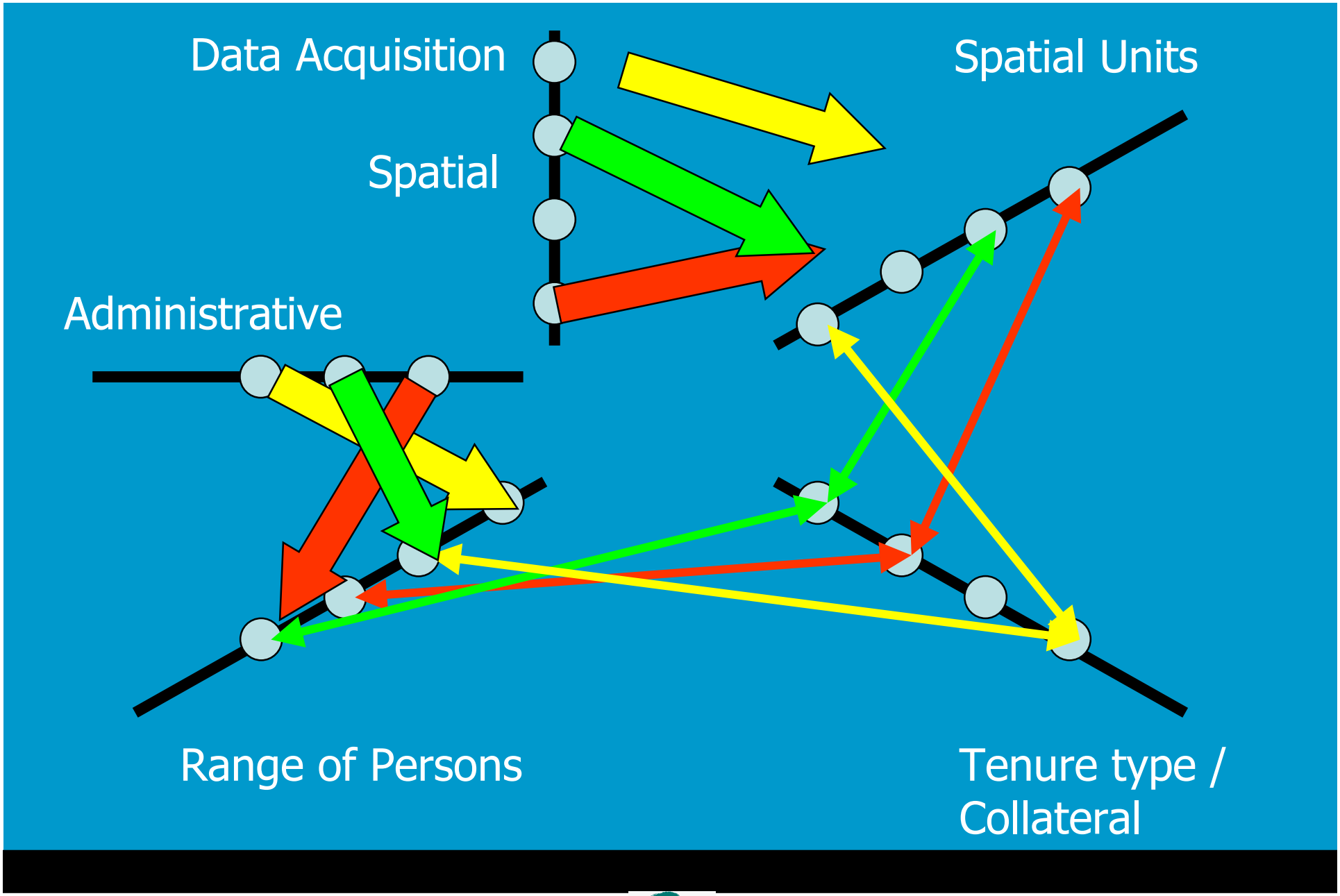
- Risks: people cannot pay!

Spatial Units

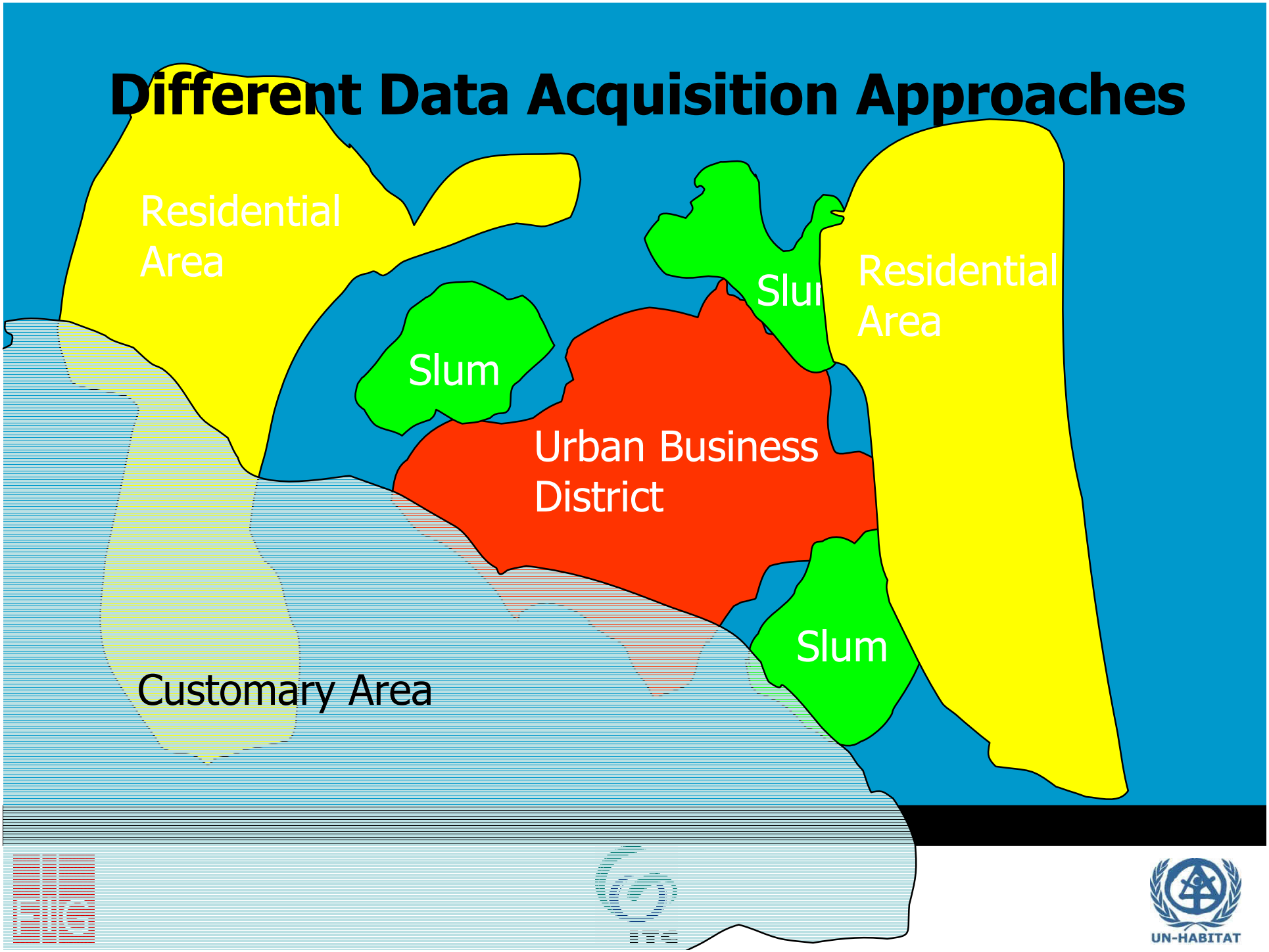
- Parcel
- Apartment
- Building
- Etc << can be extended

- One Point - inside polygon
- One point - street axes
- Set of Lines
- Polygon (low accuracy)
- Polygon (high accuracy)
- 3D Volume
- Etc << can be extended

- Quality labels


Data Acquisition
Spatial Units
Spatial
Administrative
Range of Persons
Tenure type /
Collateral

Different Data Acquisition Approaches



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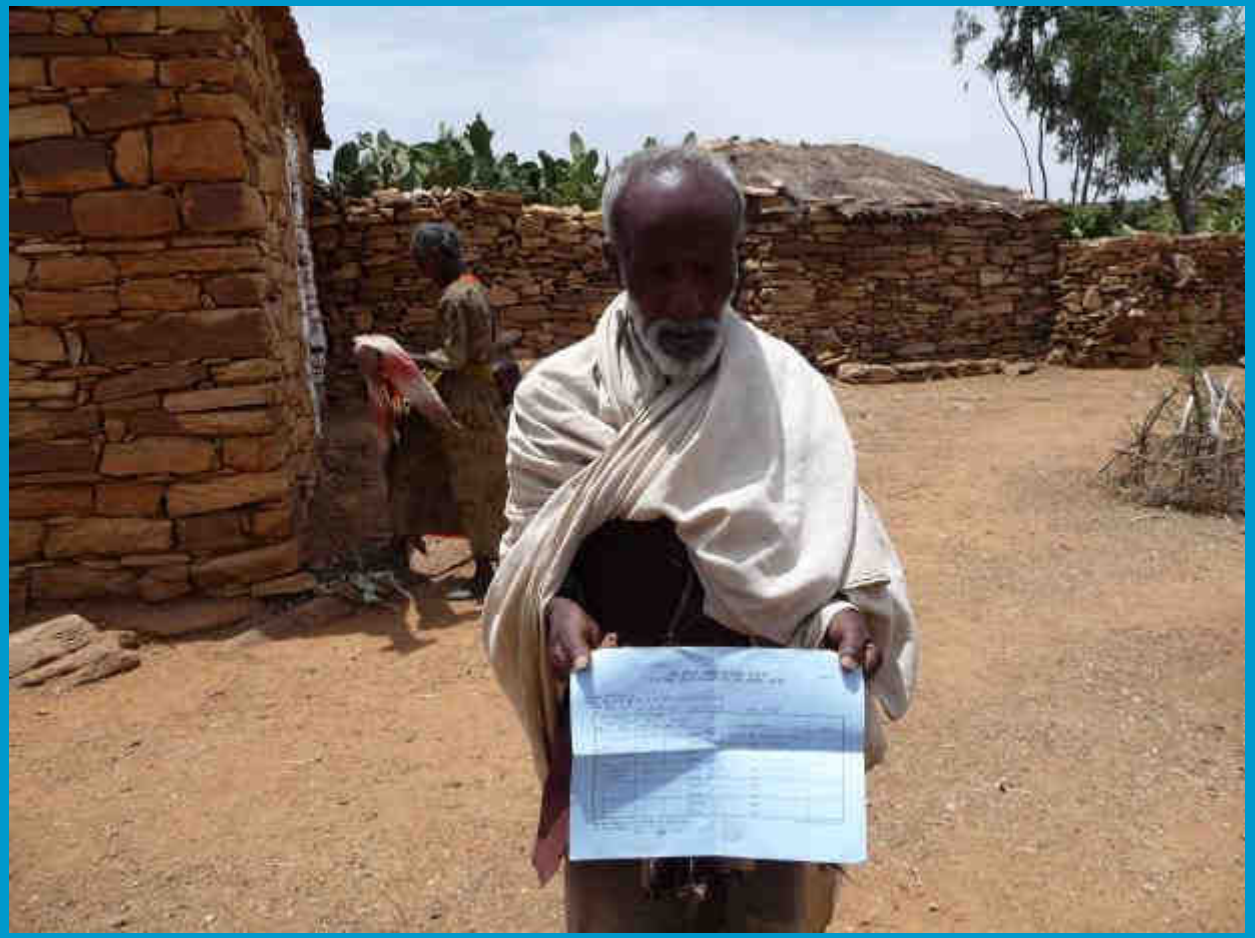

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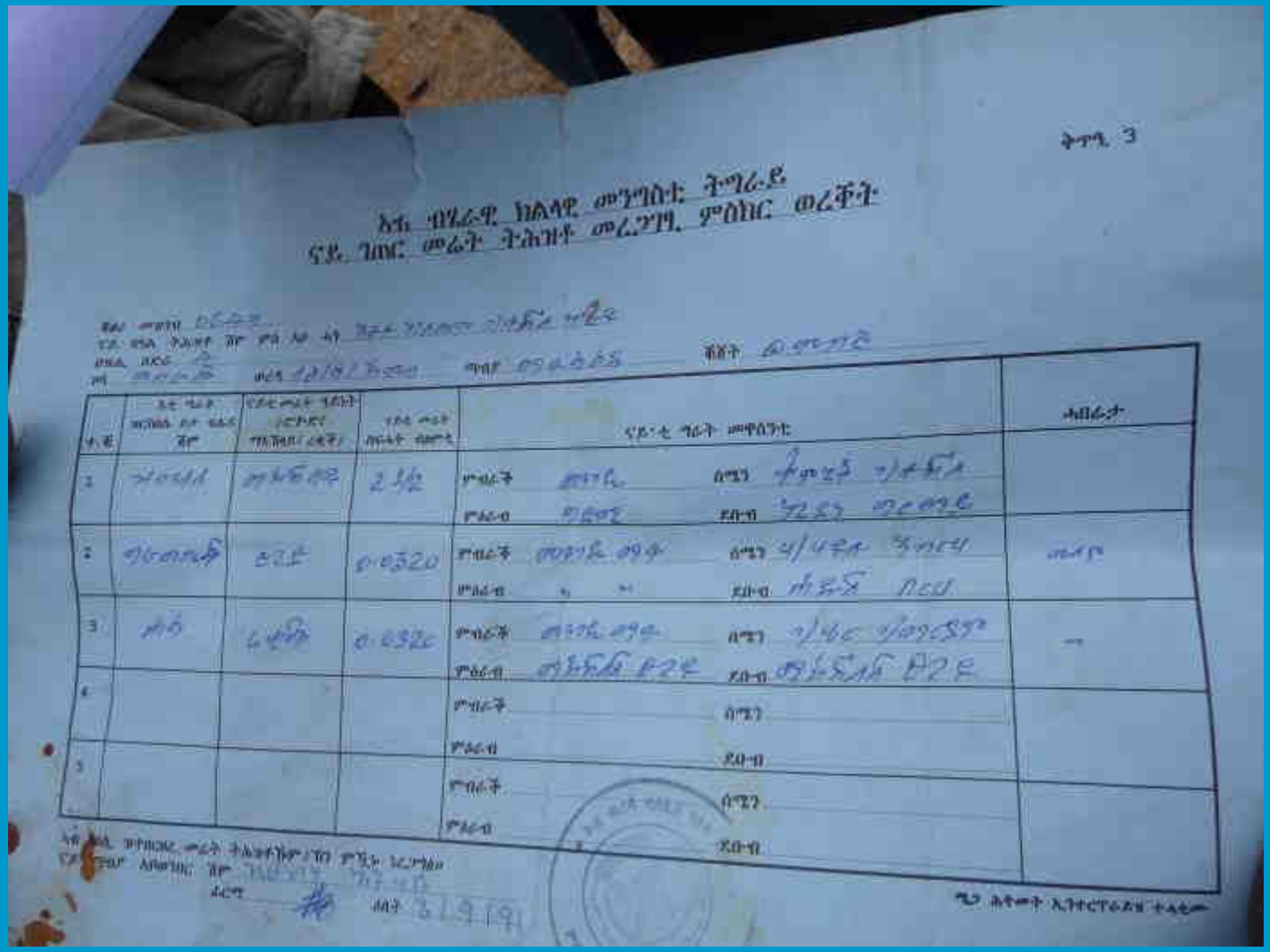

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አዲ ብሄራዊ ክልላዊ መንግስቲ ትግራይ
ናይ ገጠር መሬት ትሕዝቶ መረጋገፂ ምስክር ወረቐት

ተ.ቁ	[illegible]	[illegible]	[illegible]	ናይ'ቲ ግራት መዋስንቲ			ሓበሬታ
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[illegible]

FIG

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FIG

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Plot #	Cert'e #	Holder	Size	Neighbor N	N	S	E
1	0639	Tesfaye G/Tekle Gebray	2 1/2	~~Wota~~ Road	~~Ba~~ Baren	Hagosa Gebru	Wolay G/Yehoma
2	0631	Yiszaw Bayru	3	boarder conflict Letay G/Michael * Gebre hawariyat	Road (Curran) * Gebre Hadif	Berhe Gebray * Haile Giwargi	Road

FIG

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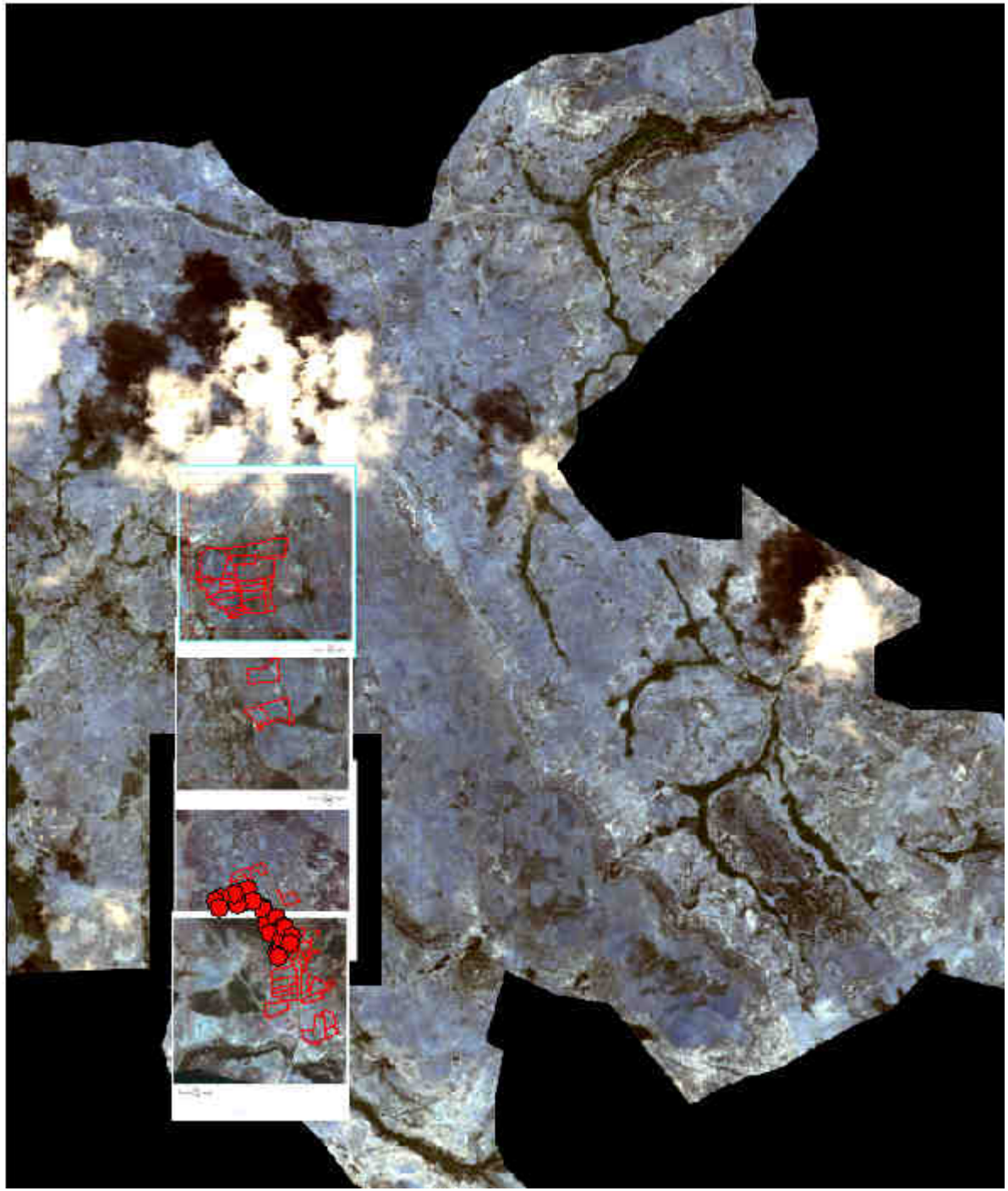
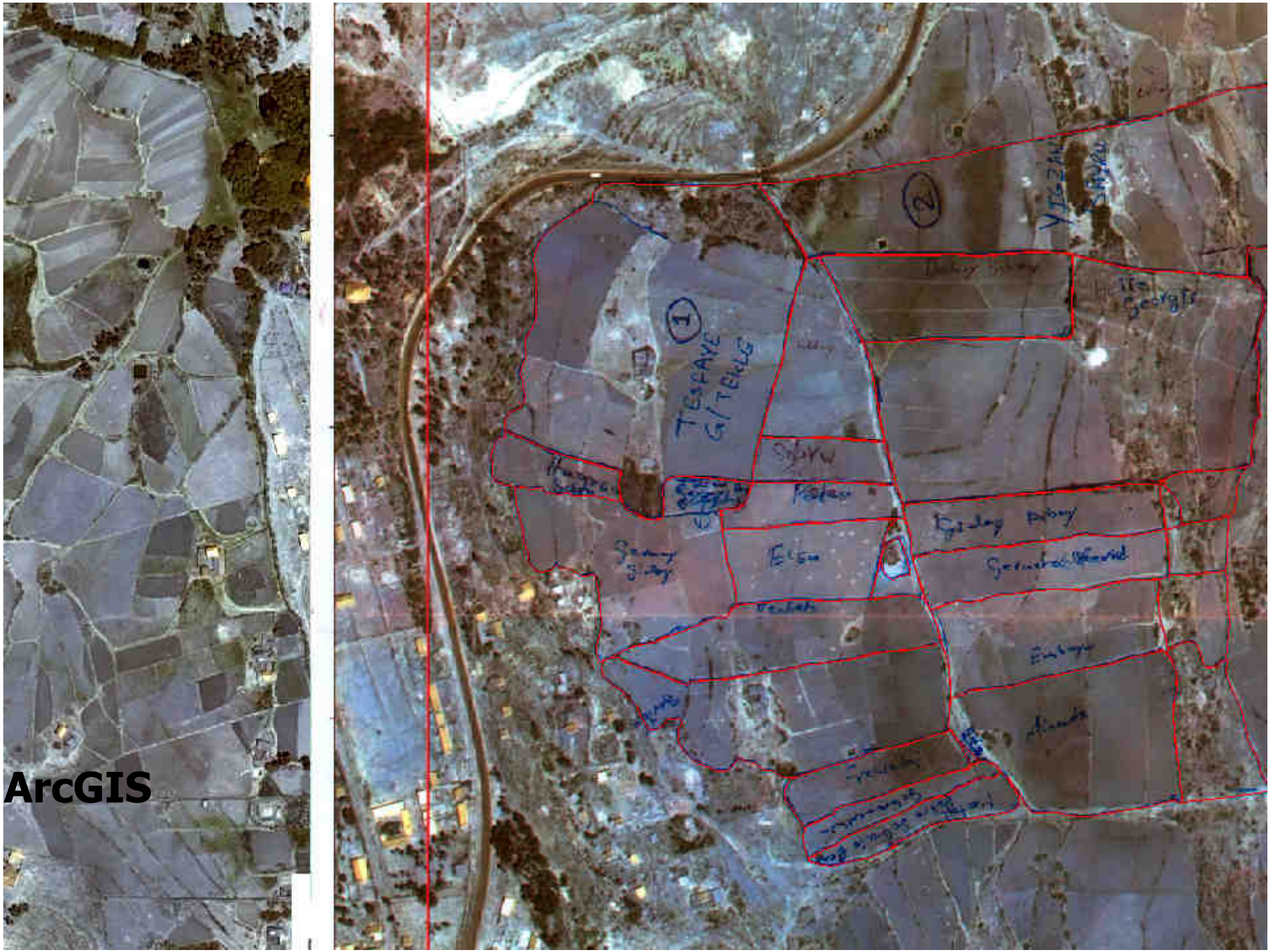
2.TIF

ArcGIS




ArcGIS

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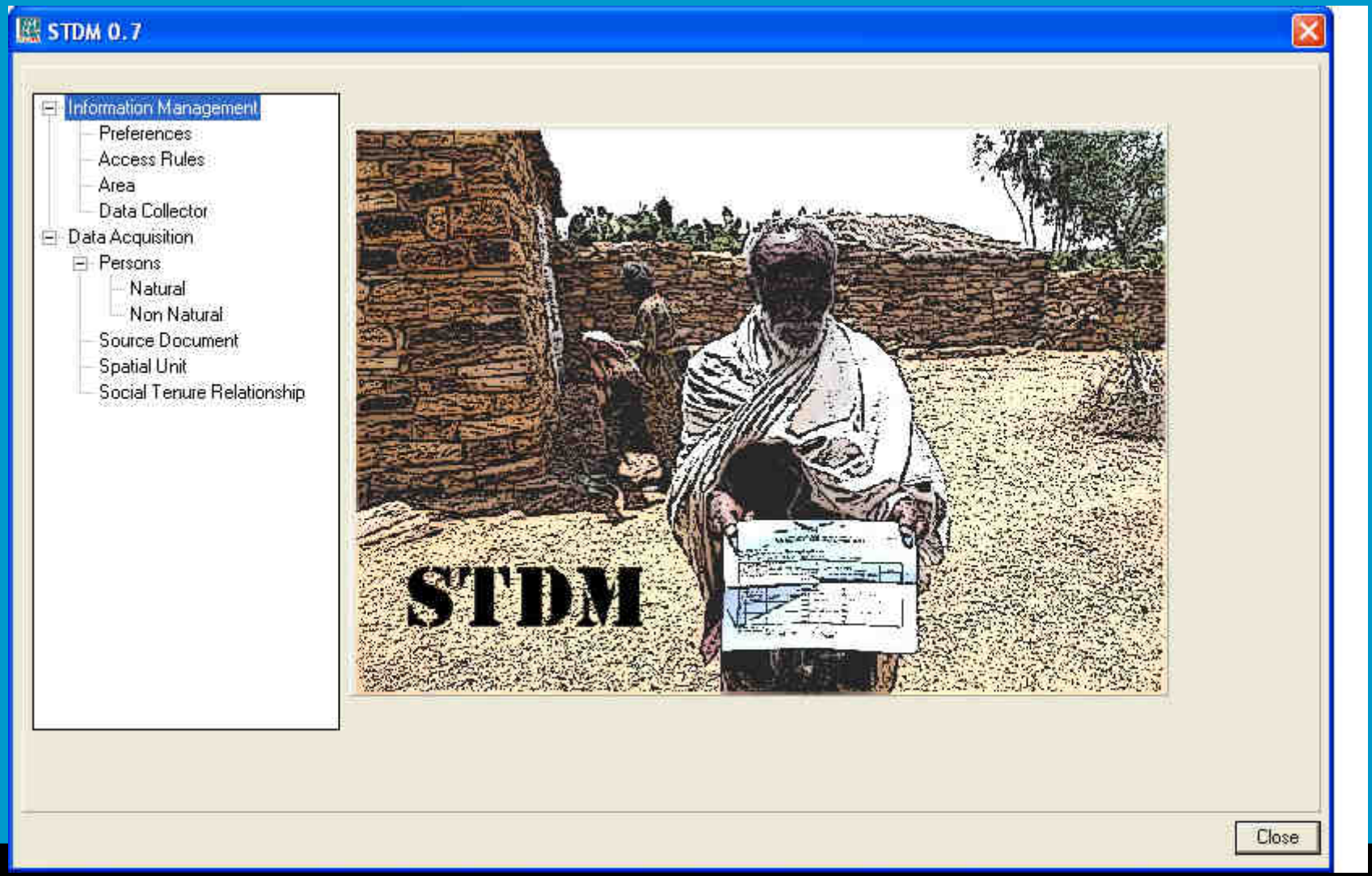
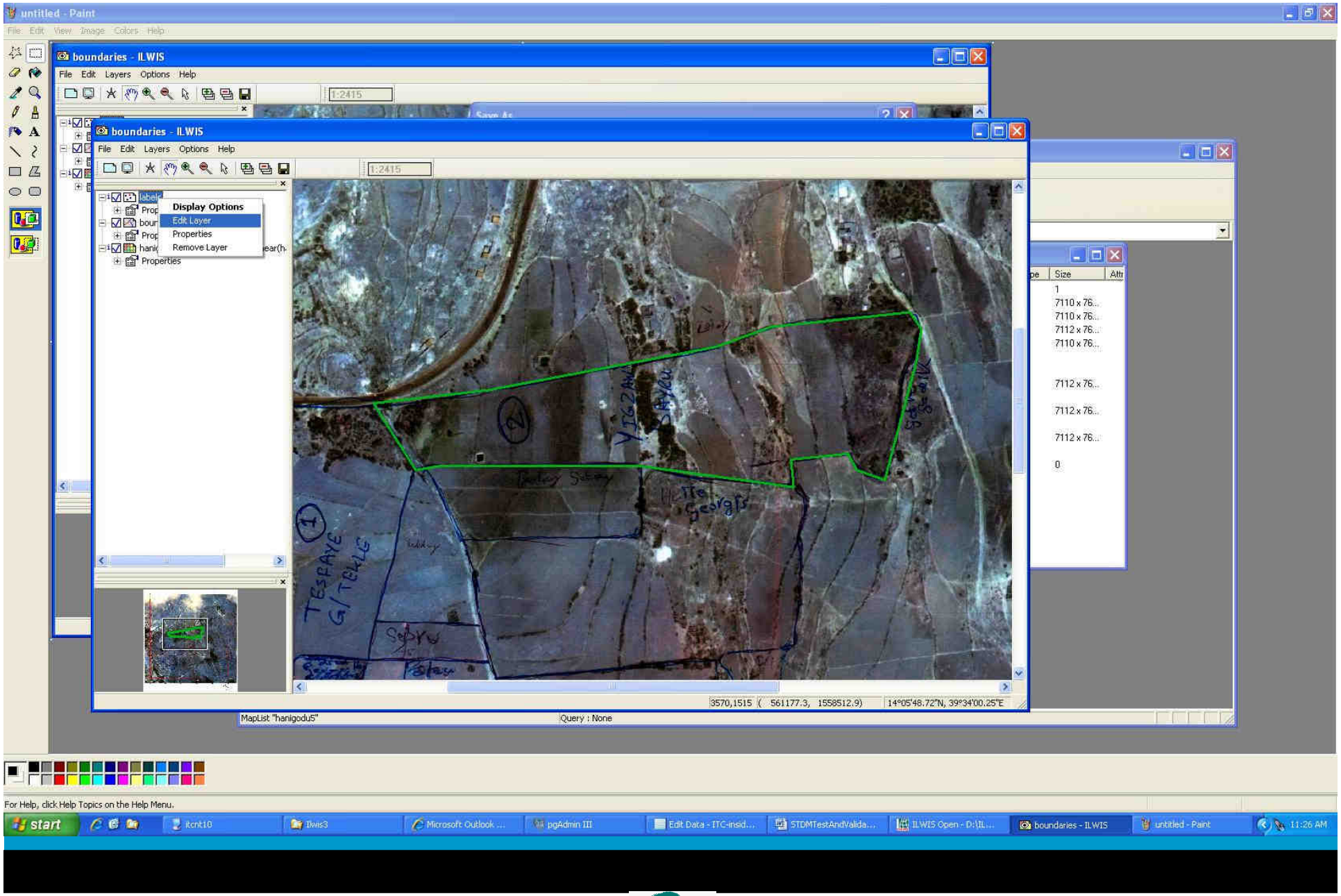
Functionality

- Plot images for field work
- Print forms for field work
- Scan images
- Vectorise
- Overlapping claims
- Overlapping tenure
- Link spatial and admin
- Holdings – groups of Parcels
- History
- Process – not modelled
- Source documents
- Data collectors

Status October 2009

- Conceptual Design
- Functional Design
- Technical Design
- Prototype – Internally tested
- Reviews by FIG
- External Testing in Ethiopia
- Improvements of the software – tbd
- Final documentation – tbd


STDM 0.7
Information Management
Preferences
Access Rules
Area
Data Collector
Data Acquisition
Persons
Natural
Non Natural
Source Document
Spatial Unit
Social Tenure Relationship
STDM
Close



FIG

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Experiences

- People can read the images easily
- It is easy to get lost: GPS for orientation is a requirement
- In some area's boundaries are flexible
- Photo's as evidence
- Admin checks cost relatively a lot of time

FIG

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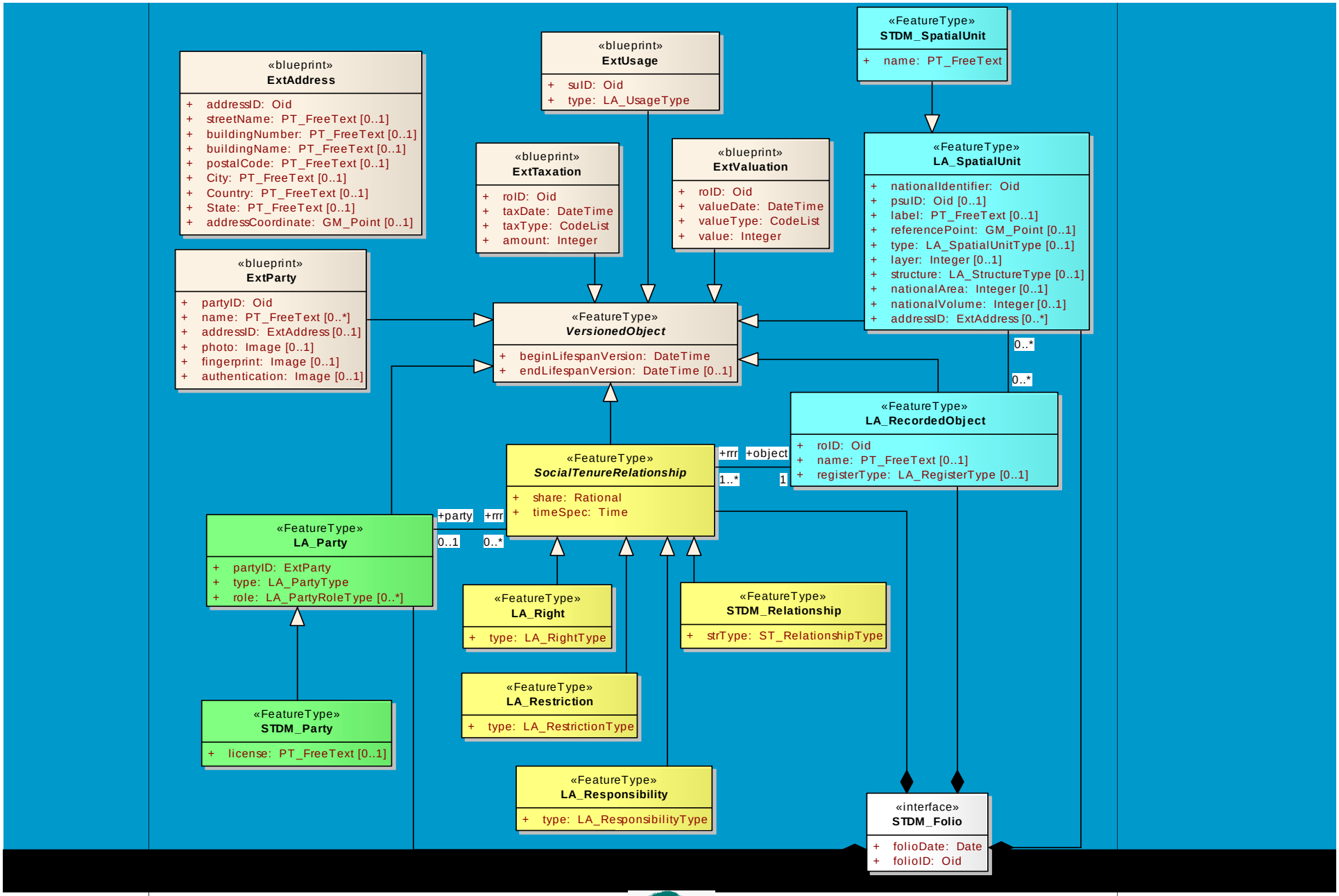
«blueprint»
ExtAddress
+ addressID: Oid
+ streetName: PT_FreeText [0..1]
+ buildingNumber: PT_FreeText [0..1]
+ buildingName: PT_FreeText [0..1]
+ postalCode: PT_FreeText [0..1]
+ City: PT_FreeText [0..1]
+ Country: PT_FreeText [0..1]
+ State: PT_FreeText [0..1]
+ addressCoordinate: GM_Point [0..1]
«blueprint»
ExtUsage
+ suID: Oid
+ type: LA_UsageType
«FeatureType»
STDM_SpatialUnit
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+ name: PT_FreeText [0..*]
+ addressID: ExtAddress [0..1]
+ photo: Image [0..1]
+ fingerprint: Image [0..1]
+ authentication: Image [0..1]
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VersionedObject
+ beginLifespanVersion: DateTime
+ endLifespanVersion: DateTime [0..1]
0..*
0..*
«FeatureType»
LA_RecordedObject
+ roID: Oid
+ name: PT_FreeText [0..1]
+ registerType: LA_RegisterType [0..1]
«FeatureType»
SocialTenureRelationship
+ share: Rational
+ timeSpec: Time
+rrr
+object
1..*
1
+party
+rrr
0..1
0..*
«FeatureType»
LA_Party
+ partyID: ExtParty
+ type: LA_PartyType
+ role: LA_PartyRoleType [0..*]
«FeatureType»
LA_Right
+ type: LA_RightType
«FeatureType»
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+ strType: ST_RelationshipType
«FeatureType»
LA_Restriction
+ type: LA_RestrictionType
«FeatureType»
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+ license: PT_FreeText [0..1]
«FeatureType»
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+ type: LA_ResponsibilityType
«interface»
STDM_Folio
+ folioDate: Date
+ folioID: Oid

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Land Administration Domain Model

- There are supposed to be huge differences between cadastral and land registry systems (around the world)
- Look to the common area's:
  - Standardised Model (adaptable, extensible)
  - Avoid re-inventing the wheel
  - Enable involved parties to communicate
- Proposal (FIG Washington, 2002): develop standard
  → Core Cadastral Domain Model

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Land Administration Domain Model

- Workshops on Standardisation in the Cadastral Domain, Enschede, The Netherlands, 2003
- Bamberg, Germany, December 2004
- Several Publications; presentations FIG events
- Many experts involved in this development
- Version 1.0 - Munich, Germany, 2006
- February 2008: FIG submitted New Working Item Proposal to ISO; this was accepted by ISO TC211
- This standard is under development and is expected to be availale in June 2011 as an International Standard
- STDM is a specialization of LADM and will be included as informative annex B of ISO 19152

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Leaflet

The Social Tenure Domain Model

A pro poor land rights recording system

The Social Tenure Domain Model (STDM) is a multi-partner software development initiative to support pro-poor land administration. The initiative is based on open source software development principles.

The STDM, as it stands, has the capacity to broaden the scope of land administration by providing a land information management framework that would integrate formal, informal, and customary land systems and administrative and spatial components. The STDM makes this possible through tools that facilitate recording all forms of land rights, all types of rights holders and all kinds land and property objects / spatial units regardless of the level of formality.

Not only in regard to formality, but the thinking behind the STDM also makes a departure in terms of going beyond some established conventions. Traditional or conventional land administration systems, for example, relate names or addresses of persons to land parcels via rights. An alternative option being provided by STDM, on the other hand, relates personal identifiers such as fingerprints to a coordinate point inside a plot of land through a social tenure relation such as tenancy. The STDM thus provides an extensible basis for efficient and effective system of land rights recording. The STDM is a specialisation of the Land Administration Domain Model (LADM), previously known as Core Cadastral Domain Model, which is a similar effort initiated by the International Federation of Surveyors (FIG).

People – land relationship

The Social Tenure Domain Model (STDM) describes relationships between people and land in unconventional manner in that it tackles land administration needs in hitherto neglected communities such as people in informal settlements and customary areas. It supports development and maintenance of records in areas where regular or formal registration of land rights is not the rule. It focuses on land and property rights, which are neither registered nor registerable, as well as overlapping claims, that may have to be adjudicated both in terms of the 'who', the 'where' and the 'what' right. In other words, the emphasis is on social tenure relationships as embedded in the continuum of land rights concept promoted by GLTN and UN-HABITAT. This means informal rights such as occupancy, adverse possession, tenancy, use rights (this can be formal as well), etc. or customary rights, indigenous tenure, etc as well as the formal ones are recognised and supported (with regard to information management) in STDM enabled land administration system. Likewise, the STDM accommodates a range of spatial units ('where', e.g. a piece of land which can be represented as one point – inside a polygon, a set of lines, as a polygon with lowhigh accuracy coordinates, as a 3D volume, etc.). Similarly, the STDM records all types of right holders ('who', e.g., individuals, couples, groups with defined and non-defined membership, group of groups, company, municipality, government department, etc.).

In regard to evidence, STDM handles the impreciseness and possible ambiguities that may arise in the description of land rights. In a nutshell, the STDM addresses information related components of land administration in an innovative way.

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Conclusion

- STDM widely recognised
- STDM includes informal and customary relations between people and land
- There is a continuum of land rights, parties, spatial units and data acquisition methods, evolutions are possible

Thank you

FIG

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