

# GIS

## A Study on Strategies for Local Government Informatization using GIS

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GIS

A Study on Strategies  
for Local Government Informatization using GIS

© 2000,

2000-28

GIS

A Study on Strategies  
for Local Government Informatization using GIS

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2000-28 · GIS

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· 1591-6 (431-712)

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<http://www.krihs.re.kr>

© 2000,

\*

2000 1995 1 가GIS  
가 2 가  
. 1 10 2 8  
가 2005 『  
』 . . .  
90 GIS  
가 10  
GIS  
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GIS  
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GIS , GIS 가 ,  
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가 가  
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GIS , GIS , GIS  
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가 GIS GIS  
가

2000. 12. 31



가 . , , 가 ,  
가 . “  
” 가  
가 GIS  
. 80  
가  
가  
70% 가  
가  
가



GIS가 가  
 GIS가 80  
 (Cartographic System)  
 가 GIS가  
 GIS  
 80 GIS  
 90 GIS GIS  
 '95 『 가GIS  
 (1995 2000)』 GIS  
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- 1. .... 1
- 2. .... 3
- 3. .... 3
- 4. .... 4
- 5. .... 4

**2**      **GIS** ..... **7**

- 1.      GIS ..... 7
- 2.      GIS ..... 28
- 3.      ..... 45
- 4.      GIS ..... 50
- 5.      GIS      가 ..... 54

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# CHAPTER 1

## 1.

21

가

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, , , ,

. 1)

가

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가

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1) 가 (NII: Agenda for Action, 1993) 「21  
(Access America, 1997)」 '96 「가

, (ISI) 「IT for All」 .



80 1 ('87 '91)  
, '92 『 (93 2001)』

가 , ,

70%

가 . 80  
GIS가 . GIS

가

GIS 가 . . . GIS  
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가 , GIS가  
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'95 『 가 』

가 가GIS

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가 GIS  
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GIS 가 90

GIS 가

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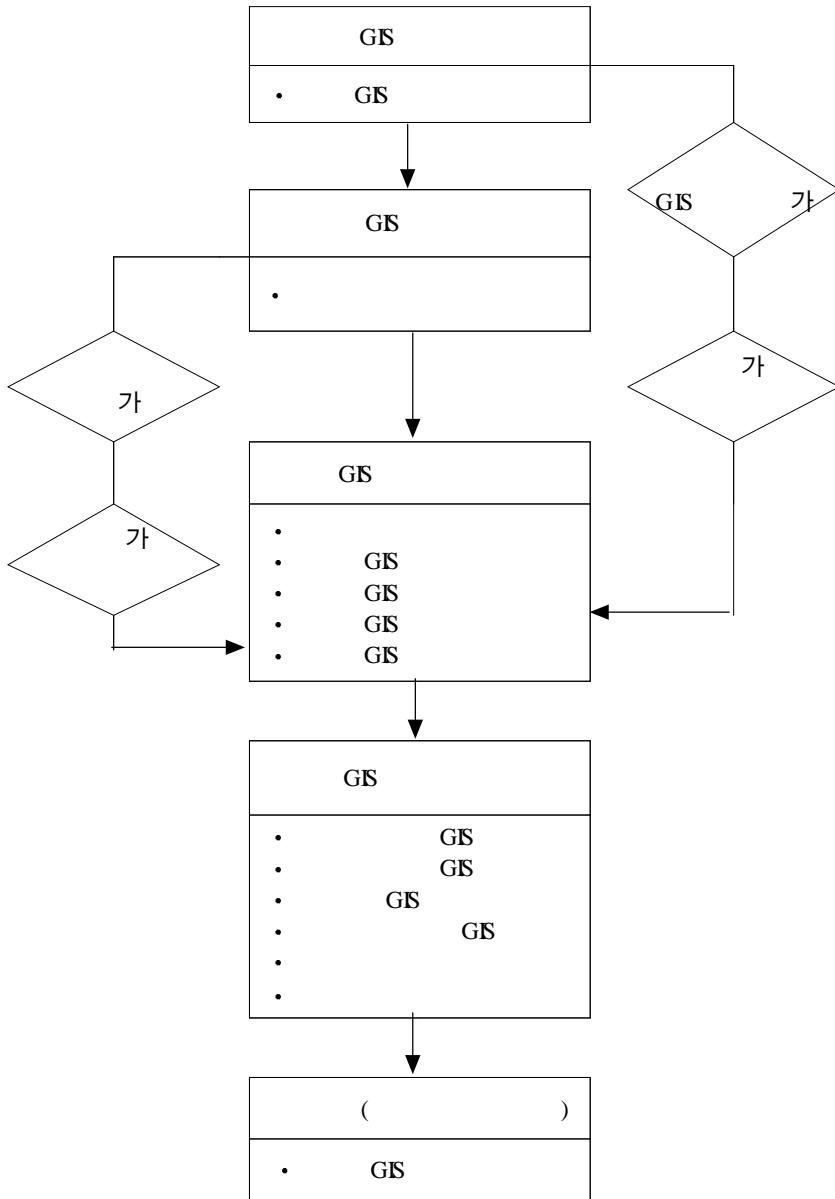
GIS

GIS

5.

< 1-1 >

< 1-1 >



# CHAPTER 2

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## GIS

### 1. GIS

1)

(1)

가 . ,

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90 가 .

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가 가 .

.

가 가

가 .

가 .

가 .80

가 .

70%

가 가 ..

GIS

GIS가

GIS가

GIS가

GIS

가

GIS가

가 가

DB

가

가

GIS

'95 4 가 가 가 GIS 가 GIS 가 GIS GIS

(2)

, , , , , 가 GIS  
 '90 GIS  
 80 90 , GIS  
 GIS  
 가 GIS 2) GIS  
 GIS  
 '90 3 '90 9

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2) GIS , , 1998

3).

'95 가GIS

'96

1/1000

90

가

GIS

GIS

'95

가GIS

GIS

'98

가

GIS

'98 IMF

GIS

. GIS

3) 가( GIS ), . , 2000. 10



	GIS	GIS
	· 80 90	· '95 가GIS
	·	· 가
	· · · ( ) · ( )	· · ( ) · · ·
	· , , . .	· ( ) · ( 19 ) · (50 )
	· ( GIS 가 )	· 가GIS 10
	· 가 GIS 가	· , 가
	· 가 GIS가 DB/	· GIS

(3) GIS

GIS  
 GIS가 '80 ,  
 , '95 가GIS  
 2000 96.2% 76

< 2-2> GIS ( )

	90	'90-'94	'95		
( )	1(1.3)	6(7.6)	69(87.3)	3(3.8)	79(100.0)
		, , , ,		, ,	-

: GIS , , 2000. 8  
 ) 가 ,

GIS  
 GIS

GIS

GIS

GIS  
 79 GIS 가 215% 17

4). 가

, 16

GIS

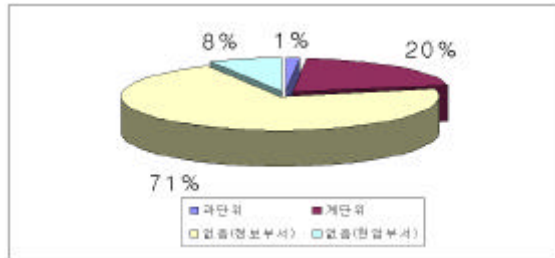
. GIS

GIS

GIS

가

< 2-1> GIS



GIS

50

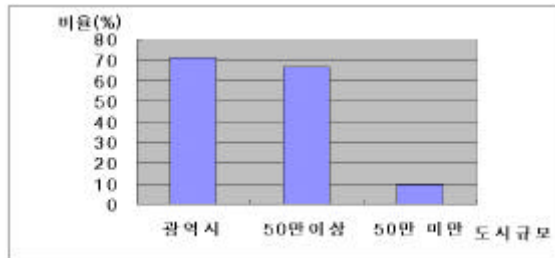
71.4%, 66.7%

50

95%

GIS

< 2-2> GIS



4)

2

GIS

가 2000 8

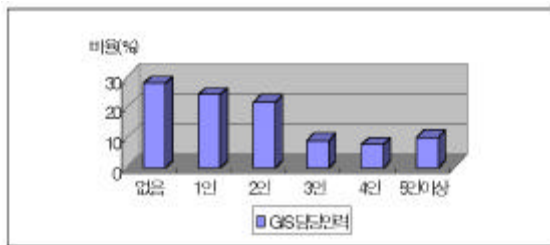
GIS

2

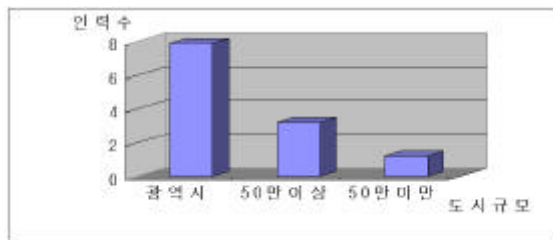
GIS

GIS  
 GIS 가 GIS  
 79 GIS  
 GIS GIS  
 79 GIS  
 GIS 2.1 GIS  
 27.8%, GIS 1 2 24.1% 21.5% GIS 가  
 2 73.4% 5).

< 2-3 > GIS



GIS GIS  
 79 50 3.2 , 50  
 12 GIS  
 가 GIS 가  
 < 2-4 > GIS



5) GIS GIS 3

14 2 GIS

GIS  
가

GIS . 2000 GIS

63.3% 50

GIS

6 50 10

가 GIS

50

48.3%

'98 6

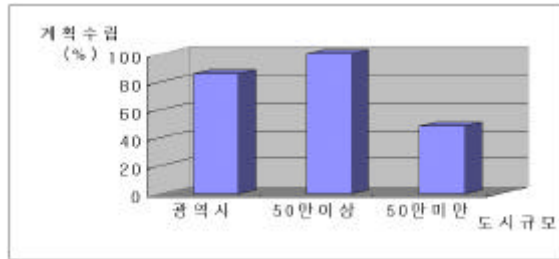
20

가 GIS

가

GIS

< 2-5> GIS



GIS

가

2

GIS

가

46.8% 37

가

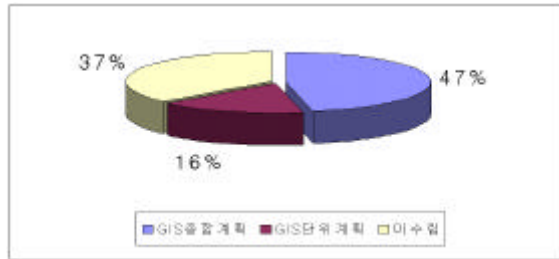
2 . GIS

15

GIS  
가

GIS

< 2-6 > GIS



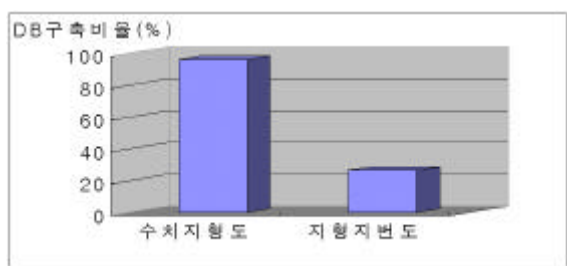
GIS  
GIS  
가 ( )  
'95 『가GIS』  
가  
1/5,000 가 1/1,000  
2000 1/1,000  
79 76  
'97  
( )  
가 GIS

가 가  
 가  
 . 2000 48 2003  
 2001 60

가

GIS

< 2-7 >



GIS

가

GIS

. GIS 가

GIS

가

50

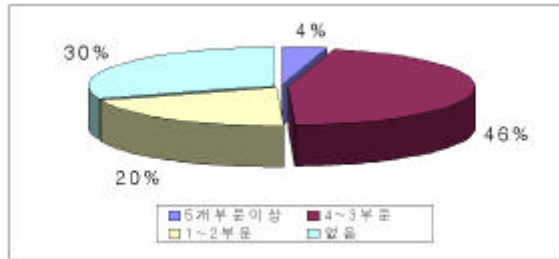
GIS

GIS

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< 2-8 >

GIS



GIS

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'98 '99

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19

6)

2003

가 가

6)

1998

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12

2000 48

2001 60

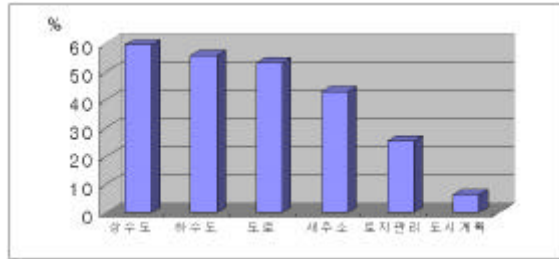
18

2

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< 2-9> GIS ( )



GIS

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< 2-3 > GIS


GIS

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90

GIS

가 . 95

가 50%

90

GIS

1770

< 2-4> GIS

( : )

DB	84,989	61,601	11,834	158,424
	-	14,831	4,225	19,056
	84,989	76,432	16,059	177,480

: , GIS , 2000. 8

50%

'98 700

< 2-5>

( : )

	'98	'99	2000	
	152	151	129	432
	10	45	210	265
	162	196	339	697

2001 가GIS 690

354 , GIS 303 , GIS 23 ,

가GIS 10 2000 574 20.2%

8).

8) , 2000. 11. 15

(4) GIS

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GIS

Rogers(1983)

S

( )

(Jeffress, G. A. and D. C. Conway, 1989).

가

Nolan

Nolan

(Initiation)/ (Expansion)/ (Formulation) /

(Maturity) 4

가 S

(Gibson, C.F. & Nolan, R.L.1973).

GIS

Rogers Nolan

S

GIS

(Croswell, 1989),

(Levinsohn, 1989; Somers, 1994),

(Huxhold & Levinsohn, 1995;

Onsrud & Pinto, 1993),

(Budic, 1994; Croswell, 1989)

9)

GIS

4

9) GIS

(2000)

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가 가 . GIS

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GIS

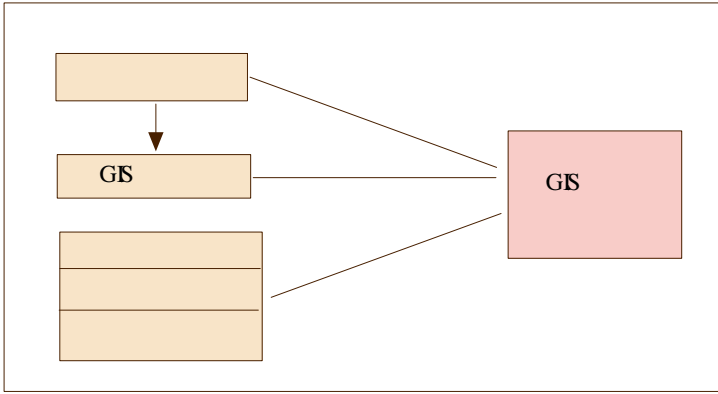
GIS GIS  
 GIS , , 4  
 . < 2-6> GIS  
 .

< 2-6> GIS

		(operational definition)
GIS	· · · · · · · · ·	· GIS · GIS 가 · GIS · GIS · GIS · · · · ·
GIS	· GIS	· GIS
	·	· GIS ,
	· · · · ·	· 가 · · · · GIS
	· · · · · · · 가	· · GIS · · · GIS · · 가
	· · ·	· , · , ( ), · AS 가 , ,

GIS /

< 2-10> GIS



GIS

GIS

GIS

GIS

GIS

GIS가

GIS

GIS 가

79

GIS

NGIS

79

GIS



GIS  
 2000 10 11 ,  
 (e-mail)  
 104 .

GIS  
 GIS GIS  
 , ,  
 . GIS , GIS  
 , , ,  
 . F 23.547, p-value .000  
 , R<sup>2</sup> 0.592 59.2%  
 GIS GIS GIS  
 (p<.01), GIS  
 . GIS GIS  
 가 GIS GIS  
 =.01  
 GIS  
 GIS (+)  
 가 GIS GIS

GIS 가

GIS

< 2-7> GIS

	GIS	B	Se B		T	Sig. T
	GIS	.322	.097	.333	3.322	.001
		.249	.079	.347	3.141	.002
		.141	.131	.123	1.075	.286
		.111	.092	.125	1.205	.232
		.837	.319		2.625	.011

R<sup>2</sup>=.592

F=23.547

Sig. F=.000

## 2. GIS

### 1) 가

(1)

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96 「 」

가 . GIS 가GIS

2000 1 가

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(UPIS)

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가 . GIS 가 가  
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GIS 7

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가 .

'98

가

NGIS 1/1000

가 . ,가

가 1/500

가 1/5000

DB

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NGIS 1/1000

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가 가

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GIS .

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'90 , 가

GIS GIS

GIS 가 가 .

GIS 가GIS

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'98 , GIS

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가 가 GIS 57.1%, 87.5% 가

GIS GIS 가 가

GIS

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(3)

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GIS

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1/1000

11).

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11) 1/1000

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GIS

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.NGIS 1/1000

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2)

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IMF GIS

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가 GIS GIS

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가 . GIS

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GIS GIS

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1/1000

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NGIS

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12) '98 5 6 NGIS  
가 가 50:50

1/1000 3

가

2000

10

2 NGIS

, 가 가 50:50

13) .

. NGIS 1/1000

가

.

가 100%

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13) 2 가 , 가 , 2000.12

3.

1) GIS

(1)

가 (National Information Infrastructure) GIS  
FGDC(Federal Geographic Data Committee)

GIS

House) , 가 (Framework Data) , (Clearing  
House) 가 GIS GIS

Demonstration Projects Program) CAP(Cooperative Agreements Program) NSDI Benefits Program  
FDPP(Framework

GIS . Cooperative Agreements Program Clearing  
House, , , Framework  
Demonstration Projects Program .  
NSDI Benefits Program

(2)

가, , .<sup>14)</sup>

, , ,가 ,

GIS 가 .

, .

「 」  
, , . ,가 ,  
가. .

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14) 道路管理ミステの 概要, 日本道路管理センター, 1996



GIS

, 가 , 가가 ,  
8-9 ( 5,200 5,600 )  
가 .

(4) ( )

4

78

1992 Tomlinson Ltd. 「GIS」

, 78 US\$3M .

GIS

1997.12 1999.8

가

1 78 가

, GIS

가

2) GIS

(1) GIS

GIS

가

GIS

GIS

(2) GIS

, ,가 , GIS

(3)

가

#### 4. GIS

1) GIS

(1) GIS

GIS

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GIS

3

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, DB

GIS

GIS

가

GIS

( )

GIS

( )

GIS



) 3 GIS 가 ( .  
 가 , 가  
 GIS  
 가 GIS GIS  
 , GIS 가  
 . GIS  
 가 .

< 2-8> GIS

.			
GIS .			
GIS			

GIS

GIS , , 가  
 ( ) ( )  
 GIS 가  
 25.3% 20 , 74.7%

< 2- 10> GIS

(25.3%)		○
		○ ( )
		○ ( ).
(74.7%)	GIS	<p>○ '90 , , , GIS</p> <p>가GIS GIS</p> <p>- , 가 , ,</p> <p>-</p> <p>○</p> <p>(UIS) (MIS),</p> <p>○ 가 ,</p> <p>, GIS</p> <p>- GIS</p> <p>Enterprise GIS</p>
	가GIS	<p>○ GIS</p> <p>○ 가GIS</p>

< 2-11> GIS

( )		- - - - - - - 가 (DXF) ( )
		- GIS - GIS 가 , - , ,
		- - GIS
		- - -
( )		- GIS GIS - 가 GIS 가
		- 가 - 가 - 가 GIS
		- GIS , - GIS ( )
		- GIS ( . )
		- ( , , ) - DB - ( , )
	가GIS	- 가GIS , 가- GIS
		- - - ( , )
		- ( ) GIS

5. GIS 가

1) 가

(1) GIS

1 가GIS , GIS  
,  
5 GIS  
.

(2) GIS

GIS

(3) GIS

가 가  
가 .

(4) GIS

가

가

가

가

IMF

GIS

, ERP, CTL,

2)

가

(1) GIS

1 가GIS

GIS

GIS

GIS

가

(2) GIS

가GIS 90

GIS

가 .

(3) GIS

1/1,000

가

, 市級

GIS

(4)

GIS

가

( , , )

, , .

) 가GIS

GIS

가

(5)

GIS

(6)

가가

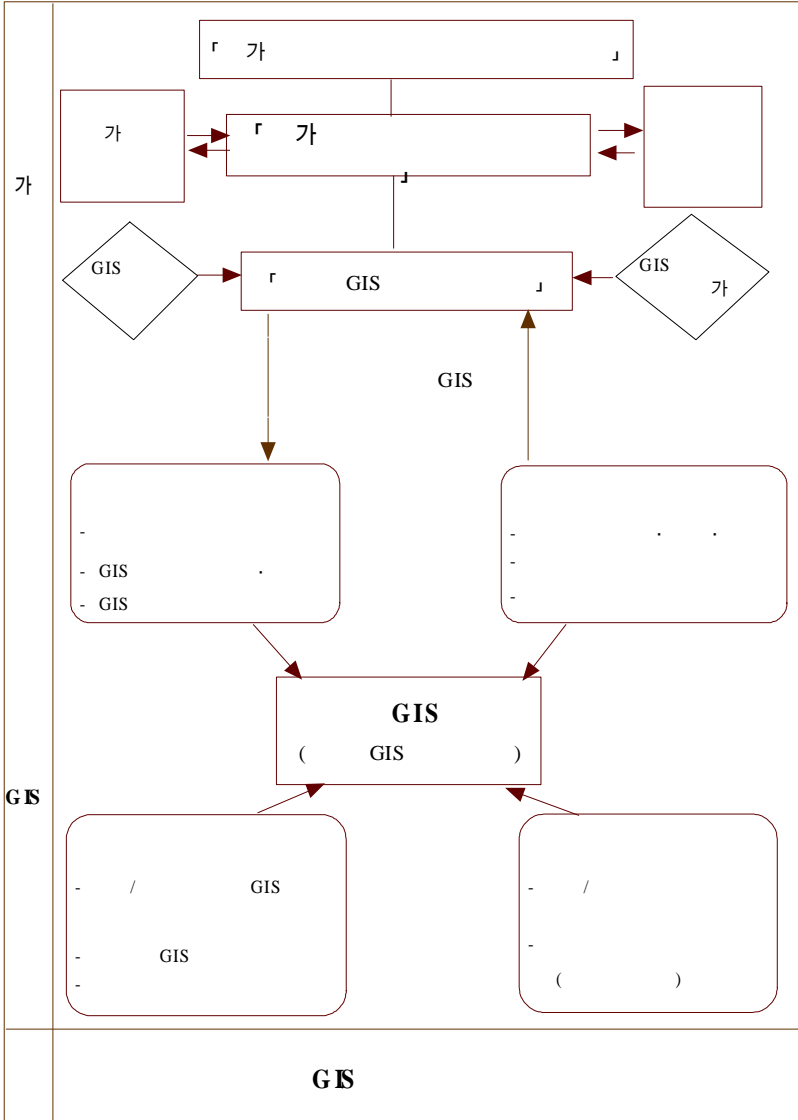


GIS

GIS

GIS

< 3- 1> GIS





## 1) GIS

### (1) H/W N/W

- , 가 , 가 가 .
- , , Server/Client .
- / GIS .
- GIS .

### (2) GIS S/W

- OpenGIS ISO .
- DB GIS .
- .
- GIS GIS .

## 2) GIS

### (1)

- , , 가 .
- .
- , , .
- , .

가가

(2)

-

-

(framework data)

- DB

( / / )

가

-

(Quality Control)

- DB

-

-

(3)

- GIS

, , ,

가

GIS가

(4)

-

, , , ,

-

/

-

, , Network

- 가 .
- 가 .
- Component GIS
- (Object-Oriented)

3) 가

(1) GIS

- GIS .
- 가 GIS .

(2)

- 가 .
- GIS .

(3) GIS

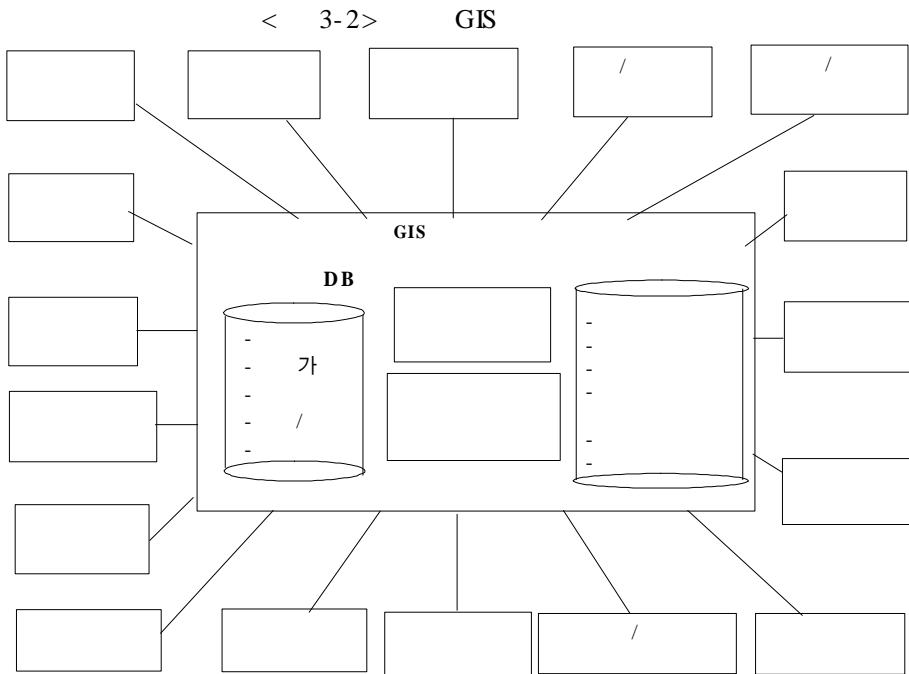
- GIS 가 GIS .
- GIS .
- 가 .

## 2. GIS

### 1) GIS

- (Framework data)
- MIS(Management Information System) GIS  
(Enterprise GIS)
- (Component) GIS
- 

가가



2) GIS

(1)

- / .
- , , .
- (Quality Control) .
- .

① /

㉠

- 가 (Framework data)  
GIS .
- DB .
- / DB  
가 .
- , , , , , ,  
GIS  
GIS
- 가
- 가 , 가

-  
-

㉞

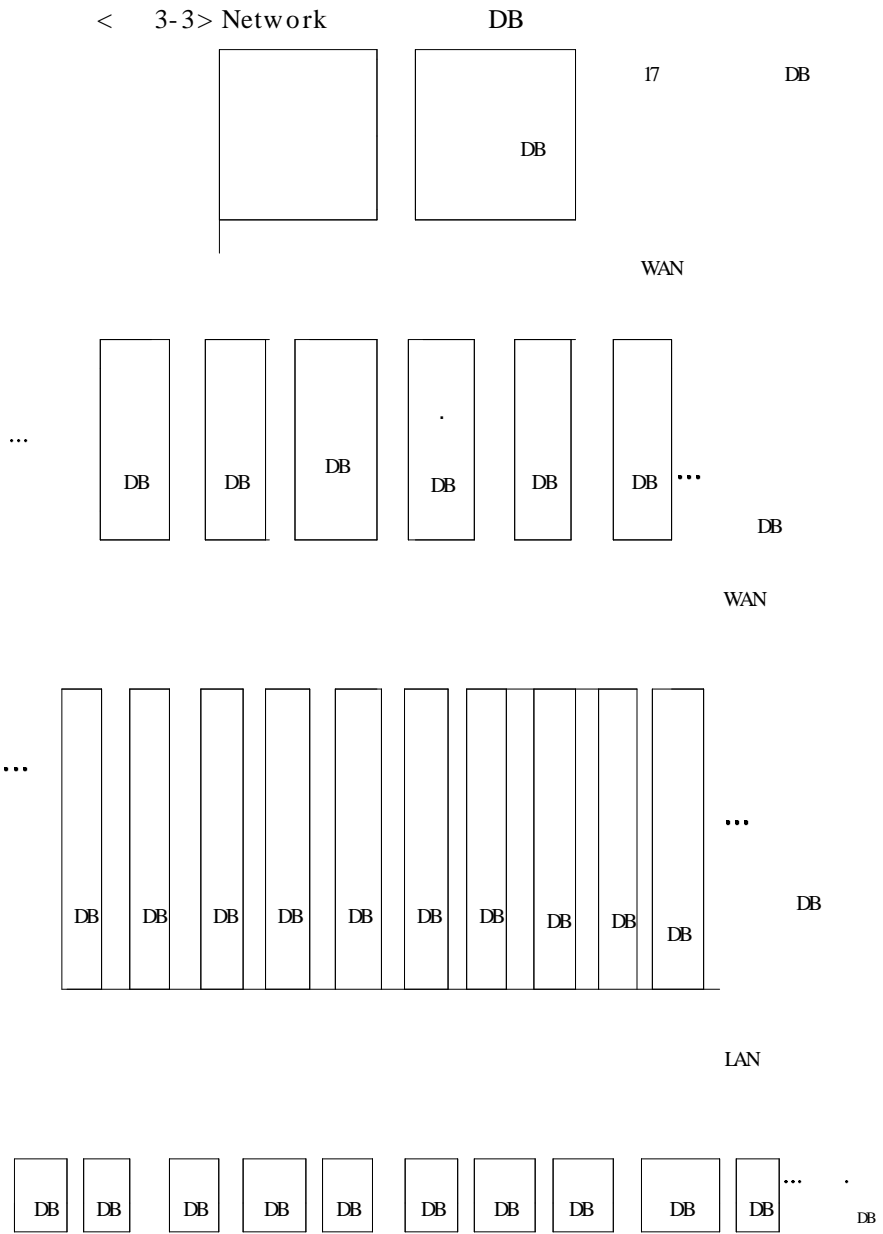
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가 . 가 , 가

( )

GIS

< 3-3> Network



②

GIS DB

GIS

60 80%

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. ( )

○ : GIS

○ :

○ : 50%, 50%

. 가

○ (1/1,000, 1/5,000, 1/25,000)

가

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DB

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가 , , , ,

㉠ GPS

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가

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GIS가

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○

, Database Design Planning

○ Datawarehouse ( , , )  
, , , , )  
가

○ (Authentidation) ,  
, , Quality Control,  
가 ,

Metadata Quality Statement가

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○

GIS

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(2) GIS

① H/W Network

㉠ Network H/W ( DB )

- , 가 ,
- ,

Network ,

- Client/Server

○

- GIS

○

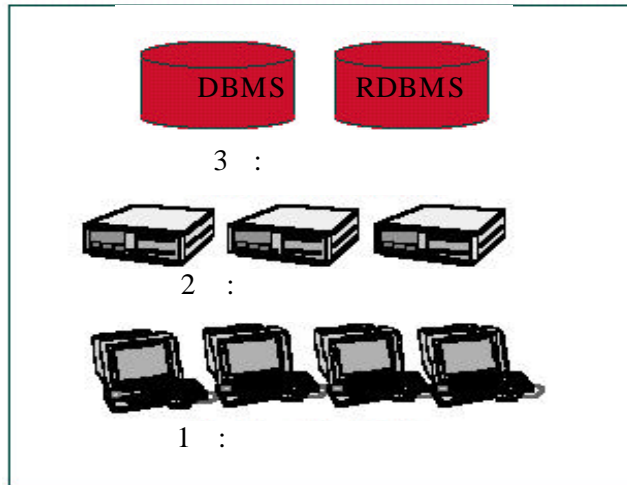
○

LAN

- GIS

㉡ / (Multitier) H/W

- 가 3 (Three-Tier)



- 1 :  
- PC/
- GIS DB

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- 2 :  
- LAN PC/
- , 가

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- 3 :  
- WAN
- 1 2 가 3 ,

3 DB DB (3 ),  
DB (2 ), - (1 )

② S/W

○ , Internet

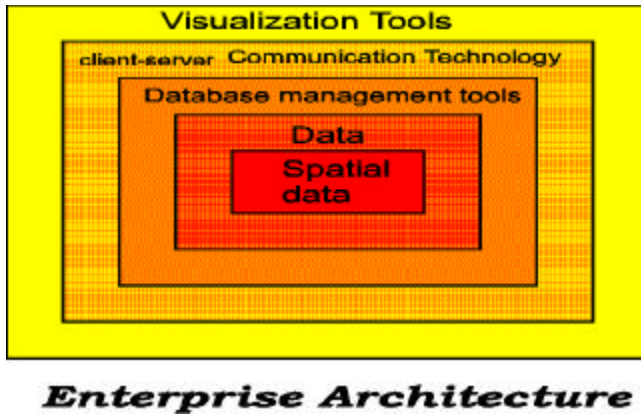
GIS

○ Component Engineering

○ GIS MIS( , )가 GIS

< 3-5>

GIS



(3)

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④ ( )

1		34		73	
2					( )
5		39		77	
7					
9		45		80	
12	( )	48			
13		49		85	
15				87	
17		51			
19				89	
20		55			
22				93	
				96	
25		60		98	
				99	
29				100	가
				102	가
31		66	/	103	
34				106	
		71			

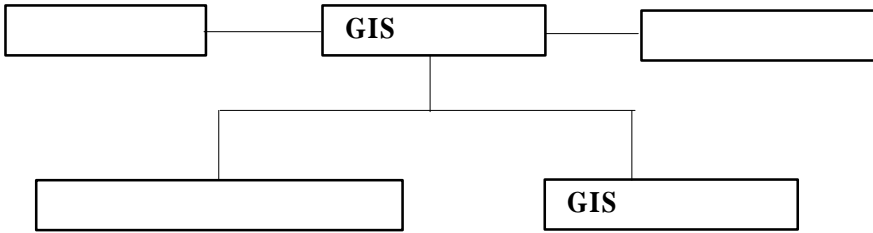


(4) GIS ( )

- GIS
- GIS GIS
- GIS

①

- GIS
- GIS GIS GIS
- GIS
- 가
- GIS GIS 가
- GIS 가 가 ,
- GIS 가



- GIS
- 
- 
- GIS
- GIS
- GIS
- GIS
- Task Force

② GIS

○ GIS

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○ GIS

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GIS

- GIS GIS .
- GIS GIS ,
- , GIS

- GIS
- GIS , GIS .
- GIS
- GIS .

- 
- GIS 가 .
- GIS , , .
- 가 .
- Site .

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- 가 .
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○

- , .
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○ GIS

- Site
- .
- .

○ GIS ,

GIS , .

○

- 
- GIS GIS

가

- "Project "
- .
- .

○

-

GIS

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GIS

○ GIS

GIS 가

(5) : GIS

○ (GIS)

○

○

가

○

가

### 3. GIS

1)

○

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- 가

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- ( )

- ( )

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-

- MIS

) UIS

. (1998-2003)

. (2000.6-2001.6)

. 가 (1999- )

. (2000.10-2001.9)

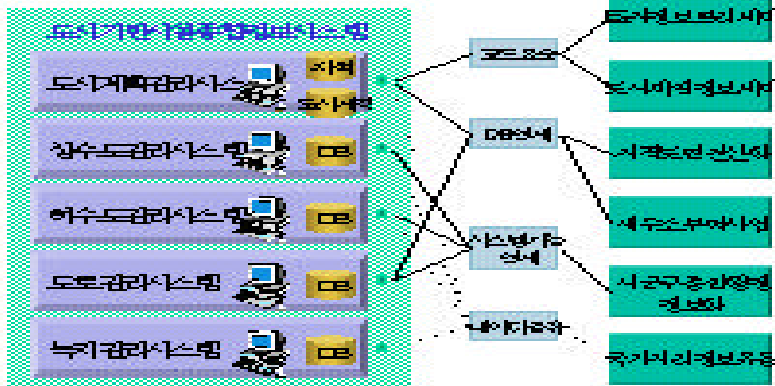
. (1999-2003)

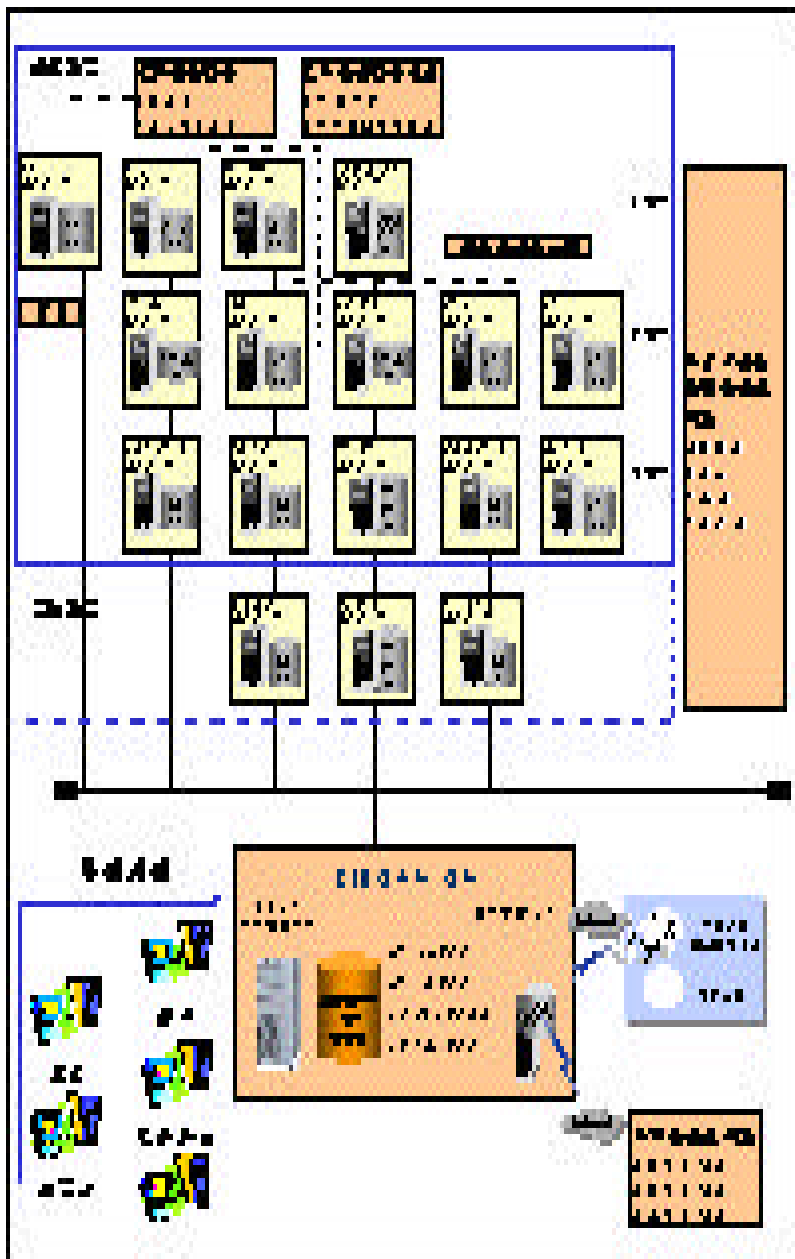
. (1998.1- )

.

5

☐ 수평방안 다라도도 검토중





## 2) GIS

(1)

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( 가 9  
2 )

(2)

, 가  
가 . Batch  
가 .( Backup  
)

(3)

- 가

## 3) GIS

(1) ( )

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- 1 (1998 - 2000): 10

· (6 ) : , , , , ,

· (4 ) : , , ,

· : , , ,

- 2 (2000 - 2002): 11

· (9 ) : , , , , , , , , ,

· (2 ) : , , ,

· : , , , , ,

( : )

		1999	2000	2001	2002
	1350	296	484	275	295
( )	896	73	320	209	295
	454	223	164	66	-

- 232

, ( ) Data Table

(GUI, , ,

, , , )

- DB  
- , ,

(2) ( ) ( )

-  
-  
- 가  
-

(3) 가 ( )

- : 1996 2003
- 1 : 1996.09.02 1997.05.30
- 2 (98) : 1999.01.23 1999.10.30
- 3 : 1999.12.31 2001.07.31

-  
- , 1/2

- ,
- 
- ,
- 
- ,
- '99 ( , )
- 3tier 2tier PowerBuilder

- Java Application .
- DataBase ORACLE Sybase .
- 가
- 가 가 .
- GIS GIS S/W BMT , 가
- GIS .

- 2000 .
- (4) ( ) ( )

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- PC

- DB

/ / / / /

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- 1996.5 :

- 1997.6 : SW

- 1998.5 :

- 1998.11 :

- 1999.2 :

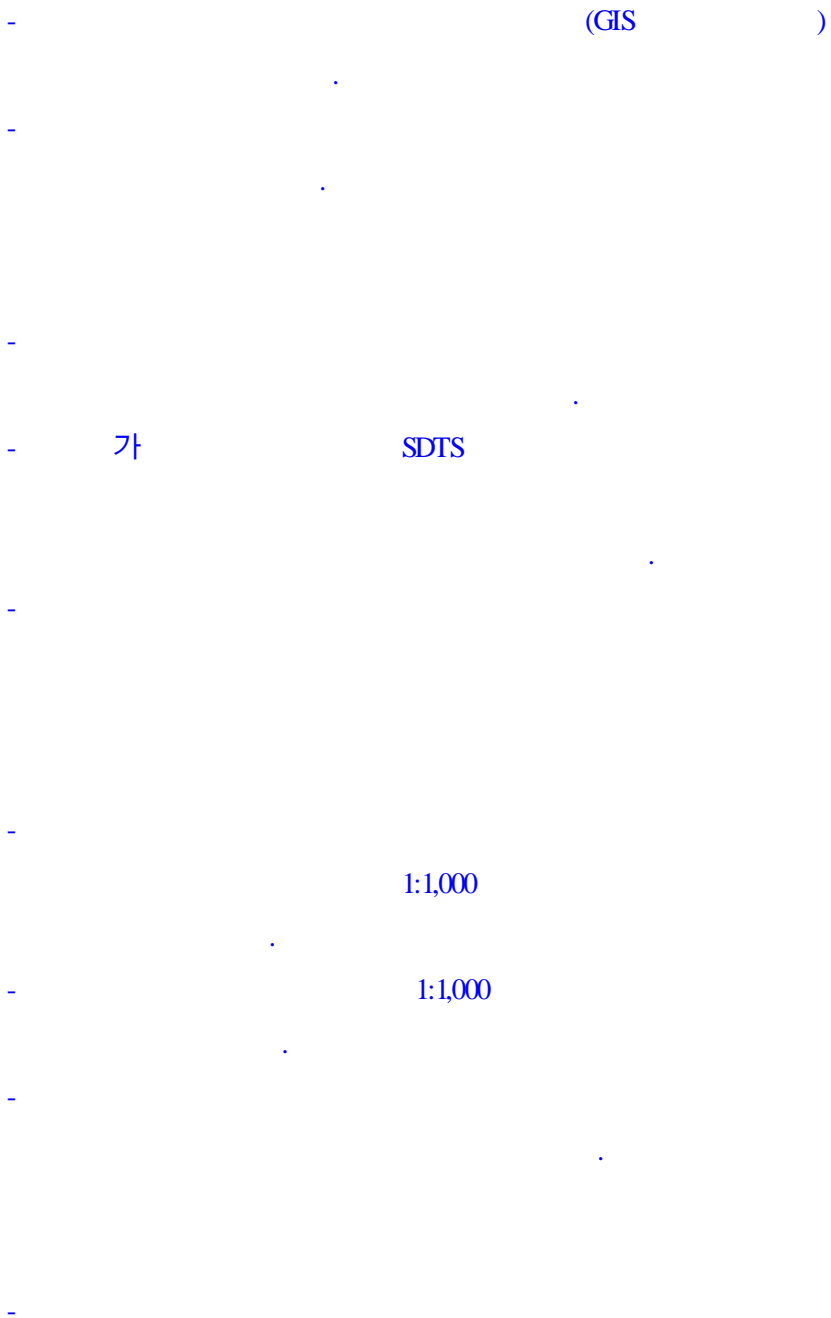
- 1999.4 ~ 1999.11 : ( )

가

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( ) 가 .

(6)



·  
(Facility control point)

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가GIS 가

# CHAPTER 4

## GIS

1.

1) GIS  
50 GIS , GIS  
GIS . 1  
, 2  
GIS .

2) GIS  
3 GIS  
가 가  
GIS  
「 가 」



3) GIS 가 GIS

GIS .

4) GIS GIS , GIS GIS GIS .

5) GIS GIS GIS GIS .

2.

2 가GIS 79 GIS 2006 GIS .

가 , , 21 . , .

3.

1)

(1) GIS , GIS GIS  
가 .  
가 .

(2) GIS  
『2 가GIS 』, 가 , CYBER KOREA  
21 가 ,  
GIS .  
GIS ,

(3) GIS  
가GIS 가  
( ,  
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가 .  
GIS 가 .

2)

(1) GIS 가

GIS

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GIS

(2)

GIS

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GIS

GIS

79

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가

. 가

GIS

(3)

2 가GIS

GIS

GIS

(4)

GIS

가

(5) GIS  
GIS  
GIS GIS

(6) GIS , GIS  
GIS

(7) GIS  
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4.

1) 가 => GIS

(1) GIS  
가 GIS 가 , GIS  
GIS 2 가 GIS GIS  
GIS





- ( , , )
- GIS (GIS , , )
- GIS , ( )
- GIS ( , , , )
- GIS (N/W, H/W, S/W)
- 
- ( )
- GIS
- 
- /
- 
- GIS
- ( , )
- GIS (H/W, N/W, S/W, DB)
-

- GIS ( )

-

가 가 가 GIS  
 ( / ) .  
 가 , , 가  
 .  
 GIS IT(Information Technology)  
 , know-how  
 , GIS .  
 가  
 , 가  
 ,  
 GIS .

### Internet Homepage

- Internet

:

. IT GIS ,  
 Internet .



- IT ( )
- + DB, Networking
- + ERP(Enterprise Resource Planning)
- + ReEngineering
  - GIS
- + Enterprise GIS
- +
- + Component
- + Open GIS
- + Internet GIS
- N/W, H/W SW(GIS package )

- GIS

-

- Internet

- Internet

GIS

- , channel .
- , ,
- : 가 , , ( , , )
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GIS

GIS GIS GIS 가

GIS 가

GIS GIS

GIS , 가

( ),

(GIS )

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- 가 , ( )

- , , ,

- GIS .

- , ( ) , , , Licensing

- / 가

- 가 ,

GIS ( / / / )

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- : , ( ) , , ,  
Licensing

( )

GIS 가 GIS 가  
 , GIS  
 가  
 GIS ,  
 GIS

Internet

- 가 GIS

- 가 ,

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-

- Item

:

GIS

- , ,

- / / partnership

가GIS

: 가GIS

, 가GIS

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가 GIS 가

가 , GIS

Partnership , GIS

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# DB ( )

- DB , DB

가 . ,

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- DB ( ,

가 )

# Data Warehouse ( )

(2)

가

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가

가

CD-ROM

가

TIN

(Grid)

3

가

가

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1996 3

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. CEN TC/287

, SDTS

, ANZLIC

. ISO

가GIS

SDTS

. ISO TC211

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가GIS

GIS

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DB

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DB

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DB

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가, DB

가, DB가

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가 가GIS .

가 가GIS , 가

가GIS ,

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DB

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, DB 가

DB

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DB

, GIS

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가 GIS

DB

DB

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(3)

Spatial Information)

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가

가

가

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가가

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가

가 ( Interoperability)

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가

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(가) 「 」 : , ,

(Spatial Data Clearing House)

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가

GIS

: , ,

CD-ROM

GIS

GIS

가

가

2

가가

가

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GIS

가GIS , 가 , , , GIS  
가GIS , GIS GIS  
가 GIS

가

1 가

가 : , ,

( Framework data) : , ,  
GPS ,

가

(interoperability)

( )

GIS Open System, (Java, Web), (OMG, CORBA)  
DB . GIS , 가 ,  
, , ,  
, GIS  
GIS  
가 DB , ,  
GIS  
GIS  
, GIS  
DB Platform

open system ,

가

Web GIS

GIS DB

GIS DB

DB가

DB

. GIS

DB

가

DB

. GIS

가

display

GIS

(EC)

OGIS( Open Geodata Interoperability Specification)

(4) GIS

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가

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- 가  
가  
CAD

o 가  
- 가 가 가 가  
- 가 가  
가

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- 가 ,  
가

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< 4-1 > 가

GIS				GIS	GIS	GIS			GIS	가GIS
				GIS	GIS	GIS			가GIS	GIS
GIS	GIS				GIS	GIS			가GIS	GIS
						가				
	GIS				GIS				GIS	GIS
		가	가			GIS	GIS			

< 4-2> GIS

			GIS
GIS	-	- GIS	,
	-	- GIS ( / / )	
	-	-	
	- GIS	- GIS GIS ( , , )	,
	-	-	,
	-	- 가 가GIS	,
	-	- DBMS· 가	,
	-	- 가	
GIS	-	- , 가	

3) => 『 GIS 』

○ GIS  
가 GIS  
, GIS , GIS  
GIS : GIS  
가  
GIS , GIS ,  
GIS , GIS ,  
GIS ,  
: ( ,  
)

GIS :  
,  
:  
가.

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>1</b>											
	/										
	/										
<b>2</b>	/										
	/										
	/										
	/										
<b>GIS</b>											

: 가 GIS  
 가 GIS

GIS (2001 2005)

( : )

			가						
GIS	- 가GIS GIS 50	- GIS 가	GIS	25	5	GIS	158	5	2 GIS 가 GIS
	- S/W	- GIS	GIS	300	3	-	-	-	, ,
	- 가GIS	-	GIS	25	5	GIS	25	5	가GIS
	-	- ,	GIS	25	5	-	-	-	가GIS GIS
GIS	- GIS - GIS	- GIS .	가GIS	80	5	-	-	-	- - - -



GIS (2001 2005)

( : )

			가					
GIS	90 , UIS 2000	가 , .	GIS	100	5	GIS	760	5
	가GIS 19	가 가 가 가	GIS	120	10	GIS	120	10
	19		GIS	90	10	GIS	90	10
	/ 가GIS UPIS ( , ) -90	- - - - -	GIS	400	4	GIS	800	4
	/	- , ,	GIS	100	5	GIS	100	5
	-	-	IS <sup>G</sup>	250	5	GIS	250	5
	/	-	GIS	100	5	GIS	100	5
	33	DB 가 UIS	GIS	100	4	GIS	150	4
	-	-	GIS-T			GIS-T	340	5
	- GIS	-	GIS	50	5	GIS	50	5
			GIS	30	3		30	3
	/		GIS				100	5
			GIS	50	5	GIS	50	5
			IS <sup>G</sup>	30	5	IS <sup>G</sup>	30	3
	- GIS	-	GIS	100	5	GIS	100	5
-		GIS	200	5	GIS	200	5	

(2001 2005)

( : )

				가						
		-	-	250	5	-	-	-		
		-	-				395	5		



5. (2001 2005)

( : )

		가			
GIS	GIS	25	5	158	5
		300	3		
		25	5	25	5
		25	5		
	GIS	80	5		
		127	5	127	5
		633	5		
		290	5	575	
		1050	10	1000	10
GIS		100	5	760	5
		120	10	120	10
	/	90	10	90	10
	/	400	4	800	4
	/	100	5	100	5
		250	5	250	5
	/	100	5	100	5
		100	4	250	4
				340	5
		50	5	50	5
		30	3	30	3
	/			100	5
		50	5	50	5
		30	5	30	3
		100	5	100	5
	200	5	200	5	
		250	5		
				395	5
		4,715		5,550	

# CHAPTER 5

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## 1. GIS

21

GIS

가

가

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10

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GIS, RS, GPS,

ERP

가

10

GIS

『GIS

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## 2. GIS

가

가

80

가

80

90

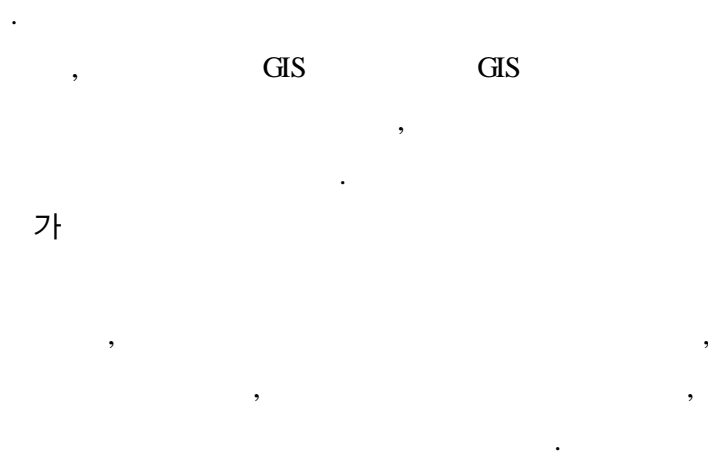
GIS

GIS

GIS

50

GIS



. 2000. GIS .  
 \_\_\_\_\_ . 1998. ( ).  
 . 2000. GIS ( , ).  
 . 1998. GIS  
 , 1996, GIS  
 . 1999. GIS . Proceeding of 4th  
 Local Government.  
 of 4th Annual International Seminar on Geographic Information System in  
 \_\_\_\_\_ . 2000. .  
 , (2000. 11. 15)  
 . 1998. GIS .  
 \_\_\_\_\_ . 1998. GIS .  
 . 2000. (GIS) ,  
 . 1999. “ ”,  
 . 2000. “ GIS ”.  
 「 GIS 」 .  
 , 1996,  
 . 1999. 「Cyber Korea 21」

. 1999. 21 「 」 ,  
.2000 “ 가” 「  
가 」 가

Rogers, E. M..(1983). Diffusion of Innovation. NY: The Free Press

Gibson, C.F. & Nolan, R.L."Managing the four stages of EDP growth," harvard  
Business Review January-February 1974 pp.76-88

Huxhold, W.E. & A.G. Levinsohn(1995). Managing Geographic Information  
System Projects. Oxford Univ. Press

Principles of Geographical Information Systems for Land Resources Assessment,  
Oxford: Oxford University Press.

Campbell, Heather and Ian Masser.1995. GIS and Organization.How effective are  
GIS in practice?, London:Taylor & Francis.

## ABSTRACT

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In Korea, GIS had been introduced centered on government agencies since the first half of 1980s. With the master plan to build 『The first National Geographic Information Systems(NGIS)』 established in 1995, so many projects have been launched to build and use together the national spatial data by the central and local government. In the first era of NGIS (1995 2000), the government has focused on making Spatial Data Infrastructure, primarily promoting production of basic data, implementation of pilot project, and arrangement of related laws and system.

But the NGIS projects in process which have mainly emphasized on creating spatial data infrastructure don't have a comprehensive plan to effectively support GIS implementation of local governments, which are both the largest consumers and users in these projects. The local governments have revealed their limited capacity to go ahead with their GIS plans in lacking finance and understanding in their organizations, and arrangement of existed data, etc., even though a few of them have got through pilot projects, and have arranged for the full-fledged development of GIS applications.

This study has been then focused on deriving the strategies to support the implementation of local government in general, given summing up as follows.

First, We analyze the states and problems of GIS implementation in local government.(Chapter 2)

Then, took a picture of the general GIS Model in local government(Chapter 3). After that We evaluationed the national and local strategies for supporting GIS implementation in local governments up to now, examining the present conditions of national GIS plicies to help them in foreign countries as U.S. and Japan, etc., before we set up the destination to back up building GIS of them in terms of founding, producing, disseminationg and utilizing spatial data.

And then, with national support plan to resolve the impending problems for local governments, we proposed some projects within the scope of NGIS to back up GIS implementation of them in four main fields; ) the creation of spatial data infrastructure(reserching, teaching, making publicity), ) the production of spatial data(making local-oriented framework data, making and upgrading of digital topographic and thematic maps, and fostering strategic points to diffuse the development of underground facility map), ) the dissemination to disseminate spatial data), and ) the utilization of spatial data (development of GIS applications). After that we estiamte 79 local governemnt's GIS expenses for five years.(Chapter 4)



**< 1> GIS**

1)

	<ul style="list-style-type: none"> <li>- NSDI ‘ , GIS</li> <li>- GIS</li> </ul>
	<ul style="list-style-type: none"> <li>- (가 (NSDI)) GIS</li> <li>- (FGDC) GIS</li> <li>- GIS</li> </ul>
	<ul style="list-style-type: none"> <li>- FGDC (Framework Data), (Clearing House) 가 GIS</li> <li>- GIS ( , , , )</li> <li>* FGDC Cooperative Agreements Program (Clearing House, ) , Framework Demonstration Projects Program( ) , NSDI Benefits Program( )</li> </ul>
	<ul style="list-style-type: none"> <li>- NSDI , , . . (Coordinator) (Client) (州) County, City (州) 가 , Clearing House</li> <li>- FGDC NSGIC( 州 ) , ICMA (International City/County Management Association), (National Leagues of Cities)</li> </ul>
	<ul style="list-style-type: none"> <li>- FGDC( : ) 가 (NSDI) GIS</li> <li>- . GIS</li> <li>- ( , 1998) : “ ” , NSDI GIS</li> </ul>

2)

	<p>- 가 GIS</p> <p>GIS</p> <p>GIS</p>
	<p>- 22 가,</p>
	<p>- '97 22 「 GIS , , Clearing House 가</p>
	<p>- '95 9 「 GIS 」 -&gt;</p> <p>- '97 12 「 GIS 」 -&gt;</p>
	<p>- '96 「 」</p> <p>GIS</p> <p>GIS</p>

3)

	- “ (AdV)” 가 가
	- 1998 “ “ - (Entgelrichtlinie) (ATKIS)
	- AdV (Geospatial Framework Data) GIS - , GIS , ,
	- GIS , 가 GIS 가 ( : GIS SICAD 區 )
	- AdV , , , GIS

**< 2 > GIS**

GIS GIS (2000. 8)  
GIS

**1. GIS**

			GIS
	'98.8	3	23

**2. GIS**

	'95.10	-		GIS
2	'2000.1	'20 10		

**3. GIS**

**1) GIS**

				( )	/	( . )
	'97-'99			7,492	/	2
( )	'98-'99			-	/	

2) GIS

	( )	/		( )	(DB' / )	
	'97-'99			7,492	/	-
	'98-'00			16,698		-
	'98-'01			3,078		-
	'97-'01	/		3,979	/	-
	'99-'02	/		-		-
	'99-'01			-		-
119	'97-'00			-	/	-
	'96-'98			-	/	-
	'97-'98			-	/	-
	'98-'00			-		가

)

(12 ,가 , ,

)



1. GIS

			GIS
	-	1	6

2. GIS

	'97.6	2010		GIS
	'98.6	2010		

3. GIS

1) GIS

				( )	/	.
				( )		( )
	'95- '98	( )		3,275	/	2
( )	'00- '02			-		-

2) GIS

	( ) /			( ) (DB/ )	
	'95-'98			3,275	-
	'98-'02			580	-
	'98-'02			448	-
	'98-'02			280	-
	'00-'01			-	-
	'98-'02			-	-
	'98-'02			-	-
	-			-	-
	-	-	-	-	-

--

1. GIS

			GIS
( )	-	1	7

2. GIS

(US)	'96.8	-		UIS

3. GIS

1) GIS

				( )	/	· ( )
	'88-'98			8,011	/	
( )	-	-	-	-	-	-



2) GIS

	( ) /		( )	/ (DB/ )	
	'93-'98		8,011	/	-
	'97.12-'98.12 (12)		1,188	/	-
	'92-'00		469	/	-
	'88.12-'00.11 (144)		-	/	-
	'98.4-'98.12	-	-		-
	'98.9-'98.12 (3)	-	-	/-	-

) . . DB ,

--

1. GIS

			GIS
	-	1	8

2. GIS

	95.9	-		, . , , 5 DB

3. GIS

1) GIS

				( )	/	.
( )				( )	/	( )
	'97-'98			2,341	/	2
( )	-	-	-	-	-	-

2) GIS

		/		( )	/ (DB/ )	
	'97-'98			2,341	/	-
	'00.3- '01.4 (26)			849		-
	'99-'02			1,800		-
	'00.3- '02.5 (26)			897		-
	'00.3- '01.4 (13)	( )	-	376		-
	'01.5- '02.4 (11)	( )	-	360		-

--

1. GIS

			GIS
	-	1	9

2. GIS

	'91	-		. DB

3. GIS

1) GIS

				( )	/	. ( )
	'91-'94			2,000	/	5
( )	'99-'00		-	-	-	-

2) GIS

		/		( )	(DB' / )	
	'91-'94			3,275	/	-
	'99-'00			260	/	-
	'96-'97			90	/	-
	'96-'97			90	/	-
	'01.6-'02 2 (8)			60		-
	'01.6-'02 2 (8)		-	60		-

--

1. GIS

			GIS
	-	1	2

2. GIS

-	-	-	-	-

3. GIS

1) GIS

				( )	/	( . )
	'96-'97			270	/	3
( )	'99-'00	( )	-	-	-	-

2) GIS

	( )	/		( )	(DB/ / )	
	'96-'97			270	/	-
	'90-'98			950	/	-
	'90-'98			1,350	/	-
	'90-'98			1,644	/	-



1. GIS

			GIS
	-	1	2

2. GIS

	'95.9	-		DB , ' ,
	'97.6	-		( , ' , , )

3. GIS

1) GIS

				( )	/	· ( )
	'97.11-' 98.7			224	/	2
(	'00-'01	-	-	-	-	-

2) GIS

	( ) /		( )	/ (DB/ )	
	'96-'99		224	/	-
	'97.3- '00.1 (34)		1,776	/	-
	'95-'00		2,157	/	-
	'98.3- '99.1 (10)		353	/	-
	'00-'01		-		-
	'00.4- '01.1 (9)		282		-



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1. GIS

			GIS
	-	1	5

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	· ( )
	'97			523	/	2
( )	'00-'01	,	-	-	-	-

2) GIS

	( ) /			( )	(DB' / )	
	'97			523	/	-
	-			-		-
	'00-'01	,		-		-

--

1. GIS

		GIS	
		1	1

2. GIS

	'98.10	-		( , )	
GIS	'99.11	-			

3. GIS

1) GIS

				( )	/	( )
	'98-'00			1,553	/	

2) GIS

		( ) /			( ) (DB/ / )	
	'98-'00			1,553	/	-
	'92.7-'94.4(21)			160	/	-
	'93.9-'95.3(18)			154	/	-
	'97.2-'98.6(16)			1,501	/	-
	'99.11-'00.9(10)		-	134		-
	'99.11-'00.9(10)		-	-		-

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1. GIS

			GIS
	-	1	2

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	( )
	'98			3,650	/	-

2) GIS

	( )	/		( )	(DB' / )	
	'98			3,650	/	-
	'99.1- '99.12 (9)			19	/	-
	'99.10- '99.12 (3)			4	/	-

--

1. GIS

			GIS
	-	1	4

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	( )
	'95-'00			1,389	/	2

2) GIS

	( ) /			( ) (DB' / )	
	'96			1,369 /	-
	'98.7- '99.6 (12)			/	-



1. GIS

			GIS
	-	1	3

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	( )
	'96-'00			1,944	/	2

2) GIS

	( )	/		( )	(DB/ / )	
	'96-'00			1,944	/	-
	'99.7-'00.4(9)			70	/	-
	'92.11-'97.9(58)			1,445	/	-

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1. GIS

			GIS
	-	1	1

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	( )
	'98			208	/	2

2) GIS

	( )	/		( )	/ (DB)	
	'98			208	/	-

--

1. GIS

			GIS
	-	1	1

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	.
				( )	/	( )
	'99-'00			839	/	-

2) GIS

	( )	/		( )	/	(DB)
	( )	/		( )	/	( )
	'99-'00			839	/	-



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1. GIS

			GIS
	-	1	3

2. GIS

	'98.10	-		(      ,      )
	'00.1	-		,      US

3. GIS

1) GIS

				(      )	/	· (      )
	'97			39	/	-

2) GIS

	(      )	/		(      )	(DB/ /      )	
	'97			39	/	-





1. GIS

			GIS
	-	1	4

2. GIS

	'98.9	-		( , )
(US)	'99.9	-		, US

3. GIS

1) GIS

				( )	/	( )
	'98-'99			2,555	/	2
( )	'00-'01			-	-	-

2) GIS

	( )	/		( )	(DB/ )	
	'98-'99			2,555	/	-
	'99.1-'99.9			734	/	-
/	'01-'02			4,254		-
	'00-'01			-	-	-



1. GIS

			GIS
	-	1	3

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	( )
	'96-'99			594	/	2
( )	'99-'00			-	-	-

2) GIS

	( )	/		( )	(DB/ / )	
	'96-'99			594	/	-
	'99.3-'00.2(12)			-	/	-
	'99.3-'00.2(12)			-	/	-
	-		-		/	-

--

1. GIS

			GIS
	-	1	2

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	( )
	'98			154	/	2 3

2) GIS

	( )	/		( )	(DB/ )	
	'98			154	/	-
	'99-'00			57		-
	'99-'00			57		-
	'00			57		-
	'99-'00			-	/	-
,	'99-'00			-	/	-

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1. GIS

			GIS
	-	1	3

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	.
	'98			392	/	( ) 2 3

2) GIS

	( )	/		( )	(DB/ )	
	'98			392	/	-
	'95-'04			80		-

--

1. GIS

			GIS
	-	1	1

2. GIS

	'98.10	-		(      ,      )

3. GIS

1) GIS

				(      )	/	(      )
	'98			76	/	3

2) GIS

	(      )	/		(      )	(DB' / )	
	'98			76	/	-



1. GIS

			GIS
	-	1	2

2. GIS

	'98.10	-		( , )
	'00.2	-		

3. GIS

1) GIS

				( )	/	.
				( )	/	( )
	'97			2,964	/	1

2) GIS

	( )	/		( )	(DB/ )	
	'97			2,964	/	-
	'99.6- '00.2(8)			138	/	-





1. GIS

			GIS
	-	1	1

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	( )
	'97			159	/	2
( )	'99-'00		-	-	-	-

2) GIS

	( )	/		( )	(DB/ )	
	'97			159	/	-
	'99.7-'00.7(12)			-	-	-

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1. GIS

			GIS
	-	1	1

2. GIS

	'98.10	-		(      ,      )

3. GIS

1) GIS

				(      )		(      )
	'98			256	/	2

2) GIS

	(      )	/		(      )	(DB' /      )	
	'98			256	/	-



1. GIS

			GIS
	-	1	1

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	.
	'98			515	/	1

2) GIS

	( )	/		( )	(DB/ )	
	'98			515	/	-
	'97.12				-	-

--

1. GIS

			GIS
	-	-	-

2. GIS

	'98.10	-	-	( , )

3. GIS

1) GIS

				( )	/	.
				( )		( )
	'98-'01	-		2,400		2

2) GIS

	( )	/		( )	(DB' / )	
	'98-'01	-		2,400		-

--

1. GIS

			GIS
-	-	-	-

2. GIS

	-	-	-	-

3. GIS

1) GIS

				( )	/	· ( )
	-	-	-	-	-	-

2) GIS

	( )	/		( )	(DB/ )	
-	-	-	-	-	-	-



1. GIS

			GIS
	-	1	1

2. GIS

	'98.10	-		( , )

3. GIS

1) GIS

				( )	/	· ( )
	'94			83	/	-

2) GIS

	( )	/		( )	(DB/ )	
	'94			83	/	-

--

1. GIS

			GIS
	-	1	1

2. GIS

	-	-	-	-

3. GIS

1) GIS

				( )	/	· ( )
	'00			148		-

2) GIS

	( )	/		( )	(DB/ )	
	'00			148		-

--

1. GIS

			GIS
	-	1	1

2. GIS

	-	-	-	-

3. GIS

1) GIS

		GIS <sup>1)</sup>		( )	/	· ( )
	'00			426		-

2) GIS

	( )	/		( )	(DE/ )	
	'00			426		-



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1. GIS

			GIS
	-	-	-

2. GIS

-	-	-	-	-

3. GIS

1) GIS

				( )	/	· ( )
	'97			233	/	-
( )	'00-'01		-	-		-

2) GIS

	( )	/		( )	(DB/ )	
	'97			233	/	-
	-			340	/	-
	'00-'01			-		-

--

1. GIS

			GIS
		1	1

2. GIS

	'88	-		

3. GIS

1) GIS

				( )	/	.
				( )		( )
	'98			353	/	

2) GIS

	( )	/		( )	(DB/ )	
	'98			353	/	-

--

1. GIS

			GIS
	-	1	2

2. GIS

-		-	-	-

3. GIS

1) GIS

				( )	/	· ( )
	'97			215	/	-

2) GIS

	( )	/		( )	(DB/ )	
	'97			215	/	-



1. GIS

			GIS
	-	1	2

2. GIS

-	-	-	-	-

3. GIS

1) GIS

				( )	/	( )
-	-	-	-	-	-	-

2) GIS

	( )	/		( )	(DB/ / )	
-	-	-	-	-	-	-

--

1. G IS

			GB
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	97			80	/	-

2) G IS

	( )	/		( )	DB/	( )
	97			80	/	-
	97.12			221	/	-



1. G IS

			GB
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			193	/	-

2) G IS

	( )	/		( )	DB/ /	( )
	98			183	/	-
	-			24	/	-

--

1. G IS

			G B
-	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	95	-		50	/	-

2) G IS

	( )	/		( )	ØB/	)
	95	-		50	-	-

--

--

1. G IS

			G B
(	-	1	4

2. G IS

	93.12	94.10-		-
	96.1	-		

3. G IS

1) G IS

				( )	/	( )
	94-00			1070	/	5
( )	98-00		-	-	-	-

2) G IS

	( ) /			( )	DB /	( )
	94-00			1070	/	-
	98.12- 99.10			103	/	-
	98.12- 99.9			334	/	-
	-			-		-



--

1. G IS

			G B
	-	1	2

2. G IS

가	00	-	-	-

3. G IS

1) G IS

				( )	/	( )
	00.10			682		-

2) G IS

	( )	/		( )	0B/	/	( )
	00			692			-

--

1. G IS

			G 6
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	95.12-			215	/	-
( )	99-00		-	-	-	-

2) G IS

	( )	/		( )	ØB/	( )
	95.12-			215	/	-
	-996			1000		-

--

--

1. G IS

			G S
	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	97-98			1,453	/	5

2) G IS

	( )	/		( )	DB/ /	)
	97-99			1,453	/	-
	992-002			195	/	-

--

1. G IS

			GB
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			236	/ -	-

2) G IS

	( )	/		( )	DB/	( )
	98			236	/ -	-

--

1. G IS

			G Б
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( . )
	98			282	/ -	

2) G IS

	( )	/		( )	DB/	)
	98			282	/ -	-

--

1. G IS

			Г Б
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	99			282	/ -	-

2) G IS

	( ) /			( )	DB/ /	)
	98			282	/ -	-

--

1. G IS

			G S
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			225	/ -	-

2) G IS

	( ) /			( ) (DB/ / )		
	98			225	/ -	-

--

1. G IS

			Г Б
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	-	-	-	-	-	( )

2) G IS

	( )	/		( )	ØB/	)
	-	-	-	-	-	-



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1. G IS

			GB
	-	1	4

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			800	/	3
( )	98-' 00		-	800	-	-

2) GIS

	( ) /		( ) (DB/ )	
	99		800	/ -
	98.12 -002		431	/ -
	006- 02.12		206	-
	99- 00		-	-
/	02- 04	-	173	-
/	97- 03	-	195	-
	03- 04	-	217	-
/	04- 05	-	260	-
/	04- 05	-	260	-
	05- 06	-	130	-



1. G IS

			G S
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( . )
	98			100	/	-
( )	00-01		-	-	-	-

2) G IS

	( )	/		( )	DB/ /	( )
	98			359	/	-
	96.10 -978			10	/	-
	96.10 -978			10	/	-
	96.10 -978			80	/	-
	00-01			-		-



1. G IS

			GB
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	968			486	/	
( )	00-01		-	-	-	-

2) G IS

	( )	/		( )	DB/	( )
	966			486	/	-
	97.12-993	-		456	/	-
	00-01			-	-	-

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1. G IS

			G B
-	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	96	-		168	/	-

2) G IS

	( )	/		( )	DB/	( )
	96	-		168	/	-



1. G IS

			G Б
	-	1	3

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( . )
	98			254	/	-
( )	00-01			-	-	-

2) G IS

	( )	/		( )	DB/	( )
	98			254	/	-
	00-01				-	-



1. G IS

			Г Б
	-	1	1

2. G IS

-		-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			200	/	-
( )	00 -01		-	-	-	-

2) G IS

	( )	/		( )	0B/ /	( )
	98			200	/	-
	-			-	-	-
	00- 01			-	-	-

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1. G IS

			G B
	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98 - 00			690	/	-
( )	99 - 00		-	-	-	-

2) G IS

	( )	/		( )	(DB/ / )	
	98-00			690	/	-
	99-00			-	-	-



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1. G IS

			G B
( )	-	1	2

2. G IS

G B	98	-		-

3. G IS

1) G IS

				( )	/	.
	96-98			727	/	3

2) G IS

	( ) /		( ) (DB/ / )	
	96-99		727 /	-
	97-01		193	-
	97-01		223	-



1. G IS

			Г Б
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	96 -98			377	/	-
( )	00 -01		-	-	-	-

2) G IS

	( )	/		( )	DB/ )	
	96-98			377	/	-
	00-01			1,000	-	-

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1. G IS

			G Б
	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	02			1800		-

2) G IS

	( )	/		( )	DB/	( )
-	-	-	-	-	-	-

--

1. G IS

			G Б
	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( . )
	98.12 - 99.10			538	/	-
( )	99 - 00		-	-	-	-

2) G IS

	( )	/		( )	DB/ / )	
	99			538	/	-
	99-00			-	-	-

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1. G IS

			G B
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
						( )
	96-97			734	/	3

2) G IS

	( )	/		( )	DB/	)
	96-97			734	/	-
	99,1-999			298	/	-

--

1. G IS

			G Б
-	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
-	-	-	-	-	-	-

2) G IS

	( )	/		( )	(DB/ / )	
-	-	-	-	-	-	-

--

1. G IS

			G B
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	98			540	/	5

2) G IS

	( )	/		( )	ØB/	)
	98			540	/	-

--

1. G IS

			G Б
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			508	/	1

2) G IS

	( )	/		( )	DB/	( )
	98			508	/	-



--

1. G IS

			Г Б
( )	-	1	3

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	98			430	/	( )
						-

2) G IS

	( )	/		( )	DB/	/
	98			403	/	-

--

1. G IS

			G S
-	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	99	-		320	/	( )

2) G IS

	( )	/		( )	DB/	/
	98	-		320	/	-

--

1. G IS

			G Б
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.( )
	98			300	/	-

2) G IS

	( )	/		( )	(DB/ / )	
	98			300	/	-



1. G IS

			GS
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	97			106	/	5

2) G IS

	( )	/		( )	DB/	( )
	97			106	/	-
	03.1- 03.12			250		-

--

1. G IS

			GS
( )	-	1	2

2. G IS

	003	-		-

3. G IS

1) G IS

				( )	/	.
	97-98			790	/	( )
						-

2) G IS

	( )	/		( )	DB/	/
	97-98			790	/	-

--

1. G IS

			GS
	-	1	2

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
-	-	-	-	-	-	( )

2) G IS

	( )	/		( )	DB/	/
-	-	-	-	-	-	-

--

--

1. G IS

			GB
	-	1	3

2. G IS

1	GB	93	97		DB , ,
2	GB	96	-		, , , , ,

3. G IS

1) G IS

				( )	/	( . )
	93-97			1317	/	3

2) GIS

	( ) /			( ) (DB/ / )	
	93-97			1317	/ -
	979-984			113	/ -
	99.1-999			69	/ -
	93.12-952			1393	/ -



--

1. G IS

			GB
	-	1	7

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( . )
	99			472	/	-

2) G IS

	( ) /			( ) (DB/ / )	
	99			472 /	-
	-	-		-	-
	-	-		-	-
	-	-		-	-



1. G IS

			G Б
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	97			427	/	-

2) G IS

	( )	/		( )	QB/ / ( )	
	97			427	/	-
	-			523		-
	98.10			752	/	-
	-	-		69		-

--

1. G IS

			G B
( )	-	1	4

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( . )
	99			472	/	-

2) G IS

	( )	/		( )	DB/ / )	
	99			472	/	-



1. G IS

			G 6
	-	1	

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	99			355	/	-

2) G IS

	( )	/		( )	DB/	( )
	99			355	/	-

--

1. G IS

			G S
	-	1	5

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( . )
	99			623	/	-

2) G IS

	( )	/		( )	ØB/ / )	
	99			623	/	-



1. G IS

			GS
-	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	979			350	/	-
( )	99-00		-	-	-	-

2) G IS

	( ) /		( ) (DB/ / )	
	978		538	/
	99-00		-	-

--

1. G IS

			G B
-	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	.
	984	-		112	/	-
( )	99-00		-	-	-	-

2) G IS

	( )	/		( )	DB/	/
	984	-		112	/	-

--

1. G IS

			G Б
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			132	/	3-5

2) G IS

	( )	/		( )	DB/	/	( )
	98			132		/	-



--

1. G IS

			G Б
-	-	-	-

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98	-		48	/	-

2) G IS

	( )	/		( )	DB/	( )
	98	-		484	/	-

--

--

1. G IS

			GB
GB	-	1	5

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98	GB		615	/	3
( )	99-00		-	-	-	-

2) G IS

	( )	/		( )	GB/ / )	
	98	GB		615	/	-
	99-00			-	-	-
	99.1-002			526	/	-



1. G IS

			GS
	-	1	1

2. G IS

-	-	-	-	-

3. G IS

1) G IS

				( )	/	( )
	98			515	/	-
( )	00-01		-	-	-	-

2) G IS

	( )	/		( )	DB/	( )
	98			515	/	-
	00-01			-	-	-

< 3 > G IS

?  
가  
가 (NG IS) NG IS  
GIS  
,  
GIS  
,  
2000. 10.  
GIS

: ( ) 431-712 1591-6  
GIS  
: (031) 380-0415, : (031) 380-0475  
: jpark@krihs.re.kr

		/	
e-mail			

1. GIS ?

( )

GIS (GIS DB

)

GIS (GIS DB )

GIS (GIS DB

)

1-1 1-4

1-1. GIS 가

? ( )

GIS

GIS 가

GIS

GIS

; ( : )

1-2. GIS ?

( )

2-3 GIS

2-3 GIS 가

1 GIS 가

13. GIS

가

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14.

GIS

가

가

? ( )

( 가)

( )

2.

(GIS)

? ( )

GIS

GIS ( : )

GIS

2-1 11-10 2 ,

2-1. GIS 가 ?  
( )

2-2. 가 GIS ( , 가,  
가 ) ? ( )

2-3. GIS 가 GIS  
가 ? ( )

2-4. GIS  
? ( : GIS 20% 가 80% -> 20 : 80  
)  
( )

2-5. GIS ? ( )  
5 4 3 2 1

3. GIS 가 ? ( )

4. GIS 가 ? ( )

5. , ,  
가 GIS ? ( )

6. GIS  
가 ? ( )

7. GIS 가 가  
? ( )

가  
( : )



8. GIS 가  
? ( )

DB

H/W SW

( : )

9. GIS 가  
? ( )

( , , , )

( )

( , , )

( , ...)

( , DB , , H/W SW )

( , )

10

11

G IS

G IS

.가

10.

G IS

10- 1.	가				
10- 2.	/				
10- 3.	가				
10- 4. G IS					
10- 5. G IS					
10- 6. G IS					
10- 7. G IS					
10- 8. G IS					
10- 9. G IS					
10-10. G IS					
10-11. G IS	가				
10-12. G IS					

11.

G IS

?

11- 1.					
11- 2.					
11- 3.					
11- 4.					
11- 5.           가					
11- 6.					
11- 7.					
11- 8. G IS					
11- 9.           가					
11-10.           가					

12. (GIS)  
? ( )

13. GIS , .  
GIS , ( ) .

	(v)
( : )	

14. ? ( )  
20 20-29 30-39 40-49 50

15. ? ( )

,

( )

16. ? ( )

1 - 3

4 - 5

6 - 7

8 - 9

17. ? ( )

18. 가 ? ( )

19. 가 ? ( )

20 가  
( )

-

. -

< 4 > G IS

1

1 ( )

(G IS)

(Software Engineering)

2 ( )

2

3 ( )

가 가

4 ( )

1. 가
2. 가
3. GIS 가
4. GIS 가 가

5 ( )

1. 가
- 2.
- 3.
- 4.
- 5.

6 ( GIS ) GIS

1. 가 GIS
- 2.

3. G IS

4. G IS IT (Information Technology)

7 ( G IS )

1. G IS

2.

3. G IS

4. 가

8 ( )

가

1. G IS

2. G IS

3.

4. G IS

5.

9 ( )



3 GIS (ISP)

10 ( )

GIS

11 ( )

1.

2. GIS

3. GIS

4.

5.

12 ( )

1.

2. , , ( )

3.

13 ( )

GIS

GIS

GIS

14 ( )

15 ( )

16 ( ) , , ( )  
( )

17 ( )

18 ( )

19 ( ) .GIS

가

20 ( )

21 ( )

22 ( )

가

1.

2.

3.

23 ( ) II

1.

2.

3. GIS

4. GIS

24 ( )

25 ( ) , , ,

가

26 ( )

1. GIS

2.

3. , , ,

-

- H/W ( / )

-

4.

5.

-

-

1)

2)

3)

4)

6. (Π)

-

- : , , , , ,

-

-

27 ( )

(Business Activity)

.

,

,

.

28 ( )

.

1.

2. 가

.

3.

.

4.

5.

가 가 .

29 ( )

(Business Function)

,

.

.

30 ( )

.

,

,

.

31 ( )

가

( Fundamental Entity ) , ( Associative Entity ) , ( Attribute Entity )

32 ( )

33 ( )

34 ( )

35 ( )

36 ( )

37 ( )

38 ( )

39 ( )

40 ( )

. 가

41 ( )

42 ( )

4 G IS

43 ( ) (ISP)

1. , ,

2. , , , , , , ,

44 ( )





4. , , ,

48 ( )

1. 가 (Consultant),

2. , , ,

49 ( )

1.

- , - , DB

2. , .

50 ( , )

1. ,가 , .

51 ( )

52 ( )

53 ( , ) , ,

1.

- , ,

54 (GIS )

55 ( ) .

56 ( ) .

57 ( ) .

1.

- , , , , client/server,

2.

3.

- , , Main memory, Disk Size , CPU Spec.

4.

58 ( ) .

1.

- , ,

-

-

-

2.

3.

4.

59 ( ) .

5 GIS

60 ( )

- 1.
- 2.
3. ( , , )
4. ( , 가 , )
- 5.

third party

GIS ( : )

6. 가

61 ( ) .

1.

2.

3.

4.

-

- GIS

-

-

-

-

-

- 가

-

-

-

- (Document, )

-

가

62 ( )

1. H/W, SW ,
- 2.

가

3.

6

63 ( )

.GIS

가

가

가

GIS

가

64 ( )

1. GIS
2. GIS 가
3. HW, SW DB GIS 가
4. 가
5. GIS 가
6. GIS 가
7. ( )
8. 가
9. staff

65 ( ) 가

01.

ISP

02.

258

03. ( )

ISP ,

04.

( )]

[ ,

05.

06.

SM ]

[ HW ,

07.

[ , ]

08.

Custom izing

가

가

09. 가  
RFP, , ISP ,

[ , , ] 2가

10. Prototype

ISP 가

11. ( )

ISP

가

12.

가가

13.

( )



14.

·  
· ( : Actor)  
· ( )  
· (Phase)  
· (Behavior)

15.

( )

16.

17.

· ,  
· (Operation)  
(A tribute)  
(Inheritance) ,

18.

19.

가 ( )

20.

, ,

21.

, ,

22.

GUI

, , , , ,

가

23.

, , , , DBM S

24.

25.

,

26.

27.

[ ] 가

28.

가 ,

가 .

262

29.

30.

31.

32.

33.

34.

35.

36.

37.

가

( )

H/W, S/W

가

Custom ization

38.

( )

39.

( )

40.

41.

42.

( ) ,

( )

( )

43.

( )

44.

45.

46.

47.

48.

49.

50.

51.

52.

53.

가

54.

55.

66 ( )

/

가

67 ( )

68 ( )

69 ( ) 가 Help Desk

1 1

, , 가

70 ( )

1. , 가 ,

2. ,

7

71 ( )

, , ,

72 ( ) , , , , ,

73 ( )

1.

2.

8

74 ( )

가가 가

가

(S/W , )

75 ( )

76 ( )

W orkthrough

77 ( 가 )

,

,

,

,

.

9

78 ( )

1.

2. Walkthrough

,

,

,

.

3. (Demonstration)

가 .

4. (Analysis)

5. (Inspection)

268



6. ( 가 )

, , 3가 ( , , )  
가

Feedback

79 ( )

1. ( Testing )

가

80 ( )

가

1.

2.

3. , , ,

4.

5.

6.

81 ( ) ,

1. ( )

가  
2. ( )

3. (Certification)