Advanced Strategies of The Korea Cadastral Resurvey Project

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1 Background
100 years old cadastral Map

Renewal in 1948

Digitized Project 1990’s to 2003

Renewal in 1960

Renewal in 1970

Renewal in 1980

Accuracy Issues due to the repeated renewal & various scales
Coordinates from Local Geodetic System needs to convert
- To use other spatial information (Topography, Underground Facilities)
- To avoid administrative inefficiency
In some cases, the use of individual property rights are limited until agreement is made among stakeholders.

In some cases, land boundary and land ownership disputes go to the court.
Korea Cadastral Resurvey Project
Korea Cadastral Resurvey Project (1)

- Long-term nationwide project (2012 ~ 2030)
- Project budget: 1,170 Million USD
- Coordinate System: ITRF 2000
- Resurveying 38 million parcels
- Boundary Accuracy: 7cm
- Integrate land information in digital format
- Establish 3D Cadastre
- Easy to access to land information
Legislative Progress

- Preliminary study on Cadastral Resurvey: 1992~1993
- Case Study Resurvey: 1994 (Changwon city)
- Cadastral Resurvey Special law legislative notice: 1996. 8., failed due to the budget & Complaints
- Cadastral Non-Coincidence area: 2007~2009
- Digital Resurvey Pilot project 1: 2008~2011
- Pre-feasibility study conducted by Government: 2010
- Digital Resurvey Pilot project 2: 2011~2012
- Established the Cadastral Resurvey Special Law: finally in 2012.3

Requests by Government
Korea Cadastral Reform Project (3)

<table>
<thead>
<tr>
<th>Contents</th>
<th>Budget (Million US$)</th>
<th>Ratio</th>
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</thead>
<tbody>
<tr>
<td>Control Point Surveying</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Step 1</td>
<td>Step 2</td>
</tr>
<tr>
<td>Group Non-coincidence Area</td>
<td>15.5</td>
<td>44.6</td>
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<td>Individual non-coincidence Area</td>
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<td>Sub total</td>
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<td>Parcel Surveying</td>
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<td>ITRF 2000 Coordinate Conversion</td>
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<td>Development area</td>
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<td>Sub total</td>
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<td>Reserve Fund</td>
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<td>Total(except of value-added tax)</td>
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<td>583</td>
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<td>Total(inclusion of value-added tax)</td>
<td>198</td>
<td>641</td>
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</tbody>
</table>
Field Survey Process

Korea Cadastral Reform Project (4)

Triangulation (±3cm)

Field Survey (±7cm)

Registration online  KLIS

Boundary adjustments and agreement
Implementation Strategies
S1. Long term planning

**Efficient land use and systematic land management is the basis for national economic development** (GIM 2012)

- Fair and systematic allocation to 32 local governments (budget & manpower, etc.)
- Priority selection by criteria (e.g. 3/4 land owner agreed..)
S2. Use existing organizations

1. Ministry of Land, Infrastructure and Transport
   - Cadastral Reform Planning Division

2. 32 Local governments
   - Cadastral Reform Support Division

3. 200 City/County/district Offices
   - Cadastral Reform Team

- With 3400 certified Surveyors
- 50 Researchers

KCSC was established by the Cadastre, Hydrography, & Survey Act. (one of a quasi-government)

and other survey companies
S3. Public Participation

Facilitate public participation (on-line and off-line)

Public participation in the institutional perspective

Resurvey Project

Participation from Web

Administrative aspect

- Effective resurvey project
- Communication with the divisions from local / federal government
- Support decision making for cadastre system

PPGIS

- Precision
- Digital Cadastral Information

Citizen led participation

- Accessible process to everyone
- Open to the public opinion
- Enhanced reliability on government
4 Future Challenges
Learned lessons

- Public participation is a key element for success
- Boundary adjustment and conclude agreement with stakeholders may the whole project period delay
- Up-to-date equipment and technology should be applied
- Interoperability with other spatial data set should be considered.
Things need to do

Accurate cadastral surveying data collection

National Spatial Data Infrastructure (NSDI)
Future planning

See the video for the V-World
Thank you
Very much!