



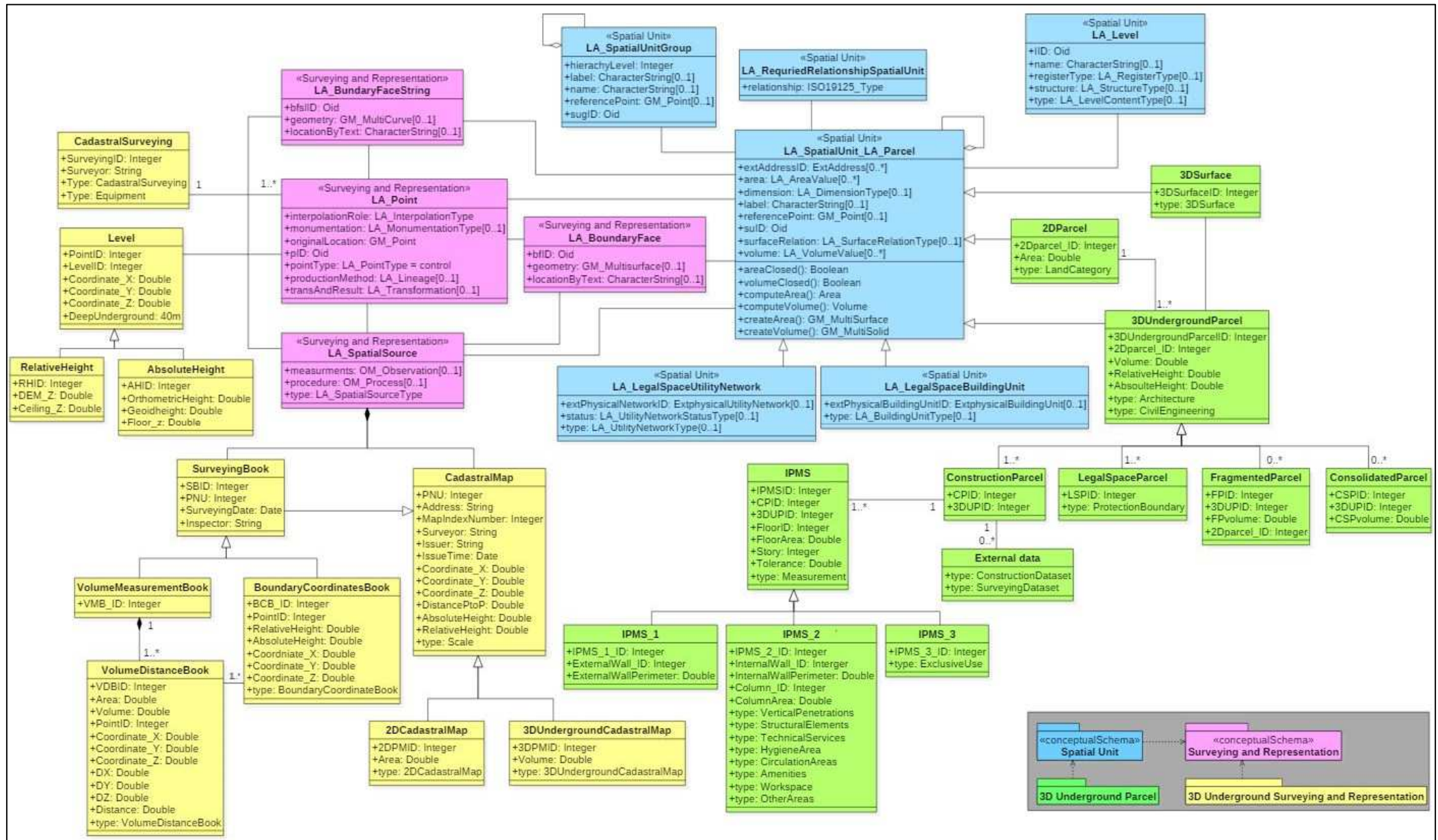
Development of 3D Underground Cadastral Data Model in Korea: Based on the Land Administration Domain Model

16. 03. 2017

Sangmin, Kim

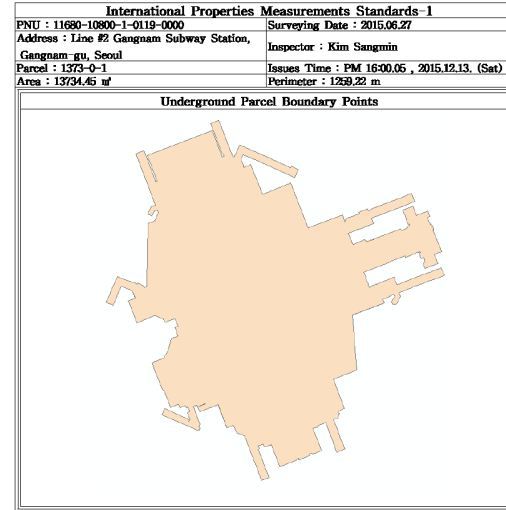
Development of 3D Underground Cadastral Data Model in Korea: Based on the Land Administration Domain Model

- Proposed 3D underground cadastral data model with LADM



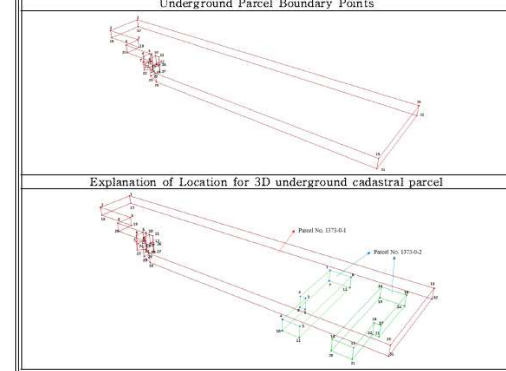
Development of 3D Underground Cadastral Data Model in Korea: Based on the Land Administration Domain Model

- Implementation of the proposed 3D underground cadastral data model



Distance Measurement Book
 PNU : 11680-10800-1-0119-0000 Surveying Date : 2015.06.27
 Address : Line #2 Gangnam Subway Station, Inspector : Kim Sangmin
 Gangnam-gu, Seoul
 Parcel : 1373-0-1 Issues Time : PM 16:00:05 , 2015.12.13. (Sat)
 Area : 2977.6 m² Volume : 6181.8 m³

Point ID	Coordinates (unit: m)			Relative Height	Segment	Distance	Point ID	Coordinates (unit: m)			Relative Height	Segment	Distance
	X	Y	Z					X	Y	Z			
1	202407.3	544356.0	12.6	17.4	P1P16	101.3	17	202407.3	544356.0	10.2	20.0	P1P17	101.3
2	202396.2	544391.7	12.6	17.4	P1P16	11.9	18	202396.2	544391.7	10.2	20.0	P1P17	11.9
3	202401.0	544399.1	12.6	17.6	P1P16	13.5	19	202401.0	544399.1	10.2	20.2	P1P17	13.5
4	202396.4	544357.5	12.6	17.6	P1P16	4.9	20	202396.4	544357.5	10.2	20.2	P1P17	4.9
5	202400.1	544327.4	12.6	17.6	P1P16	10.6	21	202400.1	544327.4	10.2	20.2	P1P17	10.6
6	202397.9	544326.6	12.7	17.6	P1P16	2.4	22	202397.9	544326.6	10.1	20.2	P1P17	2.4
7	202396.3	544323.1	12.7	17.6	P1P16	3.8	23	202396.3	544323.1	10.1	20.1	P1P17	3.8
8	202398.6	544322.1	12.7	17.6	P1P16	2.6	24	202398.6	544322.1	10.1	20.2	P1P17	2.6
9	202399.7	544324.6	12.7	17.6	P1P16	2.7	25	202399.7	544324.6	10.1	20.2	P1P17	2.7
10	202401.0	544325.0	12.6	17.6	P1P16	1.4	26	202401.0	544325.0	10.2	20.2	P1P17	1.4
11	202401.5	544323.7	12.6	17.6	P1P17	1.4	27	202401.5	544323.7	10.2	20.2	P1P17	1.4
12	202399.9	544319.6	12.6	17.6	P1P17	4.3	28	202399.9	544319.6	10.1	20.3	P1P17	4.3
13	202396.6	544315.9	12.6	17.6	P1P17	3.5	29	202396.6	544315.9	10.1	20.2	P1P17	3.5
14	202396.4	544314.3	12.6	17.6	P1P17	4.2	30	202396.4	544314.3	10.1	20.2	P1P17	4.2
15	202400.0	544325.3	12.6	17.6	P1P17	66.4	31	202400.0	544325.3	10.1	20.3	P1P17	66.4
16	202443.3	544261.3	13.6	17.9	P1P17	25.0	32	202443.3	544261.3	10.3	20.8	P1P17	25.0



Area and Volume Measurement Book
 PNU : 11680-10800-1-0119-0000 Issues Time : PM 16:00:05 , 2015.12.13. (Sat)
 Address : Line #2 Gangnam Subway Station, Inspector : Kim Sangmin
 Gangnam-gu, Seoul
 Land Category : Subway (Civil Infrastructure)

ID Number	Surface Parcel Land Category	Parcel Number	Utilization	3D Underground Parcel Parcel Type	Ownership	Right	Area (m ²)	Volume (m ³)
855-4	Road	855-4-1	US	SP	SIAG	PO	3475.3	9035.8
855-40	Road	855-40-1	US	SP	SIAG	PO	610.2	1556.4
855-43	Road	855-43-1	US	SP	SIAG	PO	116.4	302.7
855-44	Road	855-44-1	US	SP	SIAG	PO	62.7	216.1
855-13	Building site	855-13-1	US/EXD	SP	Private land	SS	21.9	56.9
855-1	Road	855-1-1	US	SP	SIAG	PO	1950.2	5098.1
1374	Road	1374-0-1	US	SP	SIAG	PO	1350.5	3599.2
1319-3	Road	1319-3-1	US	SP	SIAG	PO	107.1	278.5
1319-4	Road	1319-4-1	US	SP	SIAG	PO	83.2	20.3
1319-1	Road	1319-1-1	US	SP	SIAG	PO	119.3	310.3
1319-2	Road	1319-2-1	US	SP	SIAG	PO	377.4	981.1
1377	Road	1377-0-1	US	SP	SIAG	PO	430.7	1119.8
1318-10	Road	1318-10-1	US	SP	SIAG	PO	33.9	88.0
1318-11	Road	1318-11-1	US	SP	SIAG	PO	448.9	1151.6
1318-7	Road	1318-7-1	US	SP	SIAG	PO	29.1	75.6
1373	Road	1373-0-1	US	SP	SIAG	PO	2377.6	6181.8
858	Road	858-0-1	US	SP	SIAG	PO	2220.2	5772.8
820-10	Building site	820-10-1	US/EXD	SP	Private land	SS	16.0	39.0
820-11	Building site	820-11-1	US/EXD	SP	Private land	SS	51.7	134.4
858-11	Road	858-11-1	US	SP	SIAG	PO	34.8	90.4
821	Building site	821-0-1	US/EXD	SP	Private land	SS	90.4	208.3
858-29	Road	858-29-1	US	SP	SIAG	PO	200.5	521.4
858-30	Road	858-30-1	US	SP	SIAG	PO	665.5	1470.3
858-28	Road	858-28-1	US	SP	SIAG	PO	51.8	134.8
858-32	Road	858-32-1	US	SP	SIAG	PO	10.6	27.8
858-27	Road	858-27-1	US	SP	SIAG	PO	24.1	62.8
1373	Road	1373-0-2	SP	SP	SIAG	PO	382.4	1057.9
1377	Road	1377-0-2	SP	SP	SIAG	PO	348.8	1429.9
858	Road	858-0-2	SP	SP	SIAG	PO	198.0	811.6
858-1	Road	858-1-2	SP	SP	SIAG	PO	226.7	643.3
858-4	Road	858-4-2	SP	SP	SIAG	PO	244.9	10434.2

