



Korea Land and  
Geospatial Informatix Corporation

**Presented at the FIG Working Week 2016,  
May 2-6, 2016 in Christchurch, New Zealand**

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## Searching position in non-residential areas in emergency and disaster situations by using the national point number.

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Korea land and Geospatial Informatix Corporation

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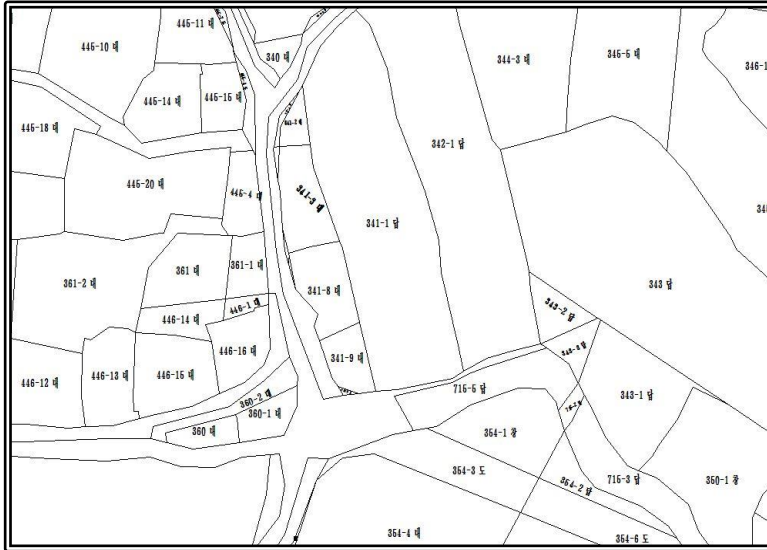
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# Introduction

INTRODUCTION



# - Background



<Address system based on the parcel numbers>

<Address system based on the street name>



< Residential area >

VS

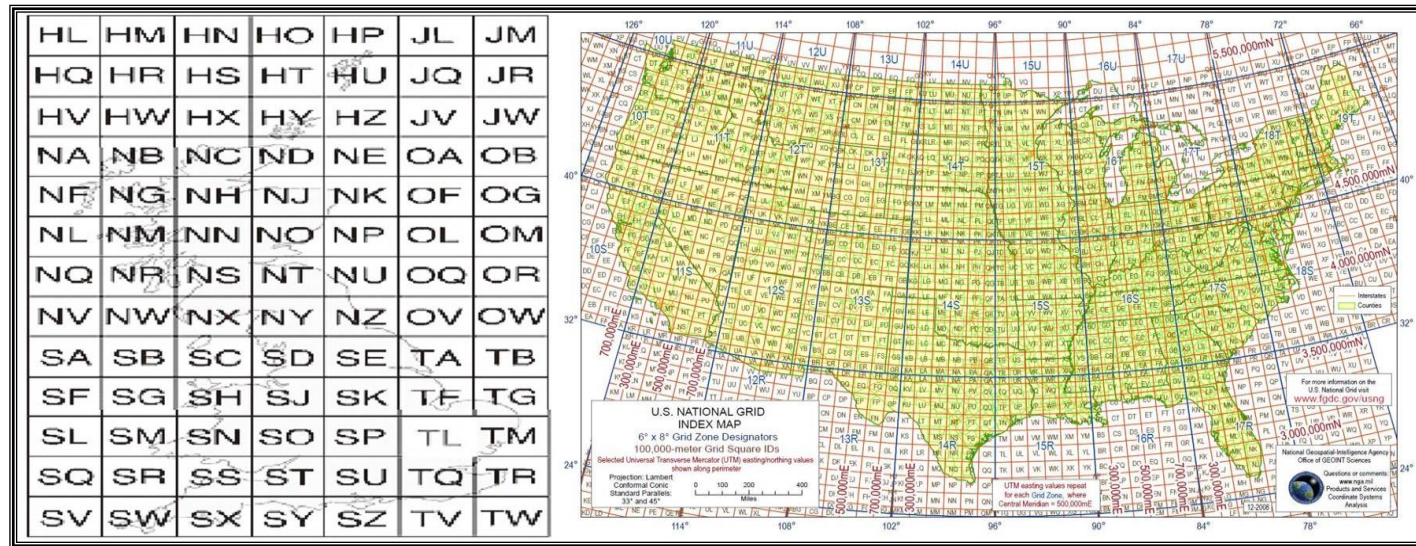


< The national point number >



< Non- Residential area >

## - Example in other countries.



< NGRS(left) and USNG(right) >

### - **USNG**(United States National Grid) in the United States

It was developed as a national standard to ensure compatibility with location-based service of paper map, and for encouraging industry of location-based service.

The size of grid is composed of 100km, 1km, 100m, 10m, 1m and they can cover the entire earth.

### - **NGRS**(National Grid Reference System) in the United Kingdom

It was introduced in order to provide a unified coordinate system to the whole country, regardless of the scale of the map. The size of grid is composed of 500km, 100km, 10km.



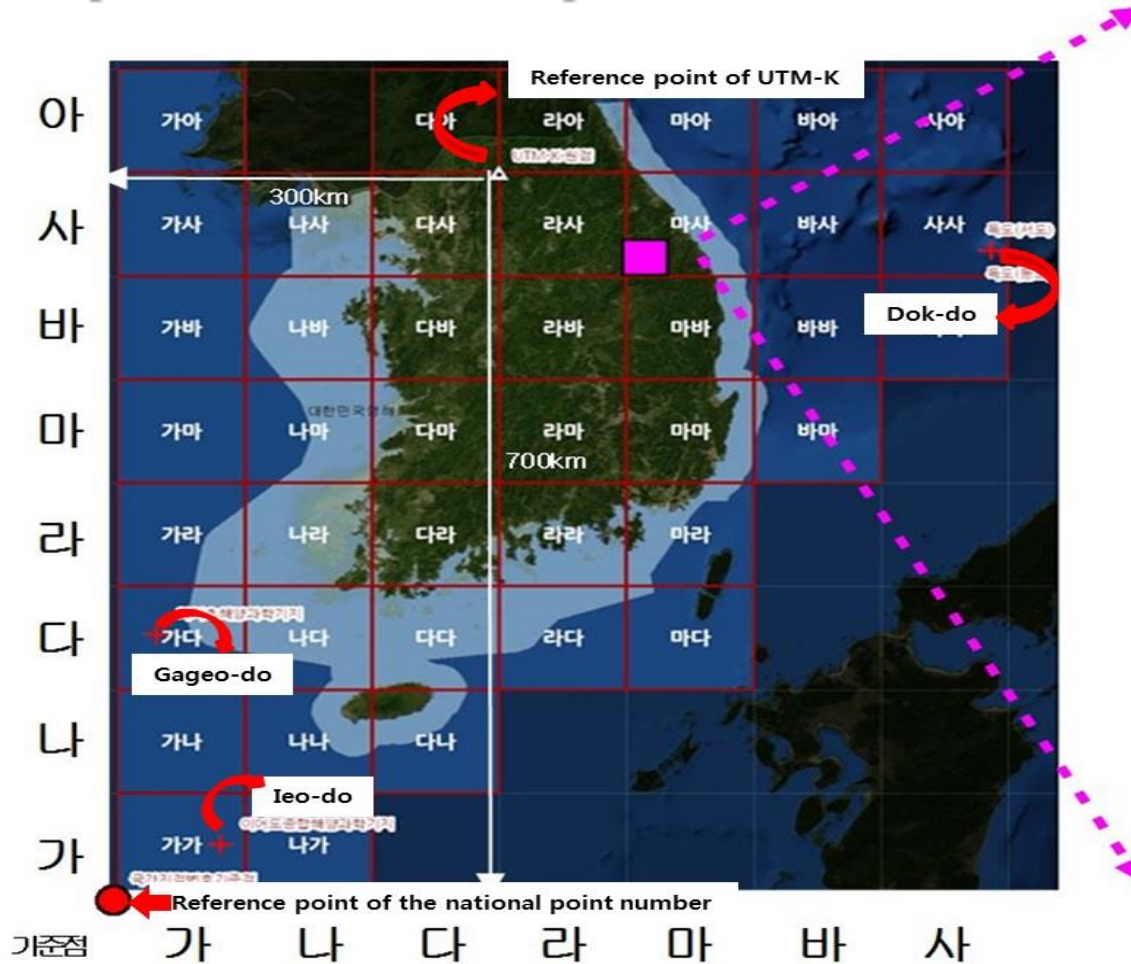
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# Main Subject





# - The reference point of the national point number.



< The reference point of the national point number on the Korean map >

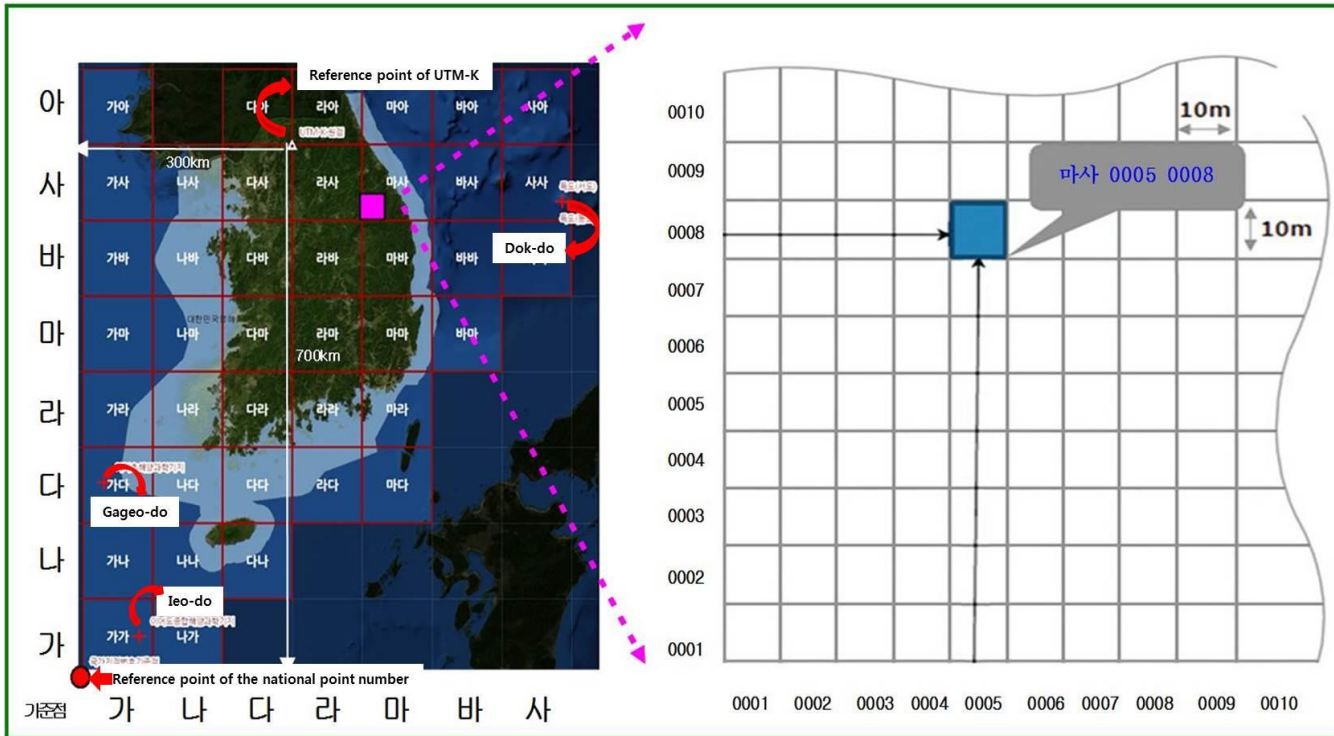
- Reference point coordinate of the national point number

East longitude  $124^{\circ}20'11.895''$ , North latitude  $31^{\circ}38'51.314''$

converted from the coordinate of X(N)1,300,000m, Y(E)700,000m.



## - The composition of the national point number.



< The process of national point number expressed in Hangul and Arabic numbers >

		National Point Number (Example : 1 2 3 4 1 2 3 4)							
Axis		West - East				South - North			
Grid Number		1	2	3	4	1	2	3	4
Grid Size		10km	1km	100m	10m	10km	1km	100m	10m

< The Size of the grid (Part of number) >

**- The area installed of the national point number.**

**1. The national point number is installed in the non-residential areas with the facilities.**

**These facilities are pylon, telegraph pole, water gate, and breakwater and so on.**



**2. The specific areas are really required of indicating position in the non-residential region for managing them, because there are no address system based on street name and buildings and the facilities – pylon, telegraph pole, water gate and breakwater.**

**This specific region is trails in the National Park.**





**3. The danger areas including high-accident frequency of damage of human life is demanded for searching position in the emergency situations in order to rescue people effectively.**

**These regions are river, valley, lake, reservoir and bridge where distress and drowning accidents happen a lot. It is very difficult to find the position without it in these regions.**



# - Verification of the national point number's position.

We can notify our location easily and quickly by using the national point number. So, in these situations its accurate position is related to life directly. Therefore, accuracy of the national point number is very important factors.

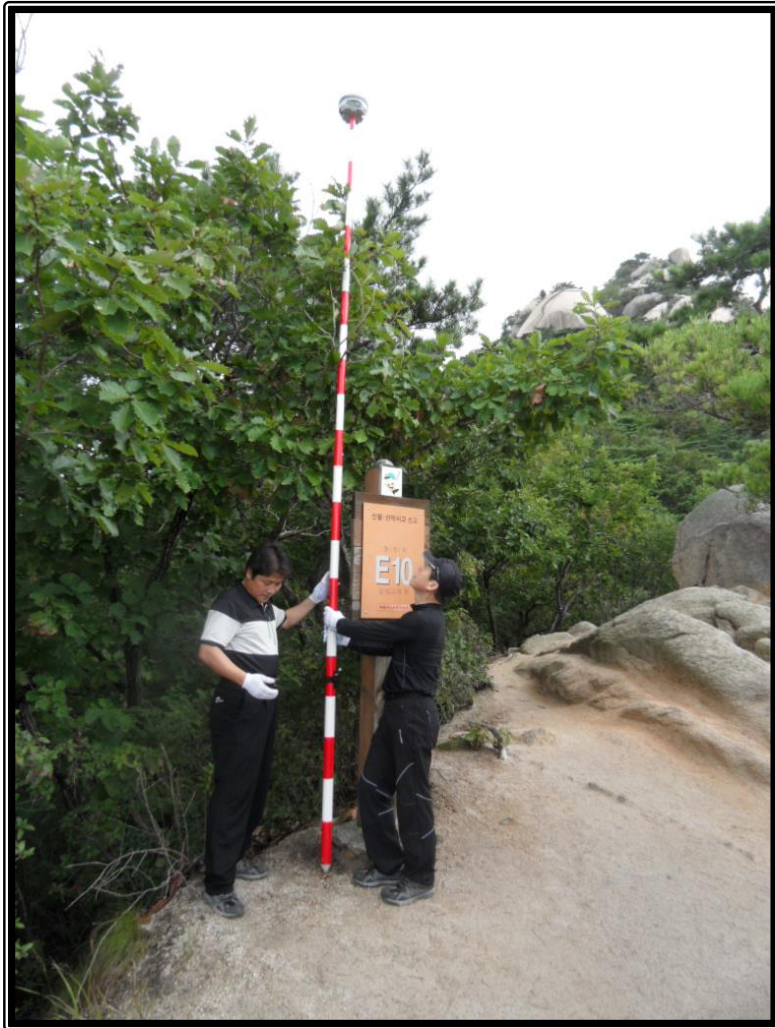
국가지점번호 검증결과 통보서				
Point number	라사55732565		Facility	CCTV
Coordinate and Longitude, latitude	X	1925652.432	Longitude	128-07-44.8258
	Y	1055735.261	Latitude	37-19-41.5274
	Z	690.329	Height	690.329
Coordinate and Longitude, latitude	* 투영법 : T.M(축척계수 0.9996)		Projection	
	* 원점의 경위도 : 경도 동경 127° 30'00", 위도 북위 38° 00' 00"		Longitude, latitude of reference point	
* 투영원점 가산수치 : X(N) 2,000,000, Y(E) 1,000,000				
Datum	세계측지계 (GRS80) 적용, 타원체의 장반경 6,378,137m, 편향을 298.25722210분의 1			
Address	강원도 영월군 수주면 두산리 산2번지			
Photo				
	Certificate and Name		지적기사 이**	
「도로명주소법」 제8조5 및 같은 법 시행령 제11조15에 따라 지점번호 검증결과를 통보합니다.				



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< The letter of verification >

The organization of verifying position is Korea Land And Geospatial Informatix Corporation ( LX Corporation ) in Korea.



< Surveyors in LX >



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# Conclusion

CONCLUSION



## **Conclusion**

- **Searching location is easy and prompt in the non-residential areas where the address system based on the street name doesn't exist in the emergency and disaster situations**
- **User can notify position and somebody also can find promptly user's position by the grid reference system (The national point number) expressed in Hangeul and Arabic numbers instead of coordinate of X, Y, Z, longitude, latitude, and height.**
- **As the government has separated the institution installing the national point number from the institution verifying its location, the accuracy of it is thoroughly reliable to everyone.**



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**Thank You**



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