3D Geospatial Database Implementation and Quality Management in Korea

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Overall

I Research Background

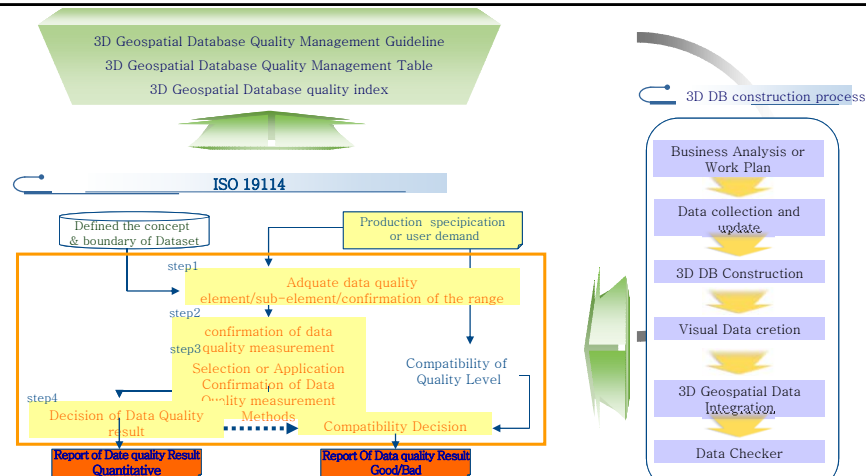II Purposes

III Methodologies

IV Conclusion & Expectations
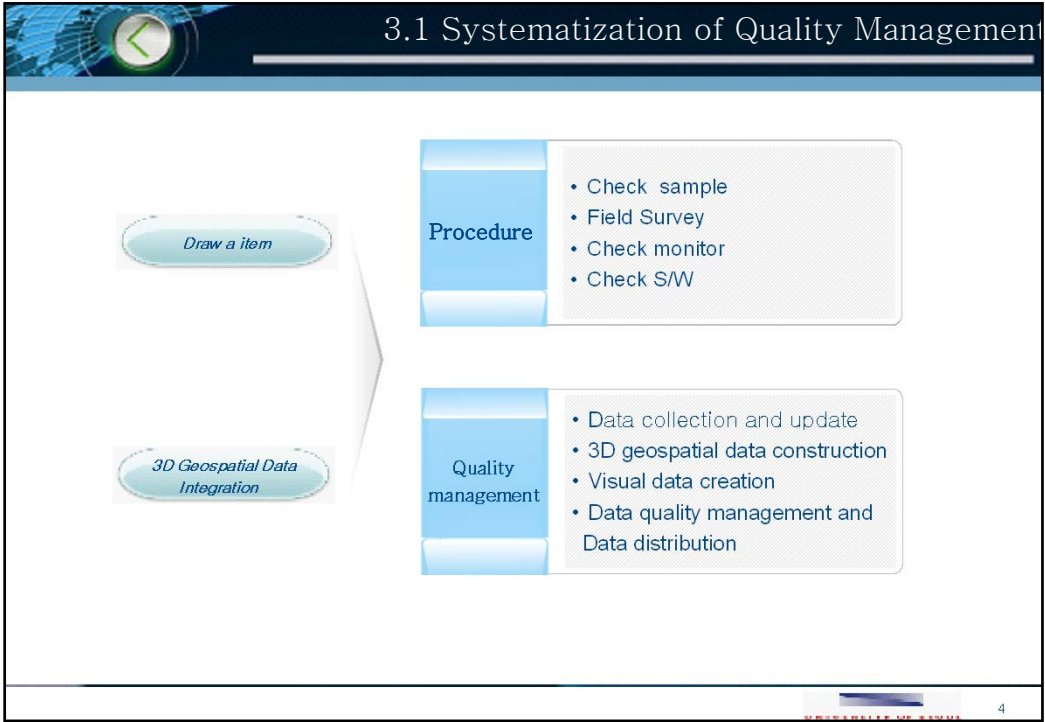
1

- As the importance of implementing 3D geospatial data has being emphasized to build a 21st century knowledge society and ubiquitous land, the demand for 3D geospatial data has been increased.

- In recent many researches and developments on the construction and applications of 3D Geospatial data have been in progress at the public and private sector over the world.

- The 3D geospatial data can be used in decision making process to support a spatial planning such as urban planning, facilities management, landscape management and emergency management through the 3-dimentional interpretation and presentation of a real world.

2

2. Research Purposes

The purpose of this study was to derive the improved 3D geospatial database quality management through the analyses of the existing 3D geospatial database quality management and case studies to create high quality 3D geospatial database.

3D Geospatial Database Quality Management Guideline
3D Geospatial Database Quality Management Table
3D Geospatial Database quality index

3D DB construction process

ISO 19114

Defined the concept & boundary of Dataset

Production specipication or user demand

step1

Adquate data quality element/sub-element/confirmation of the range

step2

confirmation of data quality measurement

step3

Selection or Application Confirmation of Data Quality measurement Methods

Compatibility of Quality Level

step4

Decision of Data Quality result

Compatibility Decision

Report of Date quality Result Quantitative

Report Of Data quality Result Good/Bad

Business Analysis or Work Plan

Data collection and update

3D DB Construction

Visual Data cretion

3D Geospatial Data Integration

Data Checker

3

3.1 Systematization of Quality Management

Draw a item

3D Geospatial Data Integration

Procedure
- Check sample
- Field Survey
- Check monitor
- Check S/W

Quality management
- Data collection and update
- 3D geospatial data construction
- Visual data creation
- Data quality management and Data distribution

4

3.2 Business makeup of Quality Inspection

Component		Content
contact		– Resonable adjust control for inspection performance organization or overall work
Site inspection		– Investigation of 3D DB Construction check list
Data inspection	Monitor Inspection	– 3D DB Con struciton Inspection through the screen – Close or Structured inspection or construction layers
	S/W Inspection	–2D Structuring or 3D Spatial Information or visualization DB Quality inspection through S/W

5

component			Quality Standards	Result	Measures	Quality Index
DB quality element	DB quality Advanced elements	DB quality minor detail				
Completeness	Excess	N/A				
	Missing	Missing Target area				
		Missing objects				
Logic Consistency	Concept Consistency	Visualization Consistency				
		DB Definition				
		Consistency or Raw Materials				
	Domain Consistency	Areas Consistent				
	Format Consistency	Shape DB Format				
		Attribute DB Format				
		Visualization Format				
		Image DB Format				
	Phase Consistency	2D Structuring				
		3d Structuring				

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6

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4. Conclusion & Expectations

① Defined the concept and boundary of 3D geospatial database quality management

② Set the process and contents of 3D geospatial database quality management in detail

③ Made the guideline such as the quality management checklist

④ The 3D geospatial database quality management through establishing an integrated quality management can make data supplier update data efficiently and users get high quality data.

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7

Tank You