

## ICT for Administration of Land Tenure and Property Rights

ICT@USAID Series Presentation

8 February 2006

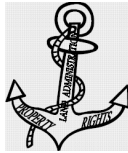
Kim G. Glenn, ARD, Inc.

## Overview

- Land Tenure and Property Rights Administration (5 minutes)
- ICT Tools (15 minutes)
- Lessons Learned from the Philippines, Albania, and East Timor (20 minutes)
- Discussion (20 minutes)

## Tenure and Property

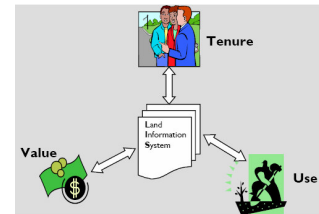
- Tenure = right to own or use
- Property = land and permanent immovable objects



Land Administration Systems  
Register Rights and Identify Properties

## Four Land Administration Functions

1. **Tenure:** specific rights to specific properties.
2. **Use:** define and enforce.



3. **Value:** for taxation, appraisal to support land markets, leasing of state properties.
4. **Information:** updating, protecting, and distributing.

## ICT Tools, but ...

- Computerized Databases
- Geographic Information Systems (GIS)
- Aerial Photography
- Remote Sensing
- Global Positioning Systems (GPS)
- Digital Cameras
- Networks

## Databases

- Owners
- Value
- Technical Description
- Unique Property ID Number
- Transactions



## Geographic Information Systems



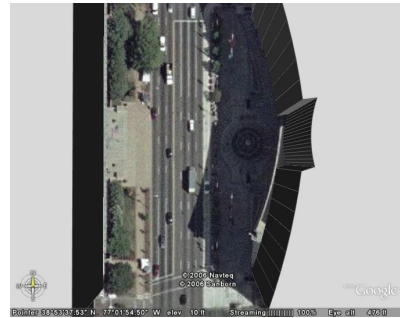
## Computerized Mapping



## Satellite Photography



## High Resolution Aerial Photography



BLOCK MAP 51.5-073/123  
(Sample only)

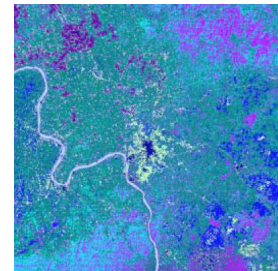
Ministry of Justice  
Directorate of Land and Property  
Office of the Cadastral and National Mapping

DILI - Farol Area  
1:10,000 Cadastral map 51.5-073



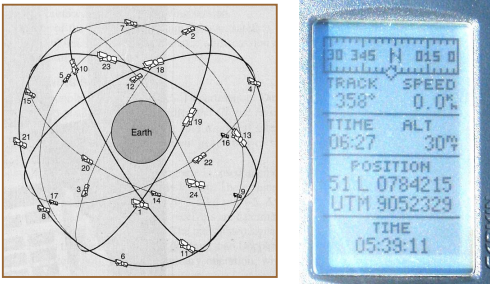
Map Scale: 1:500  
Map Projection: UTM Zone 49  
Datum: WGS 84  
Elevation unit: m  
Period: 2004  
LPN derived by adding parcel no. to 712000 CadMapNo. - 01 0073/123

## Remote Sensing

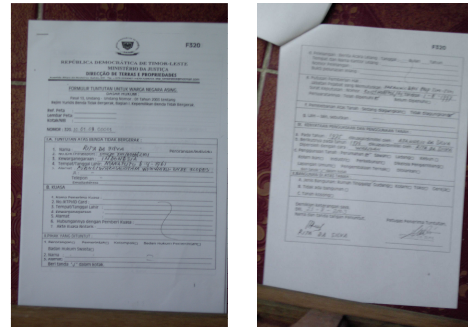


*Listening to pixels:* In this portion of a satellite image near the town of Ilom, located on the Cross River, each pixel is given a color based on land cover. For example, bright purple indicates areas of virgin forests; light violet, areas of secondary forest. Urban areas are shown in dark blue, and the light-green color indicates an "other" category—usually mixed pixels that cannot be accurately associated with a single land cover category.

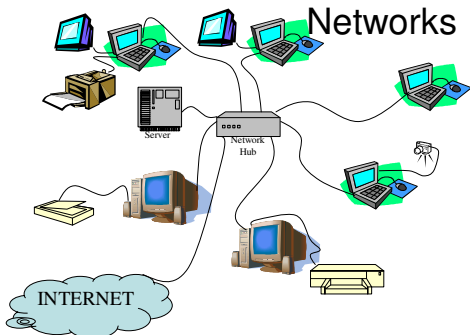
## Global Positioning System



## Digital Photography



## Networks



## ICT Tools, but ...

Information Systems often fail because the emphasis is on the technology, and not on those who are meant to use and benefit from it.

## Philippines Land Titling Computerization Project

- Well-established "Torrens" system
- Internally driven
- USTDA Technical Assistance
- Private sector financed
- Long-term implementation
- Processes Re-engineered
- Total conversion to digital media

## Albania

- Post-conflict environment
- Transitioning from deeds to registry system
- Heavily donor financed "First Registration"
- ICT's applied to initialize, but manual systems remain in place
- Public information and education key
- Transparency dramatically reduced conflict

## East Timor

- Post conflict
- Starting from scratch
- Aerial photographs a key resource
- Restitution, compensation, claims resolution, privatization, all require “preliminary cadastre”
- Digital documentation

## Conclusion

- The technology is the easy part, the human context is the real challenge
- While expensive, high connectivity leads to essential synergies
- Digital technologies carry a bias towards transparency, a critical component of successful administration of land tenure and property rights