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최 종  
연구보고서

## 농업수리시설물 관리를 위한 정보시스템 개발

Development of the Information System for Management  
of Irrigation Facilities

1998. 12

연구기관  
전북대학교

농 립 부

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1.

가

2.

GIS



2.

(WISIF)

가

# **SUMMARY**

## **. Subject**

Development of the Information System for Management of Irrigation Facilities

## **. Objectives and Importance of research**

### 1. Importance of research

The management method of the irrigation facilities are different with management agency, type, user, purpose of use, and the accuracy of data applied for the grasp of present situation and maintenance is of a low grade.

Therefore the information management system is needed to classify and systematize the data.

### 2. Objectives

The purpose of this study is to prepare the digital map of Chonbuk FLIA district, to construct the database of the irrigation facilities, to develop the information system for the management using World Wide Web, to supply and be able to use easily to whomever needs it.

## **. Research contents and scopes**

The research contents are collection and classification of the irrigation facilities data, construction of the data management system and the spatial

analysis system, establishment of the information system for the irrigation facilities management, supply and utilization of the system.

## **. Research results and utilization**

### **1. Research results**

(1) The analysis of characteristics, feasibility, user's demand, functions of system are carried out to design the system.

(2) The basic materials of irrigation facilities are investigated, and the FLIA data for this system are collected and classified through on-site survey and confirmation.

(3) The digital layer maps including basic geographic map, dam and reservoir, irrigation facilities, FLIA district and office, hydrologic observation stations are drawn up within Chonbuk FLIA district.

(4) The data management system has the functions to input, revise, delete, refer the database on the irrigation facilities, and the system is constructed about dam and reservoir, irrigation facilities, hydrologic observation stations, FLIA district with geographic data using Oracle database software.

(5) Web-based Information system are described for the functions and application of WISIF such as input, revision, update, query and refer, output, analysis, statistics, and other services.

### **2. Utilization**

This study is carried out to prepare the digital map of Chonbuk FLIA district, construction of database of the irrigation facilities, and to develop the

information system for the irrigation facilities management using World Wide Web, to supply and be able to use easily to whomever needs it.

The developed information system for the management of irrigation facilities from this study can supply the accurate data for the inter-change of informations by management agency, manager, user, and especially this system will be contributed to enlarge and utilize the database for irrigation facilities, water resources management, environmental management, maintenance by FLIA and local governments in Chonbuk province.

# CONTENTS

<b>Chapter 1. Introduction .....</b>	<b>1</b>
1.1 Backgrounds	
1.2 Necessities	
1.3 Objectives	
1.4 Research trend	
1.5 Contents and scopes	
1.6 Expected effects and utilization	
1.7 Research periods	
1.8 Study team	
<b>Chapter 2. System analysis and design .....</b>	<b>15</b>
2.1 Introduction	
2.2 Analysis of system characteristics	
2.3 Analysis of system feasibility	
2.4 Analysis of user's demands	
2.5 Analysis of function and specification	
<b>Chapter 3. Data collection and classification .....</b>	<b>35</b>
3.1 Introduction	
3.2 Data collection	
3.3 On-site survey and confirmation	
3.4 Data classification system	
<b>Chapter 4. Spatial data system .....</b>	<b>55</b>
4.1 Introduction	



4.2 System composition	
4.3 Map projection and index system	
4.4 Construction of graphic data	
4.5 Spatial data system	
<b>Chapter 5. Data management system .....</b>	<b>94</b>
5.1 Introduction	
5.2 Analysis of system environments	
5.3 System structure	
5.4 Analysis and design of Input and output data	
5.5 Design and construction of database	
5.6 Design of function and code	
5.7 System design	
5.8 Web home page	
<b>Chapter 6. Web-based information system for management of irrigation facilities .....</b>	<b>125</b>
6.1 Introduction	
6.2 Structure of WISIF	
6.3 Geomedia Web Map	
<b>Chapter 7. Use of WISIF system .....</b>	<b>154</b>
7.1 Introduction	
7.2 Application	
<b>Chapter 8. Summary and conclusion .....</b>	<b>176</b>
8.1 Summary	
8.2 Conclusion	

<b>References</b> .....	180
-------------------------	-----

## Appendices

- A. User's manual
- B. Abbreviations
- C. Source code of WISIF system
- D. Source code of database management system

<b>1</b>	.....	1
1	.....	1
2	.....	2
1.	.....	2
2.	.....	2
3.	.....	3
3	.....	3
4	.....	4
1.	.....	4
2.	.....	6
3.	.....	10
5	.....	11
1.	.....	11
2.	.....	11
3.	.....	11
4.	(Prototype) .....	12
5.	.....	12
6	.....	12
1.	.....	12
2.	.....	13
7	.....	13
8	.....	14
<b>2</b>	.....	15
1	.....	15

2	.....	15
1.	.....	16
2.	.....	20
3.	.....	21
4.	.....	22
5. GIS	.....	24
3	.....	32
1.	.....	32
2.	.....	32
3.	.....	33
4	.....	33
1.	.....	33
2.	.....	33
3.	.....	33
4.	.....	33
5	.....	34
1.	.....	34
2.	.....	34
3.	.....	34
4.	.....	34
<b>3</b>	.....	35
1	.....	35
2	.....	36
1.	.....	37
2.	.....	37
3	.....	53
1.	.....	53

2.	.....	53
3.	.....	53
4	.....	53
<b>4</b>	.....	55
1	.....	55
1.	.....	55
2.	.....	57
2	.....	59
1.	.....	59
2. (DB)	.....	59
3.	.....	60
4.	.....	61
5.	.....	62
3	.....	64
1.	.....	64
2. (Index)	.....	65
4	.....	69
1.	.....	69
2.	.....	69
3.	.....	75
4.	.....	84
5	.....	89
1.	.....	89
2.	.....	90
<b>5</b>	.....	94
1	.....	94

2	.....	94
1.	.....	94
2.	.....	95
3.	.....	95
3	.....	95
4	.....	97
1.	, / .....	97
2.	.....	98
3.	.....	98
4.	.....	99
5	.....	99
6	.....	107
1.	.....	107
2.	.....	110
7	.....	115
8	.....	116
1.	, , / .....	119
2. SELECT	.....	122
3. SQL	.....	123
4.	.....	124
<b>6</b>	.....	125
1	.....	125
2 WISIF	.....	125
1.	.....	125
2.	.....	131
3	(GeoMedia web map : GWM) .....	138
1. ActiveCGM	.....	139

2.	.....	140
3.	.....	141
4. GWM	.....	141
5. MDF	.....	146
<b>7</b>	<b>WISIF</b> .....	154
1	.....	154
2	.....	154
1. WISIF	.....	154
2.	, , , .....	159
3.	.....	160
4.	.....	160
5.	.....	161
6.	.....	172
<b>8</b>	.....	176
1	.....	176
1.	, .....	176
2.	.....	176
3.	.....	177
4.	.....	177
5.	.....	177
6.	.....	178
7. WISIF	.....	178
2	.....	179
	.....	180

<	<b>A&gt; WISIF</b>	.....	188
<	<b>B&gt;</b>	.....	207
<	<b>C&gt; WISIF</b>	<b>Source code</b> .....	209
<	<b>D&gt;</b>	<b>Source code</b> .....	245



< 2- 1>	.....	22
< 2- 2>	.....	24
< 2- 3> GIS	.....	28
< 2- 4> GIS	.....	29
< 2- 5> GIS	.....	30
< 3- 1>	.....	36
< 3- 2>	.....	38
< 3- 3>	.....	40
< 3- 4>	.....	44
< 3- 5>	.....	45
< 3- 6>	.....	46
< 4- 1>	.....	56
< 4- 2>	(1:250,000) .....	57
< 4- 3>	(1:250,000) .....	58
< 4- 4>	.....	60
< 4- 5>	.....	61
< 4- 6>	.....	62
< 4- 7>	.....	64
< 4- 8>	(1:25,000) .....	68
< 4- 9>	.....	82
< 4- 10>	.....	83
< 5- 1>	.....	95
< 5- 2>	.....	103
< 6- 1> IDC	.....	129

< 1- 1> NGIS	.....	7
< 2- 1>	.....	23
< 4- 1>	.....	63
< 4- 2> 1:200,000	.....	66
< 4- 3> 1:50,000	.....	67
< 4- 4> 1:25,000 (356041)	.....	67
< 4- 5> 1:50,000	.....	68
< 4- 6>	.....	85
< 4- 7>	.....	85
< 4- 8>	.....	86
< 4- 9>	.....	86
< 4- 10>	.....	87
< 4- 11>	.....	87
< 4- 12>	.....	87
< 4- 13>	.....	87
< 5- 1>	.....	96
< 5- 2>	.....	96
< 5- 3> 1	.....	97
< 5- 4> 1	.....	98
< 5- 5> 2	.....	98
< 5- 6> 3	.....	98
< 5- 7> 4	.....	99
< 5- 8> 2	.....	99
< 5- 9>	.....	100

< 5- 10>	ER(Entity- Relational) Diagram .....	100
< 5- 11>	.....	101
< 5- 12>	ER CDM .....	102
< 5- 13>	Storage Manager .....	104
< 5- 14>	Security Manager .....	105
< 5- 15>	SQL Net Easy Configuration .....	106
< 5- 16>	.....	107
< 5- 17>	.....	108
< 5- 18>	/ .....	108
< 5- 19>	SQL .....	109
< 5- 20>	SQL .....	109
< 5- 21>	.....	110
< 5- 22>	GetPwd.html .....	111
< 5- 23>	ChkPwd.html .....	111
< 5- 24>	Display.html .....	112
< 5- 25>	JavaScript .....	117
< 5- 26>	.....	117
< 5- 27>	.....	118
< 5- 28>	( ) .....	119
< 5- 29>	.....	119
< 5- 30>	.....	120
< 5- 31>	.....	120
< 5- 32>	가 .....	121
< 5- 33>	/ .....	121
< 5- 34>	SELECT .....	122
< 5- 35>	SELECT .....	122
< 5- 36>	SQL .....	123
< 5- 37>	SQL .....	123

< 5- 38>	.....	124
< 5- 39>	.....	124
< 6- 1>	.....	126
< 6- 2> ISAPI	.....	127
< 6- 3>	Canal.idc/htx .....	128
< 6- 4>	.....	131
< 6- 5> Database System DSN	.....	133
< 6- 6> MGE	.....	136
< 6- 7> Web	.....	142
< 6- 8> WWW 가	.....	143
< 6- 9> Cache 가	.....	143
< 6- 10> Geomedia Web Map Scripts	.....	144
< 6- 11> WISIF 가	.....	145
< 6- 12> WISIF Script 가	.....	145
< 6- 13> GWM Administrator	.....	146
< 6- 14> Map Type	.....	147
< 6- 15> Data Source	.....	147
< 6- 16> Default Display	.....	147
< 6- 17> Display	.....	148
< 6- 18> Feature Set	.....	148
< 6- 19> Feature View	.....	149
< 6- 20> Autoscale rule	.....	149
< 6- 21> Threshold	.....	150
< 6- 22> Display Set	.....	151
< 6- 23> Display property	.....	151
< 6- 24> MDF	.....	152
< 6- 25> GWM	.....	153
< 7- 1> WISIF	.....	155

< 7- 2>	WISIF wisif.htm .....	155
< 7- 3>	WISIF .....	156
< 7- 4>	.....	156
< 7- 5>	.....	157
< 7- 6>	.....	158
< 7- 7>	.....	158
< 7- 8>	.....	159
< 7- 9>	.....	159
< 7- 10>	WISIF .....	162
< 7- 11>	( ) .....	163
< 7- 12>	( , 가, / , ) ....	163
< 7- 13>	( ) .....	164
< 7- 14>	.....	164
< 7- 15>	.....	165
< 7- 16>	.....	165
< 7- 17>	가 .....	166
< 7- 18>	, .....	167
< 7- 19>	Select .....	167
< 7- 20>	Select .....	168
< 7- 21>	Select .....	168
< 7- 22>	( ) .....	169
< 7- 23>	.....	170
< 7- 24>	.....	170
< 7- 25>	( ) .....	171
< 7- 26>	SQL .....	171
< 7- 27>	SQL .....	172
< 7- 28>	WISIF BBS FAQ .....	173
< 7- 29>	WISIF BBS FAQ .....	173

< 7-30> WISIF BBS FAQ .....	174
< 7-31> .....	174
< 7-32> WISIF FTP .....	175

1

1

2

3

4

5

6

7

8

1

(Geographic Information System : GIS)

가 가

가

. GIS

가

. GIS가

GIS 가

GIS

80

가

가

가

(National Geographic Information System : NGIS)

가 . 95 5

NGIS

8

가

, GIS

가 .  
, , .  
, , ,  
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, , ,  
,  
가 .

2

1.

가. , , ,  
, , ,  
가 .

. , , .  
.

(Tool)

. , , ,  
, .

2.

가. • ,



3.

가.

가

가

가

3

가

GIS

가

(Web)

, 가 •

4

1.

가.

1950

1960

. 1967

GEO CODING SYSTEM(

)

가

GIS

TIGER(Topologically Integrated Geographic Encoding and Referencing System) 1/100,000 가

( , , )

. 1980

GIS

가

1988

2 9,600

80% GIS

가  
Tomlinson

CGIS(The Canadian Geographic Information System)가  
GIS가 . CGIS 1971 가  
TIGER GIS

GIS 1968 1974 MESH

GIS

가 . 가 GIS  
1985 UIS II

가 GIS가

가 가 ,

가

NGIS 가 , 1986

2.

80

GIS

가

가

GIS

. GIS

가

1995 NGIS

GIS

GIS

1995

( )

가

가

GIS

가

< 1- 1>

NGIS 1

2000

2 8

2001

2

가.

GIS

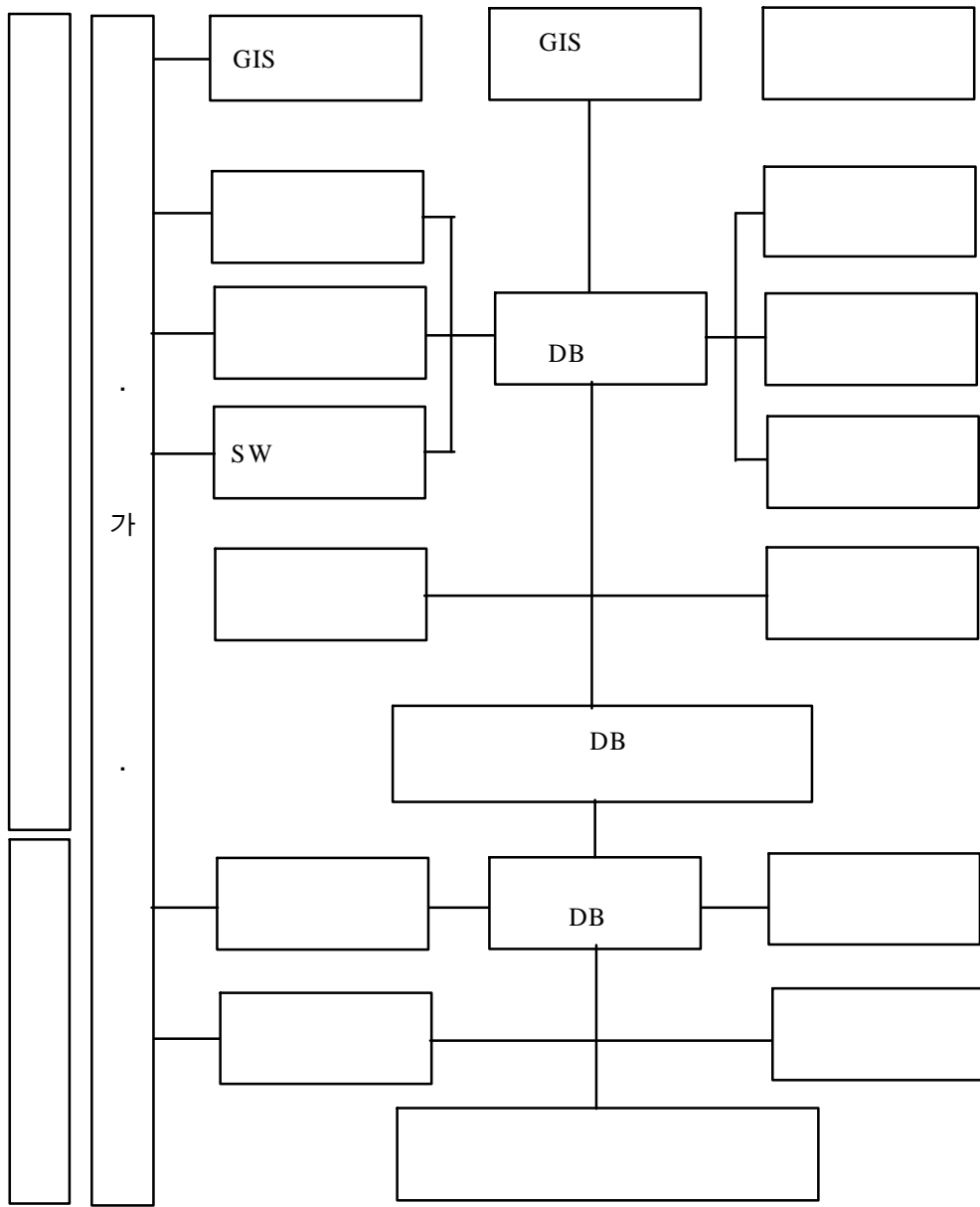
90

가

GIS

가

GIS



< 1-1 > NGIS

GIS

가 GIS

GIS

GIS

GIS

GIS

가

가

1/5,000, 1/25,000, 1/250,000

GIS

GIS

가

1987

1993

2001

NGIS

(1) (Digital map)

가

(X, Y, Z)

(2)

가

GIS

1:1,000 : (78 ) - 14,349

1:5,000 : ( 70,000km<sup>2</sup>) - 11,590

1:25,000 : ( 30,000km<sup>2</sup>) - 159

(3) 4  
, , ( 20m ) ,  
20m , ,  
가  
1:5,000 3  
1:25,000, 1:250,000 3 .

(4)  
가 3  
가 ,  
가 ,  
.

(5)  
가 , , ,  
1998  
.  
.  
1:5,000 3 4 , 1:1,000 1 2  
40% 가  
98  
가 .

3.  
GIS .



G7

‘GIS

GIS

(Layer)

GIS

5

1.

가.

( , , )

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( , )

2.

가.

.

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3.

가.

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GIS

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GIS

4. (Prototype)

가.

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5.

가.

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6

, , .

1.

가.

1)

(Prototype) .

2)

, , 가

3)

, , •

4)

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1)

2)

2.

가.

•가

7

1	:	1995	12	1	1996	11	30
2	:	1996	12	30	1997	12	29
3	:	1997	12	30	1998	12	29

8


2

1

2

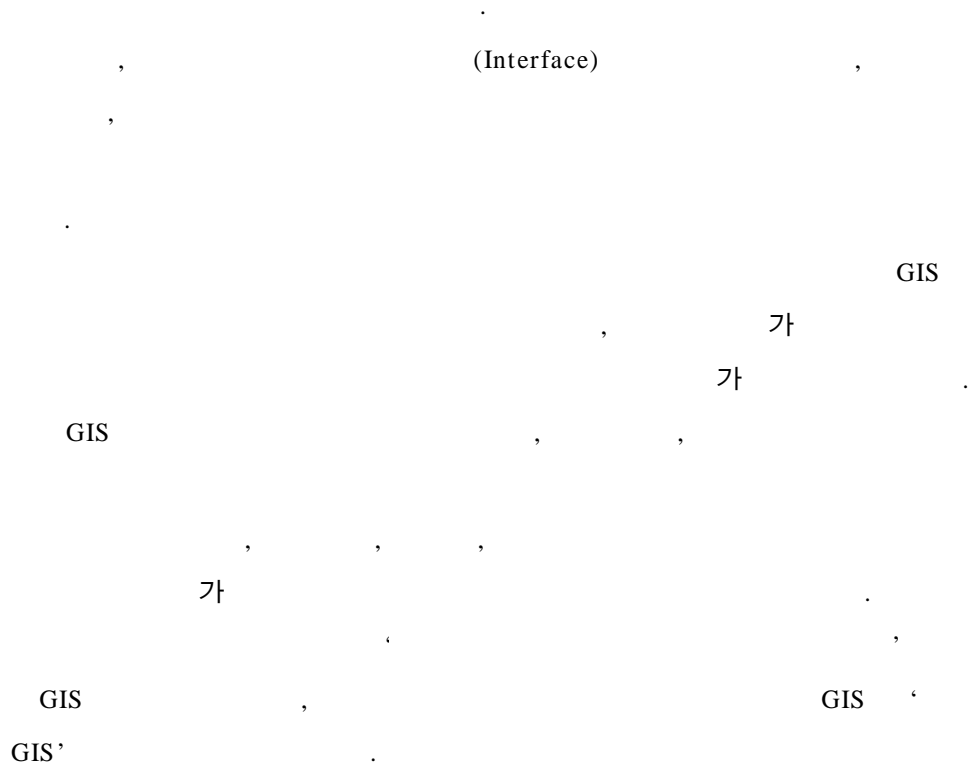
3

4

5

2

1



2

GIS

1.

가.

TCP/IP

ARPANET

NSFNET, NYSERnet

BITNET

DECnet

TCP/IP

Wide Area Network

(net)

80

90

80

2

가

130

5

가

가

PC

가

1964

(ARPA: Advance Research Project Agency)

UCLA-

4

ARPANET

GIS

GIS

FTP Web

, GIS  
 , GIS  
 , 가  
 . GIS  
 , GIS  
 , 가  
 , GIS / GIS  
 /  
 ,  
 GIS  
 , (Hyper linking)  
 . GIF JPEG  
 GIS  
 가 가  
 GIS GIS DBMS  
 가  
 GIS GIS  
 가 , ,  
 가  
 GIS 가  
 GIS 가  
 GIS 가  
 GIS 가



가 . GIS GIS  
GIS  
가 .

. GIS  
1) GIS

CGI(Common Gateway Interface)  
(Web Browser) GIS

가 , CGI  
GIS

가 , GIS 가 HTML 가  
. , CGI 가  
GIS 가  
가 . 가 .

GIS VISA(<http://www.visa.com/>)  
(ATM Locator) Yahoo(<http://www.proxi-mus.com/yahoo>) , MapQuest(<http://www.mapquest.com>) .

2) GIS  
GIS

. ActiveX Java .

가)

GIS

GIS

가

. ArcView Shapfile

CGM File

가 (<http://www.mapguide.com>)가 .

) ActiveX Control

가

GeoMedia

(<http://www.intergraph.com/iss/geomedia/>)가

가

HTML

<OBJECT>

GIS

)

GIS

(Java)

(Applet)

<APPLET>

, 가

가

가

가

,

. GIS  
GIS  
가 가 . 가  
GIS  
Zoom, Pan, Move  
가  
가 GIS  
가 GIS  
GIS  
(Synergy) 가 가

2.

3

가.

(Version up)

가

3.

### World Wide Web(WWW)

가. (Hardware)

1980년대 초, GIS는 주로 대형 메인프레임 컴퓨터를 사용하여 운영되었습니다. 그러나 1980년대 후반에 개인용 컴퓨터(PC)가 대중화되면서 GIS도 PC 기반으로 발전하기 시작했습니다. PC 기반 GIS는 사용자 인터페이스가 더 직관적이고, 데이터 처리와 시각화가 더 빠르며, 다양한 하드웨어 플랫폼에서 실행될 수 있는 유연성을 제공합니다. 또한, PC 기반 GIS는 네트워크를 통해 여러 사용자가 동시에 데이터를 공유하고 협업할 수 있는 환경을 조성할 수 있습니다. 이는 GIS의 접근성을 높이고, 다양한 분야에서 GIS를 활용하는 데 크게 기여했습니다.

< 2-1> < 2-1>

, PC 686 , (Scanner), Plotter(A0 Size),  
(Color Laser Printer), (Digital Camera), (Digitizer),  
(Mono Laser Printer)

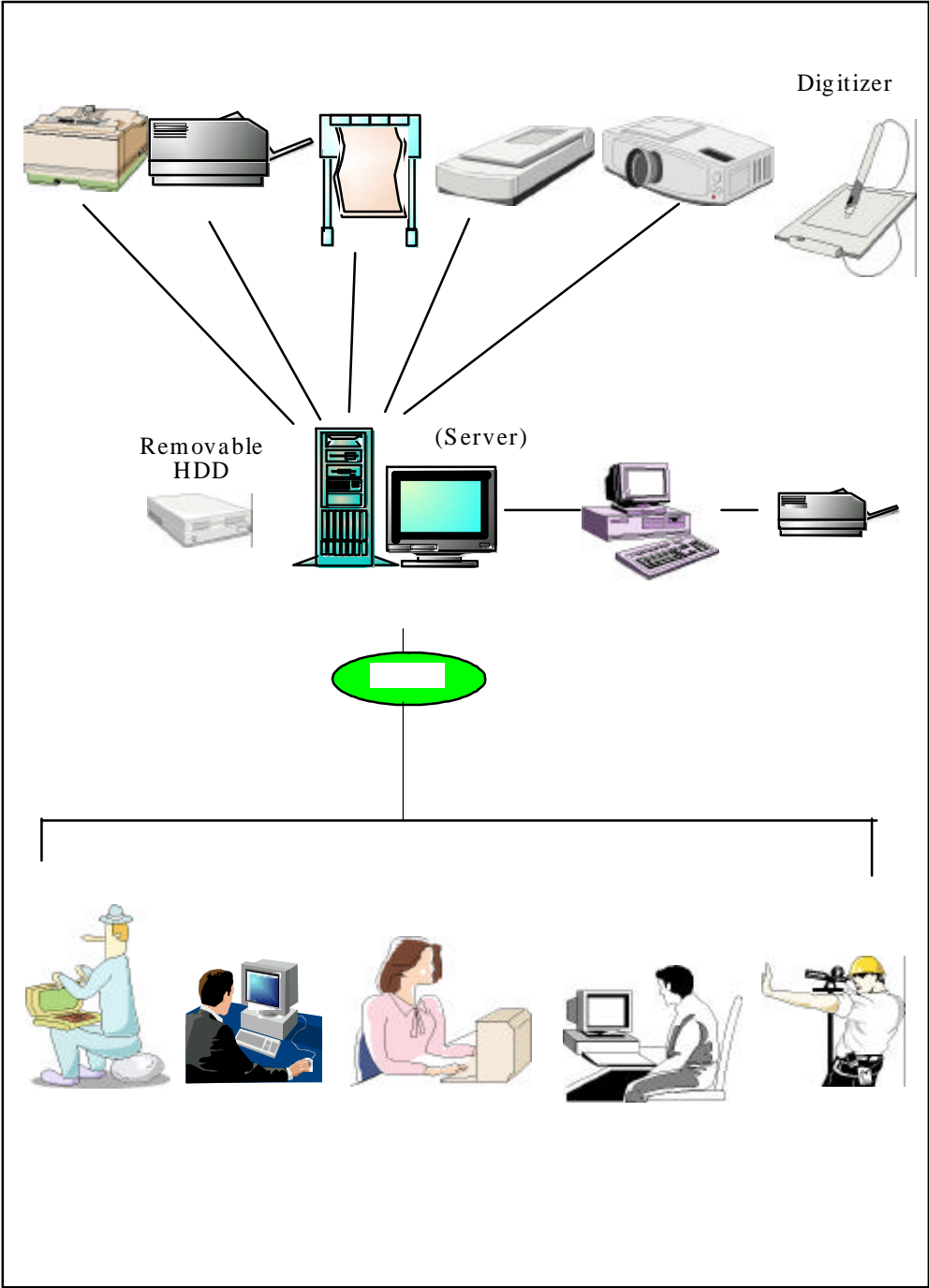
< 2-1>

		PC 686
		(Scanner) (Digitizer) (Digital Camera)
		(Plotter A0) (Color Laser Printer) (Mono Laser Printer)

4.

< 2-2>

OS 95/98, NT 4.0, 7.3,  
GIS MGE, GeoMedia, GeoMedia Web Map,  
3.0 3.0



< 2-1 >

< 2-2 >

		Window 95/98, Window NT 4.0
		Oracle DBMS 7.3
		Integrgraph Microstation, MGE MGE : I/RAS B, I/Geovec, RISords, GNUC, MCSO, MGMAP, MGAD, MGGA, MGA, MTA, MBI, MAI, MGAL, MGFC, MSPM, IT Module
		JavaScript, VBScript, IDC/HTX PerlScript Visual interDEV
		Microsoft Internet Information Server 3.0 Netscape Enterprise Server
	Web	Netscape Navigator 3.0 Internet Explorer3.0

5. GIS

가

가

가

가

가

GIS

가

(1)

가

가.

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. 가

(2) 가

가.

- 1) -
- 2)
- 3)
- 4)

. 가

- 1) /
- 2)
- 3) Post Script

.

- 1) /
- 2)
- 3)
- 4)
- 5)
- 6) Recovery
- 7) /
- 8) (Display)
- 9)
- 10)
- 11) ASCII
- 12) VPF
- 13) SDTS



14) TIFF Format

15) UTM

16) TM

17)

18)

19)

20)

21)

22)

23)

. DB

1) (Oracle Informix I/F)

2) (Oracle, Sybase, Ingress, Informix )

3) RDB Open/Relate( RDB )

.

1)

2)

3)

. User I/F

1) Open Window

2) Motif

3) Icon

4) Pull down

5) 4GL

6)

1)

2)

(3) GIS

GIS

가

가

MGE, GeoMedia, GeoMedia Wep Map

(4) GeoMedia

GIS

GeoMedia

Jupiter Project

OPEN GIS

GIS

. GeoMedia

GIS

GIS

MS Office Product

Desktop GIS

Format Data Viewing

Standard image format

Multi- source data

Single desktop

가.

GIS

1) Intergraph Modular GIS Environment(MGE)

2) MGE GeoData Manager(MGDM)

3) MGE Segment Manager(MGSM)

4) FRAMME GIS Data

5) Microsoft ACCESS

	SW													
					GIS			DB MS		GPS				CAD
	ARC/INFO	ESRI		1982	●	●	●	●	●			●	●	
	Infomap	TEC.		1974	●	●	●	●				●	●	
	GDS	EDS	STM	1981	●							●	●	●
	CARIS	SYS.		1981	●	●	●		●			●	●	
	MGE			1987	●	●	●	●	●	●	●	●	●	●
	FRAMME			1987	●	●	●	●	●	●	●	●	●	●
	PC ARC/INFO	ESRI		1987	●	●	●	●				●	●	
	SPANS Image	INTERA TYDAC TEC.		1993					●					
	SPANS GIS	INTERA TYDAC TEC.		1985	●	●	●	●	●					
	SPANS MAP	INTERA TYDAC TEC.		1991	●									
	ArcCAD	ESRI		1992	●	●		●		●	●	●	●	●
	ArcVIEW	ESRI		1991	●					●	●	●		
	Mapinfo			1987	●	●		●				●	●	
	ERDAS IMAGINE	ERDAS		1992	●	●	●		●					
	ER Mapper	Earth Resource Mapping		1990	●	●	●		●	●			●	
CAD	Microstation			1987	●	●	●	●	●			●	●	●
SW	Tracer for AutoCAD	IGS		1993		●	●	●				●	●	●
SW	CADCore/ Tracer	IGS		1989		●	●	●				●	●	●
SW	VIRAK			1988		●								

< 2-4 > GIS

SW									
			MAC		OS/2	IBM PC	MAC	W/S	
ARC/INFO	●								●
Infomap	●					●	●	●	●
GDS	●							●	●
CARIS	●	●		●		●		●	●
MGE	●	●	●	●		●	●	●	
FRAMME	●	●	●	●		●	●	●	
PC ARC/INFO		●		●		●			
SPANS Image	●								
SPANS GIS	●			●	●	●		●	
SPANS MAP				●	●				
ArcCAD		●		●		●			
ArcVIEW	●		●	●			●	●	●
Mapinfo	●	●	●	●		●	●	●	
ERDAS IMAGINE	●	●							
ER Mapper	●							●	●
Microstation	●	●	●	●		●	●	●	
Tracer for AutoCAD	●	●				●		●	
CADCore/Tracer	●	●				●		●	
VIRAK	●								

< 2-5 > GIS

SW													
	DB	DB2	dBASE	DS		IMS	INFO				OS/2 EE	Rbase	
ARC/INFO		●	●	●	●		●	●	●	●			●
Infomap	●	●								●			
GDS		●								●		●	
CARIS			●		●			●	●	●			
MGE		●	●			●	●	●	●	●			●
FRAMME		●	●			●	●	●	●	●			●
PC ARC/INFO	●		●		●								
SPANS Image	●												
SPANS GIS	●	●									●		
SPANS MAP		●	●		●				●	●	●		●
ArcCAD	●		●		●					●			
ArcVIEW			●		●		●	●	●	●			●
Mapinfo		●	●		●			●	●	●	●	●	●
ERDAS IMAGINE	●												
ER Mapper							●	●	●				
Microstation		●	●			●	●	●	●	●			
Tracer for AutoCAD	●		●		●		●			●			
CADCore/Tracer	●		●		●		●			●			
VIRAK	●								●	●			

- 6) ESRI ArcInfo
- 7) ArcView Shapefile
- 8) Microstation DGN AutoCad data

. / Query  
GeoMedia

GUI Buffer Zone ,

1) Customizing

MS MS Toolbar Customize

GeoMedia

MicroSoft Resource Editing Tool Dialogue Localization

2) Customizing

GeoMedia OLE Automation

Entry

GeoMedia

3) Customizing

Borland Delphi, Powersoft PowerBuilder, Visual Basic, Visual C++,

Visual FoxPro GeoMedia 가

가 GeoMedia OLE Automation

, 100

가 Software Vendor GeoMedia

(4) GeoMedia Web Map

Geomedia Web Map Open GIS

NT

GIS

ActiveCGM

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가

Windows ini

MDF (Map Definition File)

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GIS

feature

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ActiveCGM

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1. : , , ,

가. : 1/25,000

. : (1/25,000)

. (水系) : (1/500,000)

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2.

가.

, , , ,

1,267 ha 74% 941 ha가

517 ha(54.9%) , 163 ha

(17.3%), 110 ha(11.7%), 22 ha(2.3%),

22 ha(2.4%), 11.4% 107 ha

, 5 50%가

,

가 ,

1970 60%

, 82 km 83% 69 km가

, 2,035 1,276km 가 가 119 230km

, 1,823 963km .

1987

1970 47%, 68%가

, 2,955 703 ,

2,252 . 10 (1978 1987 )

1 8,367 19% 3,465



< 3- 2> 5,799  
 가 2,328 40.1%, 1,400  
 24.2%, 564 9.7%, 1,507 26.0%  
 1,367 , 4,432  
 3,065  
 103,076ha 16,092ha 86,984ha가

57 ( : 29,681ha, : 11,864ha- m), 28 ( : 17,562ha),  
 3 ( : 3,133ha), 3,028 2,613.8km( : 2,149.3km,  
 : 464.5km) . 2,688 , 1,566 ,  
 661 , 433 , 277 , 1,165 , 가 132 ,  
 497 , 872 , 338 , 35 , 1 , 4  
 , 33 , 57 , 21 , 2 , 2 ,  
 5 , 188 , 81 , 22 , 1 ,  
 23 , 1 25 9,088 .  
 < 3- 3> < 3- 6> .

1) ( , , )

2) ( ) : . . , . ,

3) : 3

< 3-3>

(1)

								(ha)	(ha)	(ha)	
				.	.						
1							45	20,035	9,949.3	319.0	
2							45	30	10.0	2.00	
3							45	100	0.0	2.00	
4							45	25	6.0	0.70	
5							45	28	7.0	0.80	
6							45	25	0.0	2.00	
7							45	15	5.0	1.00	
8							45	30	0.0	1.00	
9							58	120	61.0	9.30	
10							45	62	19.0	3.90	
11							45	37	16.0	1.90	
12							45	22	8.0	1.00	
13							66	248	70.6	7.30	
14							78	735	235.1	34.40	
15							45	50	4.1	1.00	
16							45	45	4.2	1.00	
17							45	25	5.0	0.50	
18							45	75	17.0	1.30	
19							45	150	95.0	4.70	
20							45	15	5.0	0.60	
21							45	14	5.0	0.50	
22	가						45	45	16.00	1.30	
23							45	15	7.0	0.80	
24							45	15	5.0	0.90	
25							45	50	16.0	1.70	
26							45	24	9.0	1.00	
27							45	12	4.0	1.10	
28							45	50	6.0	1.10	
29							56	405	0.0	3.20	



		(ha- m)	(m)	(m)		가	(f)	(mm/ day)	(%)		
1		2,451.40	22.7	290	4	3	1.0	6.0	20		
2		3.00	5.0	120	4	3	1.2	6.0	20		
3		4.00	5.0	150	4	3	1.0	6.0	20		
4		1.20	4.0	50	4	3	1.0	6.0	20		
5		1.40	4.0	45	4	3	1.0	6.0	20		
6		2.40	4.0	70	4	3	1.0	6.0	20		
7		1.50	3.0	30	4	3	1.0	6.0	20		
8		1.80	5.0	70	4	3	1.0	6.0	20		
9		20.90	6.0	292	4	3	1.2	5.0	15		
10		7.98	3.0	146	4	3	1.0	6.0	20		
11		4.72	4.0	125	4	3	1.0	6.0	20		
12		5.40	6.0	120	4	3	1.0	6.0	20		
13		39.90	11.4	134	4	10	1.0	6.0	20		
14		189.70	14.7	283	4	20	1.0	6.0	20		
15		3.00	6.0	140	4	3	1.0	6.0	20		
16		3.00	6.0	70	4	3	1.0	6.0	20		
17		1.50	5.0	45	4	3	1.0	6.0	20		
18		3.40	5.0	50	4	3	1.0	6.0	20		
19		32.90	10.0	114	4	3	1.0	6.0	20		
20		1.50	5.0	58	4	3	1.0	6.0	20		
21		1.00	4.0	60	4	3	1.0	6.0	20		
22	가	3.90	5.0	85	4	3	1.0	6.0	20		
23		1.60	4.0	53	4	3	1.0	6.0	20		
24		1.80	4.0	118	4	3	1.0	6.0	20		
25		3.40	4.0	90	4	3	1.0	6.0	20		
26		2.00	4.0	126	4	3	1.0	6.0	20		
27		2.20	5.0	127	4	1	1.0	6.0	20		
28		1.70	3.0	296	4	1	1.0	6.0	20		
29		0.00	6.2	226	4	1	0.0	0.0	0		

< 3-3>

(2)

								(ha)	(ha)	(ha)	
				.	.						
30							45	50	15.0	12.00	
31							55	150	35.0	8.30	
32							45	103	24.3	5.30	
33							54	22	40.0	12.00	
34							54	24	24.0	2.50	
35							54	40	21.9	1.80	
36							45	12,000	12,228.9	233.70	
37							45	-	2116.9	322.00	
38							65	8,984	2163.9	99.50	
39							75	72	261.7	44.70	
40							59	366	980.0	88.00	
41							45	70	229.3	13.60	
42							76	-	433.9	85.00	
43							45	38	19.0	1.60	
44							45	27	14.0	1.00	
45							45	25	3.0	1.10	
46							45	30	17.0	2.30	
47							62	100	230.0	29.00	
48							86	60	29.0	1.00	
49							86	15	4.0	1.00	
50							86	14	5.0	0.60	
51							86	20	7.0	0.80	
52							48	141	61.0	6.00	
53							65	75	68.0	7.00	
54							45	90	30.0	2.80	
55							45	50	15.0	2.00	
56							45	28	14.0	1.80	
57							45	30	5.0	0.60	
									29,681.1		

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

		(ha- m)	(m)	(m)		가	(f)	(mm/ day)	(%)		
30		3.70	2.0	220	4	1	0.0	0.0	0		
31		22.80	9.3	179	4	10	1.2	6.0	20		
32		15.20	4.7	169	4	1	1.0	6.0	20		
33		3.70	2.0	220	4	1	1.0	6.0	20		
34		1.90	5.0	200	4	1	1.0	6.0	20		
35		4.60	5.7	162	4	3	1.0	6.0	20		
36		5,464.60	55.0	255	2	1	1.0	6.0	20		
37		1,299.30	5.1	6,087	4	1	0.0	0.0	0		
38		1,124.10	30.0	160	2	1	0.0	0.0	0		
39		253.20	11.3	628	4	1	0.0	0.0	0		
40		391.80	9.7	270	4	1	0.0	0.0	0		
41		14.80	3.1	260	4	1	0.0	0.0	0		
42		287.50	4.4	3,472	4	10	0.0	0.0	0		
43		3.80	4.0	150	4	3	0.0	0.0	0		
44		2.80	4.0	160	4	3	0.0	0.0	0		
45		1.50	4.6	166	4	3	0.0	0.0	0		
46		3.59	2.0	193	4	3	0.0	0.0	0		
47		113.90	9.9	252	4	3	0.0	0.0	0		
48		2.00	7.0	100	4	1	0.0	0.0	0		
49		1.50	5.0	110	4	1	0.0	0.0	0		
50		0.90	4.0	70	4	1	0.0	0.0	0		
51		1.20	4.0	85	4	1	0.0	0.0	0		
52		16.40	8.5	151	4	1	0.0	0.0	0		
53		18.00	8.5	176	4	1	0.0	0.0	0		
54		6.60	6.0	206	4	1	0.0	0.0	0		
55		3.00	4.0	70	4	3	0.0	0.0	0		
56		2.70	3.0	120	4	3	0.0	0.0	0		
57		0.73	4.4	1,294	1	0	0.0	0.0	0		
		11,864.02									

< 3-4 >

			(ha)	( )
1		가		
2			15,324.00	
3			130.50	
4			81.30	
5			318.00	
6			50.00	
7			72.50	
8			755.70	
9			17.00	
10			13.30	
11			76.00	
12			17.00	
13			60.00	
14			9.50	
15			68.00	
16			30.00	
17			40.00	
18			16.00	
19			30.00	
20			52.00	
21			64.00	
22			21.00	
23			21.00	
24			26.00	
25			30.00	
26			20.00	
27			70.00	
28			150.00	
			17,562.80	

< 3-5>

(1)

							가						
	229	241	46	60	49	220	32	388	82	47	-	-	1,394
	182	127	18	44	23	142	9	45	149	19	2	-	760
	204	245	44	59	16	182	15	15	214	27	3	-	1,024
	241	208	52	240	63	52	6	6	1	36	-	-	905
	214	139	34	8	13	63	1	-	2	47	-	-	521
	192	20	157	1	13	73	1	3	16	41	5	1	523
	216	145	85	4	8	73	12	13	76	36	3	-	671
	325	84	39	2	14	118	2	6	68	26	5	-	689
	274	107	81	7	36	78	12	11	72	16	7	-	701
	204	75	32	4	14	7	8	-	50	11	4	-	409
	325	132	57	4	16	157	31	7	69	29	3	-	830
	62	43	16	-	12	-	3	3	73	3	3	-	218
	2,668	1,566	661	433	277	1,165	132	497	872	338	35	1	8,645

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(2)

	-	28	49	-	-	-	-	-	-	-	-	-	77	1,471
	-	4	8	21	1	2	5	188	-	-	-	-	229	992
	-	1	-	-	-	-	-	-	-	-	-	-	1	1,025
	-	-	-	-	1	-	-	-	-	17	-	-	18	922
	-	-	-	-	-	-	-	-	8	-	-	-	8	601
	4	-	-	-	-	-	-	-	-	-	-	-	4	527
	-	-	-	-	-	-	-	-	-	-	-	-	-	671
	-	-	-	-	-	-	-	-	-	2	1	23	1	717
	-	-	-	-	-	-	-	-	-	3	-	-	-	705
	-	-	-	-	-	-	-	-	-	-	-	-	-	409
	-	-	-	-	-	-	-	-	-	-	-	-	-	830
	-	-	-	-	-	-	-	-	-	-	-	-	-	218
	4	33	57	21	2	2	5	188	8	22	1	23	1	9,088

		(m)				(m)		
	-	-	-	-	-	-	-	-
	-	-	-	-	2	8,987	500	8,487
	1	8,200	-	8,200	-	-	-	-
	1	8,200	-	8,200	2	8,987	500	8,487
	-	-	-	-	-	-	-	-
	14	30,390	19,850	10,540	18	52,185	36,973	15,212
	30	44,340	38,806	5,534	70	26,762	23,368	3,394
	44	74,730	58,656	16,074	88	78,947	60,341	18,606
	-	-	-	-	1	2,827	1,028	1,799
	4	3,160	3,160	-	1	514	514	-
	33	11,180	11,180	-	93	52,297	50,787	1,510
	37	14,340	14,340	-	95	55,638	52,329	3,309
	31	35,922	34,124	1,798	-	-	-	-
	136	75,534	75,334	200	63	77,854	76,654	1,200
	-	-	-	-	-	-	-	-
	167	111,456	109,458	1,998	63	77,854	76,654	1,200
	5	16,160	15,570	590	-	-	-	-
	254	224,886	198,024	26,862	228	221,426	189,824	31,602

		(m)				(m)		
	1	1,500	522.0	948.0	1	460	220	240
	1	6,240	2,730.0	3,510.0	1	1,500	1,050	450
	1	4,830	3,637.0	1,193.0	1	10,500	1,130	9,370
	3	12,570	6,889.0	5,651.0	3	12,460	2,400	10,060
	9	17,180	16,093.3	1,086.7	9	12,200	530	11,670
	18	29,449	17,966.1	11,462.9	34	33,025	6,478	26,547
	161	61,127	57,262.6	3,864.4	153	69,281	10,314	58,967
	188	107,756	91,342.0	16,414.0	196	114,506	17,322	97,184
	12	16,511	15,234.5	1,276.5	8	18,850	17,950	900
	7	5,737	5,573.1	163.9	8	5,625	5,585	40
	94	36,519	34,376.5	2,142.5	108	54,453	53,305	1,150
	113	58,767	54,937.1	3,829.9	124	78,928	76,838	2,090
	15	15,422	15,329.2	92.3	32	47,860	2,126	45,734
	-	-	-	-	167	59,040	-	59,040
	3	1,852	1,505.0	347.0	-	-	-	-
	18	17,274	16,834.7	439.3	199	106,900	2,126	104,774
	-	-	-	-	-	-	-	-
	322	196,367	170,392.6	25,974.2	522	312,794	98,686	214,108

		(m)				(m)		
	3	3,380	2,930	450	2	890	670	220
	1	1,020	-	1,020	-	-	-	-
	-	-	-	-	1	7,320	3,680	3,640
	4	4,400	2,930	1,470	3	8,210	4,350	3,860
	-	-	-	-	2	7,320	3,680	3,640
	1	1,520	-	1,520	39	52,320	29,530	22,790
	7	3,370	-	3,370	98	70,160	62,870	7,290
	8	4,890	-	4,890	139	135,110	99,890	35,220
	4	17,942	17,942	-	3	16,800	16,800	-
	14	16,064	16,064	-	7	15,940	15,940	-
	6	3,310	-	3,310	7	3,780	2,940	240
	24	37,316	34,006	3,310	17	35,920	35,680	240
	16	40,421	37,281	3,140	1	2,000	2,000	-
	237	101,925	101,525	400	7	10,540	10,540	-
	-	7,971	17,891	80	10	9,470	2,570	6,900
	256	160,317	156,697	3,620	18	22,010	15,110	6,900
	-	-	-	-	-	-	-	-
	292	206,923	193,633	13,290	177	201,250	155,030	46,220



		(m)				(m)		
	-	-	-	-	-	-	-	-
	-	-	-	-	1	2,200	2,200	-
	-	-	-	-	-	-	-	-
	-	-	-	-	1	2,200	2,200	-
	2	459	459	-	-	15,250	6,650	8,600
	1	430	430	-	-	10,400	4,534	5,866
	11	4,274	3,866	408	-	266,722	255,006	5,716
	14	5,163	4,755	408	-	286,372	266,190	20,182
	5	7,842	7,842	-	-	12,140	10,940	1,200
	6	4,088	4,088	-	-	30,875	27,215	3,660
	3	768	728	40	-	55,535	48,125	7,410
	14	12,698	12,658	40	-	98,550	86,280	12,270
	30	40,376	33,118	7,258	-	-	-	-
	177	92,542	90,699	1,843	-	-	-	-
	1	2,900	2,900	-	-	-	-	-
	208	135,818	126,501	9,317	-	-	-	-
	-	-	-	-	-	-	-	-
	236	153,679	143,914	9,765	1	387,122	354,670	32,452

		(m)				(m)		
	-	-	-	-	1	1,156	-	1,156
	-	-	-	-	-	-	-	-
	1	6,300	4,500	1,800	-	-	-	-
	1	6,300	4,500	1,800	1	1,156	-	1,156
	5	7,020	4,970	2,050	-	-	-	-
	22	20,873	10,630	10,240	11	12,017	6,547	5,470
	45	16,427	11,540	4,887	72	43,865	3,997	3,895
	72	44,320	27,140	17,180	83	55,882	10,544	9,365
	7	14,404	14,254	150	-	-	-	-
	17	19,282	18,922	360	1	3,200	3,200	-
	46	15,040	13,863	1,177	39	23,633	22,620	1,013
	70	48,726	47,039	1,687	40	26,837	25,820	1,013
	21	18,809	17,989	820	22	26,265	24,580	1,680
	117	74,520	68,763	5,757	81	38,726	37,866	860
	-	-	-	-	-	-	-	-
	138	93,324	86,752	6,577	103	64,991	62,446	2,545
	-	-	-	-	-	-	-	-
	281	192,675	165,431	274	227	148,862	134,783	14,079

		(m)				(m)		
	-	-	-	-	2	530	-	530
	1	910	910	-	1	1,570	1,570	-
	-	-	-	-	1	6,710	6,710	-
	1	910	910	-	4	8,810	8,280	530
	2	3,430	2,870	600	8	8,470	7,330	1,140
	1	4,250	900	3,350	23	33,360	22,760	10,600
	61	64,460	63,330	1,130	115	64,614	61,674	2,940
	64	72,140	67,060	5,080	146	106,444	91,764	14,680
	5	11,330	11,330	-	1	4,700	4,700	-
	2	3,020	3,020	-	11	9,320	8,220	1,100
	57	62,190	62,040	150	102	67,985	67,035	950
	64	76,540	76,390	150	114	82,005	79,955	2,050
	6	11,450	10,150	1,300	2	6,880	6,880	-
	49	22,590	22,410	180	34	18,950	18,780	170
	4	2,410	2,035	375	-	-	-	-
	59	36,450	34,595	1,855	36	25,830	25,660	170
	-	-	-	-	-	-	-	-
	188	186,040	178,955	7,085	300	223,259	205,659	17,430

			(m)		
		10	7,886	4,342.0	3,544.0
		8	22,427	8,960.0	13,467.0
		6	43,860	19,657.0	24,203.0
		24	74,173	32,959.0	41,214.0
		37	71,329	42,542.3	28,786.7
		182	280,219	156,618.1	128,600.9
		803	693,429	592,033.6	101,395.4
		1,022	1,044,977	791,194.0	253,783.0
		46	123,346	118,020.5	5,325.5
		78	116,825	111,501.1	5,323.9
		588	386,090	366,997.5	19,092.5
		712	626,361	596,519.1	29,741.9
		176	245,405	183,577.7	61,827.3
		1,068	572,221	562,571.0	69,650.0
		21	34,603	26,901.0	7702.0
		1,265	852,229	713,049.7	139,179.3
		5	16,160	15,570.0	590.0
		3,028	2,013,800	2,149,291.8	464,508.2







4

1:250,000

12

1 1996 3 1998

Oracle

D/B, D/B, D/B, D/B, D/B

1

1:250,000

1.

가 (NGIS) 가 ( ) -

1.0(96.5.7)



가.

3가 가 .  
/ 가 .  
001  
999 3

< 4-1>

A		
B		
C	/	, ,
D		, ,
E		, , ,
F		
Z		, ,

. NGIS

가 “ 가 ( ) :



< 4-3>

(1:250,000)

1		127.14.30- 36.01.20	21		126.54.00- 35.30.25
2		127.16.00- 35.58.40	22		127.07.00- 35.32.10
3		127.16.30- 35.57.00	23		126.42.40- 35.28.15
4		127.07.20- 35.52.50	24		126.37.30- 35.27.50
5		126.37.30- 35.56.30	25		126.31.10- 35.29.00
6		126.39.30- 35.55.30	26		126.28.00- 35.25.30
7		126.42.00- 35.56.30	27		126.30.10- 35.24.30
8		126.45.00- 35.55.30	28		126.49.30- 35.21.00
9		126.50.00- 35.50.30	29		127.01.30- 35.22.20
10		126.54.00- 35.50.30	30		127.00.00- 35.10.30
11		127.01.30- 35.47.10	31		126.30.20- 35.13.30
12		127.10.55- 35.49.20	32		126.40.30- 35.13.30
13		127.13.00- 35.46.30	33		126.00.30- 35.07.30
14		127.07.20- 35.44.10	34		126.22.45- 35.12.45
15		127.01.00- 35.43.00	35		126.44.00- 35.07.30
16		126.39.30- 35.44.50	36		127.06.30- 35.04.40
17		126.45.30- 35.44.50	37		127.13.00- 34.59.30
18		126.41.00- 35.39.50	38		127.35.40- 35.00.00
19		126.42.20- 35.33.10	39		127.43.00- 35.01.40
20		126.51.15- 35.31.00	40	-	-

2

1.

가.

PC 686, (AO),

Window 95/98,  
 Window NT 4.0, Oracle DBMS 7.3  
 Microstation MGE  
 JavaScript, VBscript, Microsoft Internet  
 Information Server 3.0, Netscape Enterprise Server,  
 Netscape Navigator 3.0 Internet Explorer 3.0

2. (DB)

(Graphic data) (Non-graphic data)

(Image information),  
 (Attribute information), (Locational information),  
 ( , , , )

< 4-4>

	• : , , , -	
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	, , , )	
	- : , , , -	
	, , ( , , , -	
	, , , )	
	- : , , , -	

3.

< 4-5>

- (1) 1:25,000 (Layer)
- (2) 1:25,000
- (3) (Raster)  
RLE
- (4) (Vector)  
가

(5)

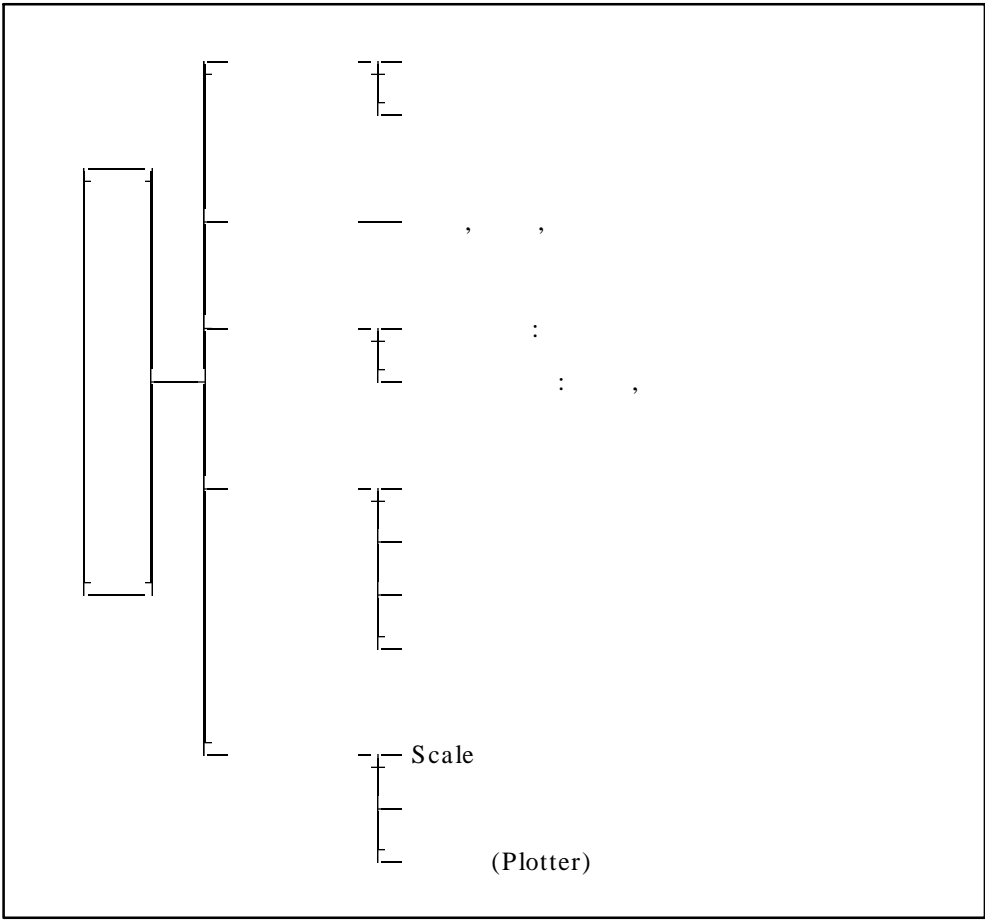
< 4-5 >

		( )
		( , )(57)
		(1)
		(28)
		, ,
		(10), (8), (6), (1,022), (712), (1,265)
		, , , ,
		, , , , ,
		, , , , ,
		,
		(3)
		(5)
		(2)
		(1), (12)

4.

Oracle DBMS





< 4-1 >



3

1.

가.

Bessel(1841 )

< 4-7 >

		(m)	(m)	
Airy(1830)		6,377,563	6,356,257	1/299.32
Everest(1830)		6,377,304	6,356,103	1/300.80
Bessel(1841)	, ,	6,377,397	6,356,079	1/299.15
Clarke(1866)	, ,	6,378,206	6,356,584	1/294.98
Clarke(1880)	,	6,378,246	6,356,515	1/293.47
Hayford(1924)	,	6,378,388	6,356,912	1/297.00
Krasovsky(1940)		6,378,245	6,356,863	1/298.30
Australian(1965)		6,378,160	6,356,775	1/298.25
WGS 72(1972)	NASA,	6,378,135	6,356,751	1/298.26
WGS 84(1984)	NASA, ( )	6,378,137	6,356,752	1/298.26

(TM) (125cE,38cN),  
 (127cE,38cN), (129cE,38cN)  
 (TM, Transverse Mercator coordinates)

TN

(Gauss-Kruger projection)

y , x

(UTM, Universal Transverse Mercator coordinates)

UTM

. UTM

6c 60

Mercator

2. (Index)

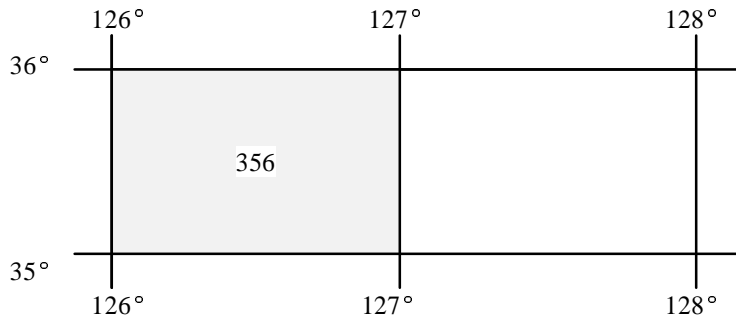
가 “ 가 ( ) : ”

가.

33° ~ 44° ( ~ ), 123° ~ 132°  
 ( ~ ) , 34° ~ 39° ( ~ ,  
 ), : 125° ~ 130° ( ~ ) , : 35° 15' ~ 38° 15'  
 ( ~ ) , : 126° 15' ~ 128° ( ~ )

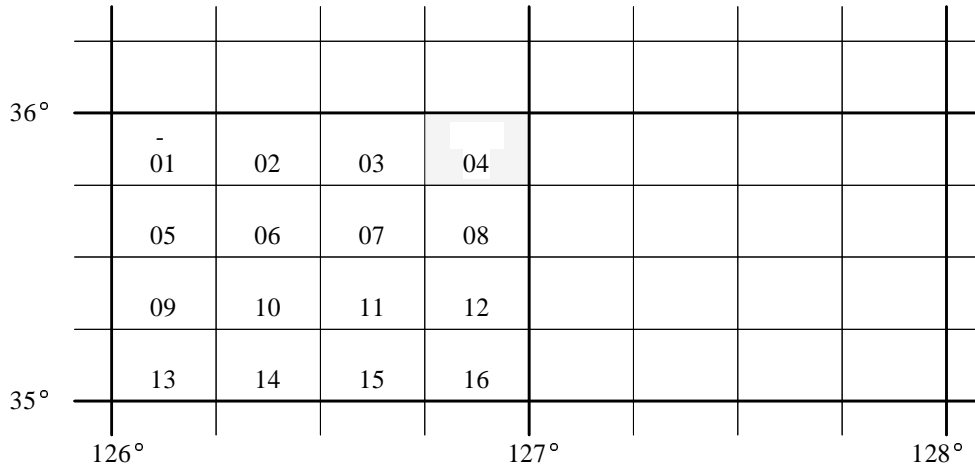
(Index code)

가 1:200,000  
 1° × 1° < 4-2>  
 1:200,000 35° ~ 36° , 126° ~ 127°  
 356



< 4-2> 1:200,000

1:50,000 1:200,000 1° × 1°  
 4 15' × 15'  
 < 4-3> 1:50,000 16  
 01 16 04  
 15' × 15' , +  
 + 35+6+04 = **35604**가



< 4-3> 1:50,000

1:25,000      1:50,000      15' × 15'

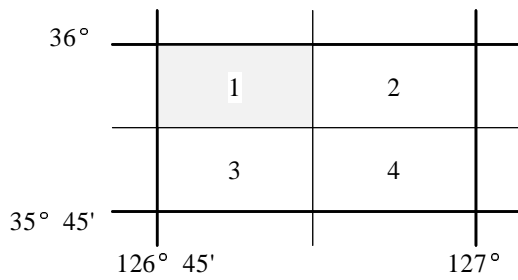
•      2      7' 30" × 7' 30" ,

< 4-4>      4      1      4

1      7' 30" × 7' 30" ,      1:50,000

4      1:50,000      1      가      가      35604 + 1 =

**356041**가 .



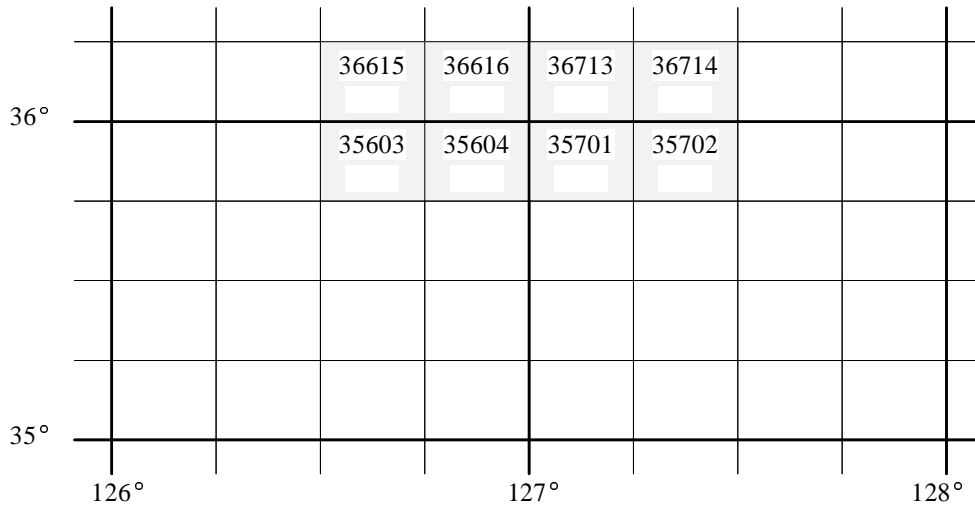
< 4-4> 1:25,000      (356041)

(1:25,000)

4- 8> < 4- 5>

(1:25,000)

가 12 < 4- 5>



< 4- 5> 1:50,000

< 4- 8>

(1:25,000)

366151	366152	366161	366162	367131	367132	367141	367142
366153	366154	366163	366164	367133	367134	367143	367144
356031	356032	356041	356042	357011	357012	357021	357022
356032	356034	356043	356044	357013	357014	357023	357024

4

1.

1:250,000

1:25,000

12 ,

1:25,000

2.

가. Category

1:25,000

4

5

9

Category

(1) (Basemap)

- (Administration map) : , ,

- (Roads map) :

- (Coast and stream map) : ( , ),

- (Contour map) : ,

(2)

- (Dam map) : , , ,

- (Hydraulic structures map) : , , , ,

- (Agency) : (FLIA), ,

- (Hydrologic station map) : , ,

- (Map) :

. Feature

9 category (feature) ,  
feature .

(1)

- : feature .  
- : feature .  
- : feature .  
- : area centriod .

(2)

- : 88  
feature .  
- : 2 4 ,  
feature .  
- : feature .  
- : line .  
- : line feature .  
- : feature .  
- : , , ,  
feature  
- : line .  
- : line .  
- : line feature .

(3)

- : feature .
- : area boundary feature
- : feature .

(4)

- : feature .
- : feature

(5)

- : feature .
- : feature .

(6)

- : feature .
- ( ) : line .
- : feature .
- : line .
- : grouping .
- : grouping .
- : feature .
- : feature .
- : point .
- : line .
- : line .



(7)

- : line .  
- : point .  
- : point .  
- : point .  
- : feature .  
- : feature  
- : feature  
- : feature .  
- : feature  
- : feature  
- : feature  
- : feature .  
- : line .  
- : point .  
- : point .  
- : line .  
- : line feature .  
- : point .  
- : point .  
- : point .  
- : point .  
- : point .  
- : point .

- : point .
- : point .
- : point .
- : point .
- : point .
- : point .

(8)

- : , , area  
boundary feature .
- : point .
- : point .
- : point .

(9)

- : , , ( , TM)  
.
- : point .
- : point .
- : point .

(10)

- : .

. Seed File (Coordinate Systems)

Seed File .

- Coordinate type : 2-D Projected
- Coordinate system : Primary Coordinate System
  - Project define : Transverse Mercator

- Geodetic Datum : Tokyo
- Ellipsoid : Bessel 1841
  
- Mapping system parameter
  - Longitude of Origin : 127:00:10.405 d:m:s
  - Latitude of Origin : 38:00:00 d:m:s
  - False Easting : 200,000.000 m
  - False Northing : 500,000.000 m
  
- Units Formats
- Paper working unit mapping working unit
  - Working Units : Longitude & Latitude (d:m:s)
  - Paper Working Units
    - Resolution : 1000.00000000  
UORs per (m)
    - Range  
Storage Minimum Point X : - 2147483.647 m  
Y : - 2147483.647 m  
Storage Center Point X : 0.000 m  
Y : 0.000 m  
Storage Maximum Point X : 2147483.647 m  
Y : 2147483.647 m
  - Mapping Working Units
    - Resolution : 1000.00000000  
UORs per (m)
    - Range  
Storage Minimum Point X : - 2147483.647 m  
Y : - 2147483.647 m



- : RAIL\_BR = Roads(map), **Railway Bridge**(feature name)
  - : RAIL\_TN = Roads(map), **Railway Tunnel**(feature name)
- (3) (Coast)
- : COAST\_LD = **Coast**(map), **land coast**(feature name)
  - : COAST\_IS = **Coast**(map), **Island**(feature name)
  - : COAST\_BK = **Coast**(map), **Coast Bank**(feature name)
- (4) (Stream)
- : STRM\_RI = **Stream**(map), **River**(feature name)
  - : STRM\_ST = **Stream**(map), **Stream**(feature name)
- (5) (Contour)
- : CONT\_IND = **Contour**(map), **index line**(feature name)
  - : CONT\_INT = **Contour**(map), **intermediate line**(feature name)
- (6) (Dam)
- : DAM\_RESV = **Dam**(map), **Reservoir**(feature name)
  - ( ) : DAM\_BANK = **Dam**(map), **Dam Bank**(feature name)
  - : DAM\_SHED = **Dam**(map), **Dam watershed**(feature name)
  - : DAM\_SPIL = **Dam**(map), **Spillway**(feature name)
  - : DAM\_INTOW = **Dam**(map), **Intake tower**(feature name)
  - : DAM\_INCO = **Dam**(map), **Inclined conduit**(feature name)
  - : SEA\_RESV = **Dam**(map), **Fresh water reservoir**(feature name)
  - : SEA\_DIKE = **Dam**(map), **Sea dike**(feature name)
  - : SEA\_POLD = **Dam**(map), **polder dike**(feature name)
  - : SEA ESTR = **Dam**(map), **Estuary dam**(feature name)

- : SEA\_SLGA = Dam(map), **Sluice gate**(feature name)

(7) (Irrigation structures)

- : AGF\_WEIR = **Agri\_facility**(category), **weir**(feature name)

- : AGF\_IRPS = **Agri\_facility**(category), **Irrigation pumping station**(feature name)

- : AGF\_DRPS = **Agri\_facility**(category), **Drainage pumping station**(feature name)

- : AGF\_IDPS = **Agri\_facility**(category), **Irrigation & Drainage pumping station**(feature name)

- : AGF\_IRCC = **Agri\_facility**(category), **Conveyance canal** (feature name)

- : AGF\_IRCM = **Agri\_facility**(category), **Irrigation main canal** (feature name)

- : AGF\_IRCB = **Agri\_facility**(category), **Irrigation branch canal**(feature name)

- : AGF\_IRCL = **Agri\_facility**(category), **Irrigation lateral canal** (feature name)

- : AGF\_DRCM = **Agri\_facility**(category), **Main Drain canal** (feature name)

- : AGF\_DRCB = **Agri\_facility**(category), **Branch Drain canal** (feature name)

- : AGF\_DRCL = **Agri\_facility**(category), **Lateral Drain canal** (feature name)

- : AGF\_LIOC = **Agri\_facility**(category), **lining open canal** (feature name)

- : AGF\_CULV = **Agri\_facility**(category), **Culvert**(feature name)

- : AGF\_INVS = **Agri\_facility**(category), **Inverted siphon**(feature name)

name)

- AGF\_AQUE = **A**gri\_facility(category), **a**queduct(feature name)
- : AGF\_IRTN = **A**gri\_facility(category), **I**rrigation **t**unnel  
(feature name)
- : AGF\_DROP = **A**gri\_facility(category), canal **d**rop(feature  
name)
- : AGF\_CHUT = **A**gri\_facility(category), **C**hute (feature name)
- : AGF\_CAWA = **A**gri\_facility(category), **C**anal **w**asteway  
(feature name)
- : AGF\_INLW = **A**gri\_facility(category), **I**nlet **w**ork(feature  
name)
- : AGF\_OUTW = **A**gri\_facility(category), **O**utlet **w**ork(feature  
name)
- : AGF\_DIVS = **A**gri\_facility(category), **D**iversion(feature name)
- : AGF\_CHGA = **A**gri\_facility(category), **C**heck **g**ate(feature  
name)
- : AGF\_INGA = **A**gri\_facility(category), **I**ntake **g**ate(feature  
name)
- : AGF\_OUGA = **A**gri\_facility(category), **O**utlet **g**ate(feature  
name)
- : AGF\_LOCK = **A**gri\_facility(category), **L**ock **g**ate(feature  
name)
- : AGF\_WAGA = **A**gri\_facility(category), **W**asteway **g**ate  
(feature name)
- : AGF\_TBWL = **A**gri\_facility(category), **T**ube **w**ell(feature name)
- : AGF\_COWL = **A**gri\_facility(category), **C**ollector **w**ell(feature  
name)

(8) (FLIA)

- : FLIA\_IRA = **FLIA**(map), **Irrigation area**(feature name)
- : FLIA\_MOF = **FLIA**(map), **Main office**(feature name)
- : FLIA\_BOF = **FLIA**(map), **Branch office**(feature name)
- : FLIA\_COF = **FLIA**(map), **Control office**(feature name)

(9) (Hydrologic Station)

- : WEAT\_STN = **Station**(category), **Weather station**(feature name)
- : RAIN\_STN = **Station**(category), **Rain gauge**(feature name)
- : WAEL\_STN = **Station**(category), **Water level gauge**(feature name)

(10) (Map boundary)

(11) ( )

- - : RE\_EL
  - : RE\_AR
  - : RE\_LK
  - : ES\_LK
- - : ES\_EL
  - : ES\_AR
  - : RE\_LK
  - : ES\_LK
-



- : RE\_DY
- : RE\_EL
- : RE\_LK
- : ES\_LK

•

- : ES\_DY
- : ES\_EL
- : RE\_LK
- : ES\_LK

(12) : MULTB

- : MDR\_MAP
- : MST\_MAP
- : MLG\_MAP
- : MPHOTO
- ( ) : MREF\_TB

. feature

Feature table

- mslink (integer)
- fcode (char 12)
- fname (char 32)
- category (integer)
- tablename (char 18)
- ftype (smallint,0~5) : 0 = undefined, 1 = point, 2 = line, 3 = area boundary, 4 = area centroid, 5 = label
- flevel (smallint,1~63)
- fstyle (smallint,0~7)

- fweight (smallint,0~31)
- fcolor (smallint,0~255)
- digcmd (char 240)
- felement (smallint) : 2 = cell(complex), 3 = line, 4 = line string, 6 = shape, 7 = text node(complex), 11 = curve, 15 = ellipse, 16 = arc, 17 = text, 23 = circular truncated cone
- fangle (char 16)
- fheight (double)
- fwidth (double)
- flinespace (double)
- textunit (char 15)
- linelength (smallint,1~255)
- ffont (smallint,0~127)
- fsymbol (char 1)
- fjustification (char 3)
- celllibrary (char 14)
- fcellname (char 6)
- cellscale (double)
- streamdelta (double)
- streamtolerance (double)
- streamunit (char 15)
- snapttype (smallint,0~1)
- snaptolerance (smallint,2~100)
- newdup (smallint,0~1) : 0 = new mode, 1 = duplicate mode
- fdastype (smallint)
- max\_displayscale (integer)
- min\_displayscale (integer)

- comp\_feature\_id (integer)
- use\_range (char 1)
- is\_optional (char 1)
- is\_repeating (char 1)
- displaypriority (smallint)

attribute                      user-defined attribute table                      ,

category      feature      Oracle      attribute table                      link

feature                                      Graphic element

< 4- 9>      < 4- 10>                      ,

<                      >

. D/B

### Oracle DBMS

< 4-9>

	Category Map	Feature	Fname (map)	Fcode	Attribute							
					ftype	style	wt	level	color	num	cell	table
	Road		road_ex	10101	line	0	1	11	5			
			road_rd	10102	line	0	0	12	5			
			road_wy	10103	line	0	0	13	6			
	Admini- stration		admin_do	20201	AB	3	1	16	8			
			admin_sigun	20202	AB	6	0	17	8			
			admin_epmyon	20203	AB	4	0	18	8			
			admin_jurisd	20204	AC	0	4	19	7			
	Water		coast_ld	30301	line	0	0	20	1			
			coast_is	30302	poly	0	0	22	1			
			strm_ri	30303	line	0	0	24	7			
			strm_st	30304	line	0	0	25	7			
	Contour		cont_ind	40401	line	0	1	26	118			
			cont_int	40402	line	0	0	27	118			

( ) AB = area bound, AC = area centroid

	Category (Map)	Feature	Feature	Fname (Map)	Fcode	Attribute								
						type	style	level	wt	color	num	cell	table	
(DAM)				DAM_RESV	1010	AB	0	1	0	7	407			
				DAM_RESC	1011	AC	0	12	4	3	290		RESC	
				DAM_BANK	1020	L	0	2	1	8	272		DBANK	
				DAM_SPIL	1040	P	0	4	1	8			SPIL	
				DAM_INT0	1050	P		5					INTA	
				DAM_INCO	1051	P		6					INTA	
				DAM_FWRV	1060	AB		7						
				DAM_FWRC	1061	AC		13	4	9				FWRC
				DAM_SEDI	1070	L	0	8	0	8	9			SEDI
				DAM_PODI	1071	L	0	9	0	8				SEDI
			DAM_ESDA	1072	L	0	10	0	8				SEDI	
			DAM_SLGA	1080	P	0	11	0	8		1011		SLGA	
(AGFA)				AGF_WEIR	2010	P	0	21	1	8	36	2001	WEIR	
				AGF_IRPS	2020	P		22	0	109	92	2002	PUMP	
				AGF_DRPS	2021	P		23	0	109	3	2003	PUMP	
				AGF_IDPS	2022			24					PUMP	
				AGF_IRCC	2030	L	0	25	3	105	17		CANAL	
				AGF_IRCM	2031	L	0	26	1	105	41		CANAL	
				AGF_IRCB	2032	L	0	27	0	105	439		CANAL	
				AGF_IRCL	2033			28					CANAL	
				AGF_DRCM	2034	L	0	29	1	105	20		CANAL	
				AGF_DRCB	2035	L	0	30	0	105	69		CANAL	
				AGF_DRCL	2036			31					CANAL	
				AGF_LIOC	2040			32					AST1	
		( )		AGF_CULV	2041	L	3	33	0	105	12		AST1	
				AGF_INVS	2042	L	3	34	0	105	14		AST1	
				AGF_AQUE	2043			35					AST1	
				AGF_IRTN	2044			36					AST1	
				AGF_DROP	2050	P		37					AST2	
				AGF_CAWA	2051	P		38					AST2	
				AGF_INLW	2052	P		39					AST2	
				AGF_OUTW	2053	P		40					AST2	
				AGF_BRIG	2054	P		50	4				AST2	
				AGF_DIVS	2060	P	0	41	0	165	88	2021	WGATE	
				AGF_CHGA	2061	P	0	42	0	165	106	2022	WGATE	
			AGF_INGA	2062	P	0	43	0	165	10	2023	WGATE		
			AGF_OUGA	2063	P	0	44	0	165	16	2024	WGATE		
			AGF_LOCK	2064	P	0	45	0	165	47	2025	WGATE		
			AGF_WAGA	2065	P	0	46	0	165	4	2026	WGATE		
			AGF_TBWL	2070	P	0	47	0	3	2	2027	TBWL		
			AGF_COWL	2071	P	0	48	0	3	3	208	TBWL		
			AGF_BANK	2080	L	0	49	0	6	783				

	Category (Map)	Feature	Feature	Fname (Map)	Fcode	Attribute							
						type	style	level	wt	color	num	cell	table
	(FLIA)			FLIA_IRA	3010	AB	0	51	0	3	615		
				FLIA_IRAC	3011	AC	0	55	4	25	20		IRAC
					FLIA_OF	3020	P	0	52	0		33	3002
	(HYST)			WEAT_STN	4010	P		56		22			STN
				RAIN_STN	4020	P		57		22	5		STN
					WAEL_STN	4030	P		58		22	5	STN
	(MAPB)			map_base	5010	AB	0	61	0	2			
				mapboundc	5011	AC		62	4	5			MAPB
					map_agfa	5012	AB	0	60	0	3		

4.

가 ,

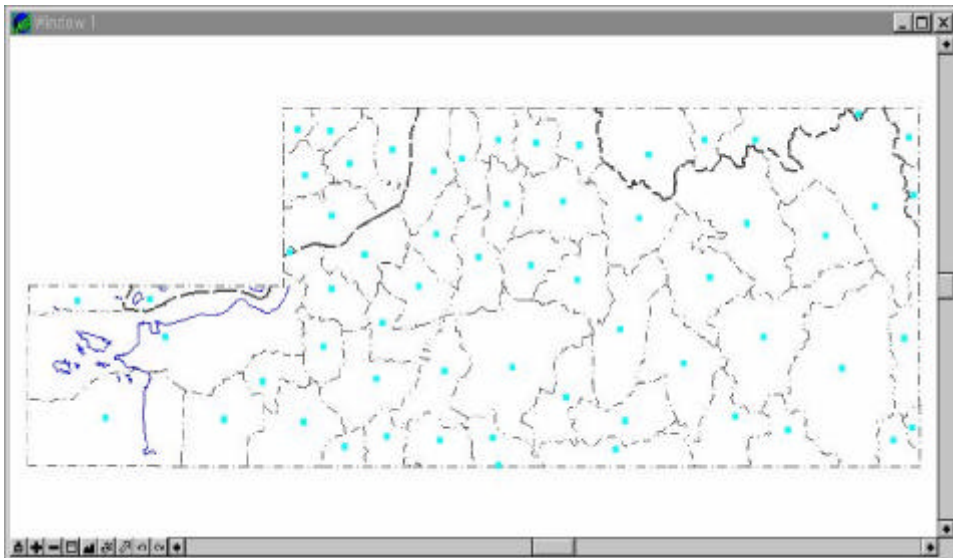
가.

(1)

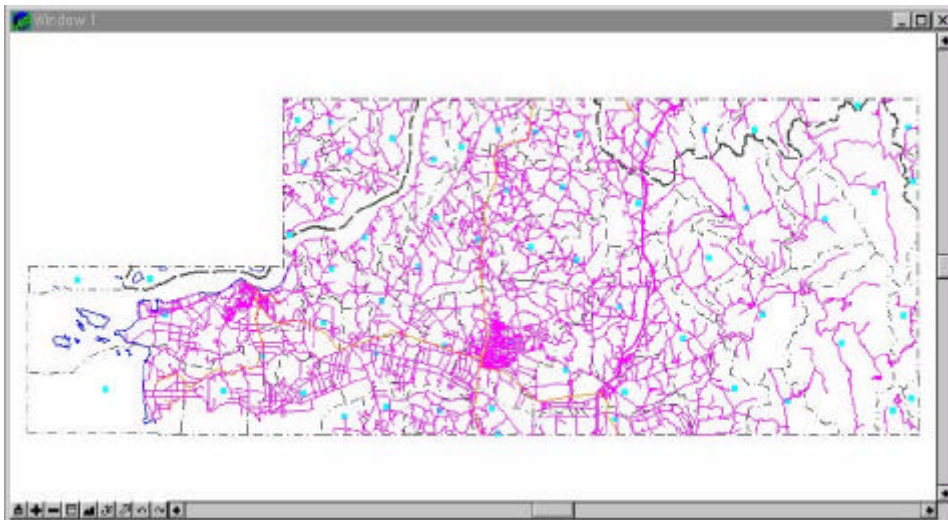
, < 4- 6>

(2)

, < 4- 7>



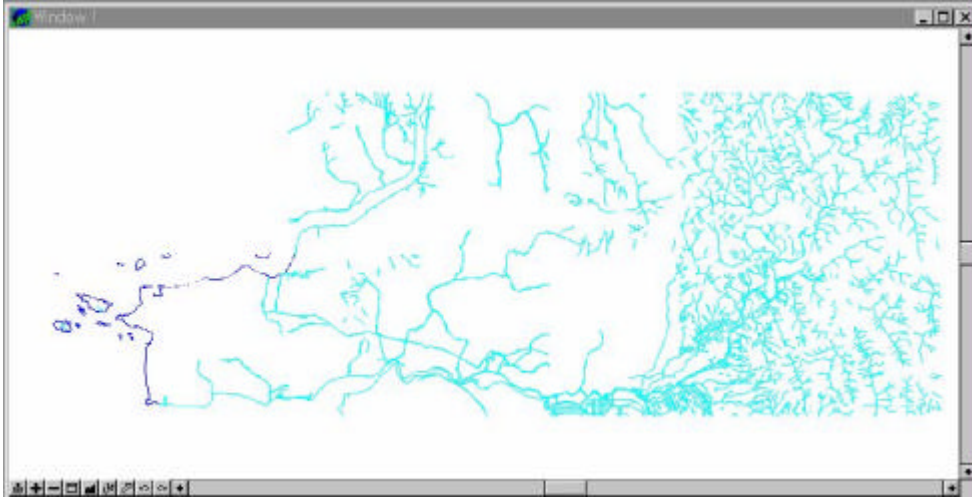
< 4-6>



< 4-7>

(3)

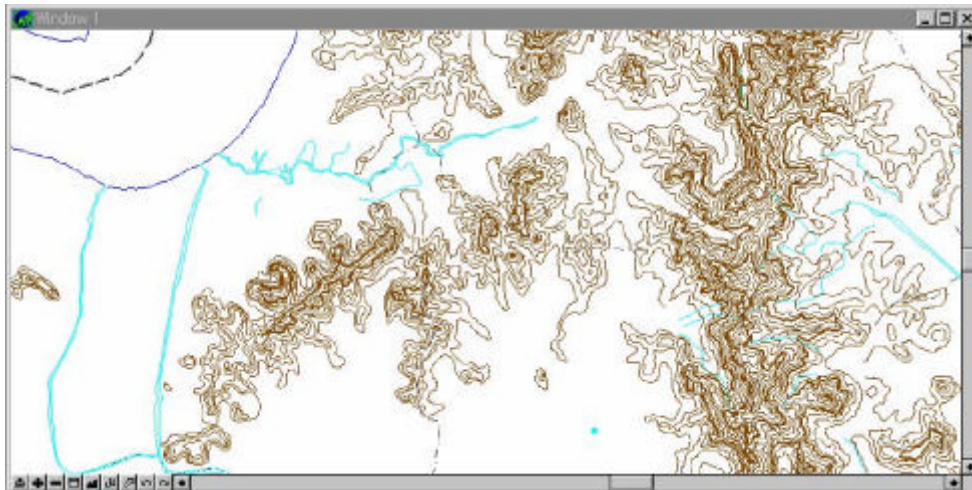
( , ), , < 4-8>



< 4-8>

(4) ( )

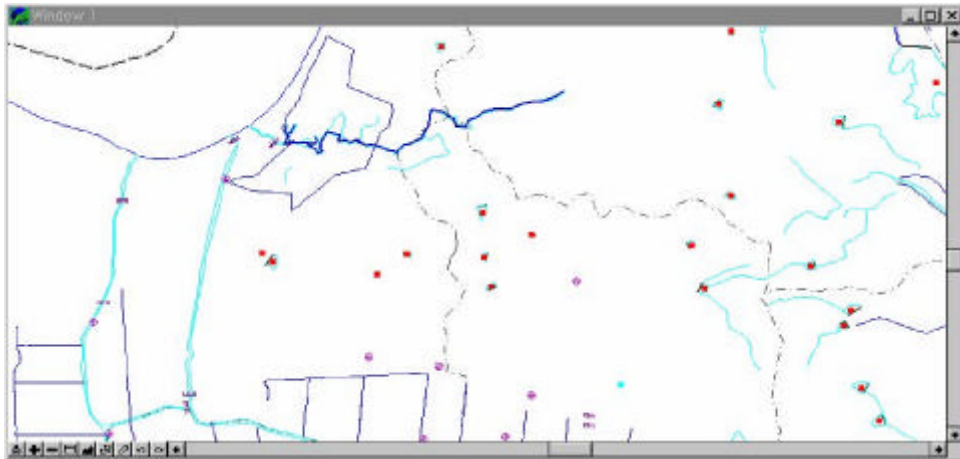
, , < 4-9>



< 4-9>

(1)

4-10>



< 4-10>

(2)

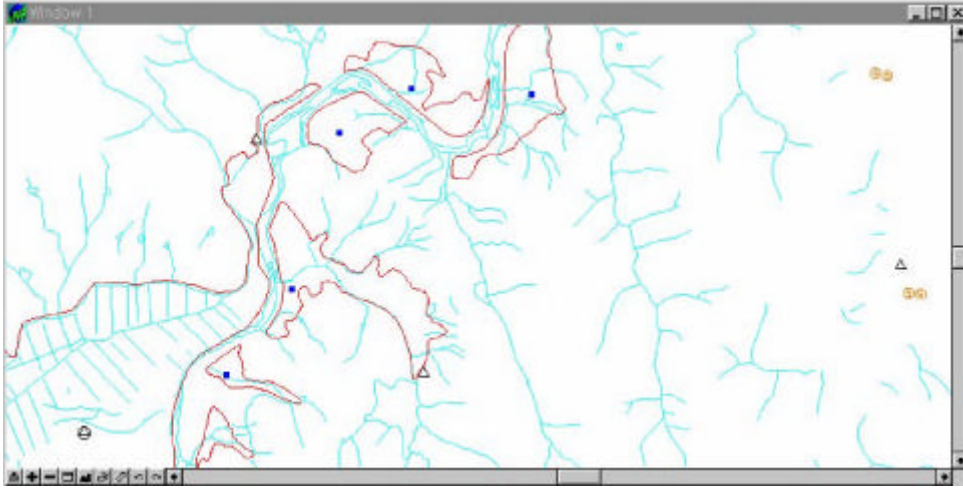
, < 4-11>



< 4-11>



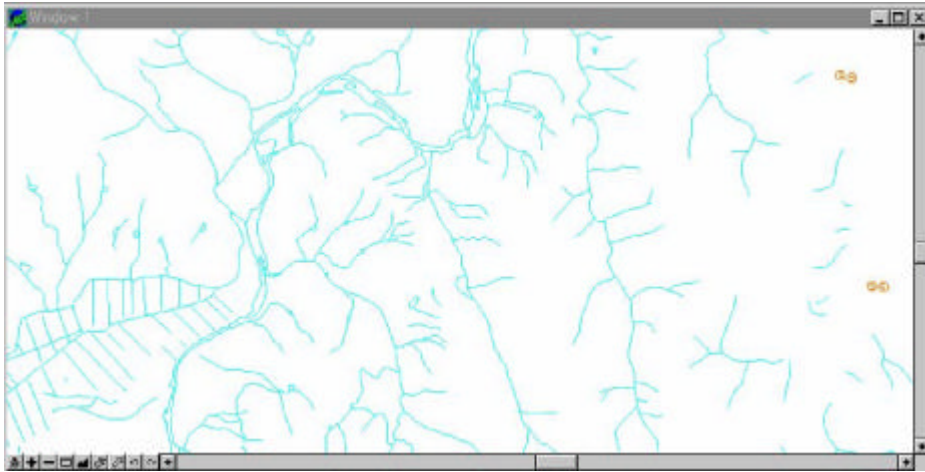
, < 4-12>



< 4-12>

, <

4-13>



< 4-13>





$$\begin{aligned}
 & \bullet \quad = \quad + \\
 (3) \quad & = \quad + \quad + \quad + \quad + \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \\
 & \bullet \quad = \quad ( \quad ) + \quad + \\
 - \quad & = \quad + \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \bullet \quad = \quad + \quad + \\
 - \quad & = \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \bullet \quad = \quad + \quad + \\
 - \quad & = \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \bullet \quad = \quad ( \quad ) + \quad + \\
 - \quad & = \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad + \\
 & \quad \quad \quad + \quad \quad \quad + \quad \quad \quad +
 \end{aligned}$$

$$\begin{aligned} \bullet &= + + \\ - &= + + + + \\ &+ + + + + \\ &+ + \end{aligned}$$

$$\begin{aligned} \bullet &= + + \\ - &= + + + \\ &+ + + \end{aligned}$$

$$(4) = + +$$

$$\bullet = + + + + +$$

$$\bullet = + + + \text{TM}$$

$$\bullet = + + +$$

$$+$$

$$\bullet = + + + + +$$

$$\bullet = + + + \text{TM}$$

$$\bullet = + + + + +$$

$$+ + + + +$$

$$\bullet = + + + + +$$

$$\bullet = + + + \text{TM}$$

$$\bullet = + + + + +$$

$$+ + + + +$$

$$+$$

$$(5) = + + + + +$$

$$+ + + + +$$

$$\begin{aligned}
 (6) \quad &= \text{Layer} + ( + + + ) \\
 & \\
 \bullet &= + + \\
 \bullet &= \\
 - &= + + + + \\
 \bullet &= + \\
 - &= , + , \\
 - &= \\
 \bullet &= + \\
 - &= + \\
 \bullet &= \\
 - &= \cdot \cdot + \cdot + \cdot
 \end{aligned}$$

5

1

2

3

4

5

6

7

8

# 5

1

Entity-Relation Model, (Web Server), (Web Server)

2

(Web-based geographic Information System for Irrigation Facilities : WISIF) (Intergraph) Geomedia Web Map

1.

Enterprise Web Server 3.0, Netscape, Live Wire, Web DB, Javascript



2.

query  
7.3 for NT

Oracle RDBMS

3.

NT 가

< 5-1>

< 5-1>

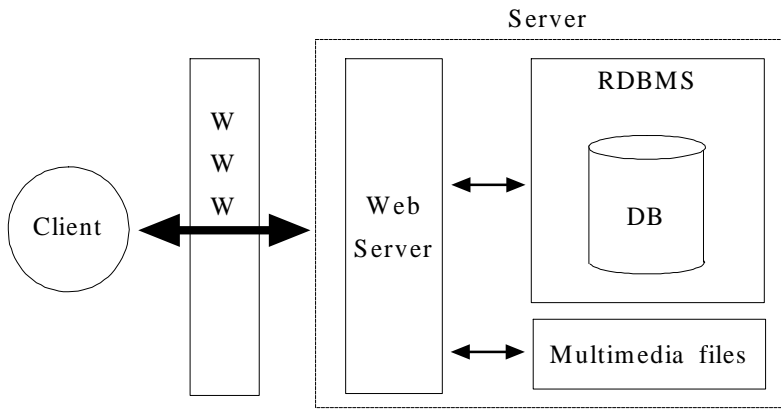
Web Server	Netscape Enterprise Web Server 3.0
RDBMS	Oracle Server 7.3 for NT

3

< 5-1>

HTML

가  
(Web Browser)



< 5-1>

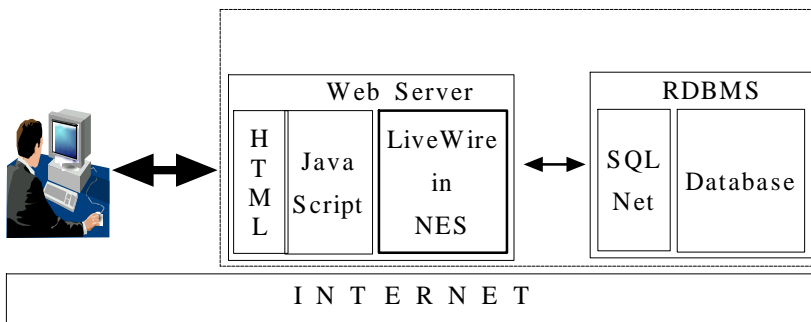
Netscape Enterprise Server 3.0

server-side Javascript 가

server-side Javascript

SQL Net

< 5-2> 가

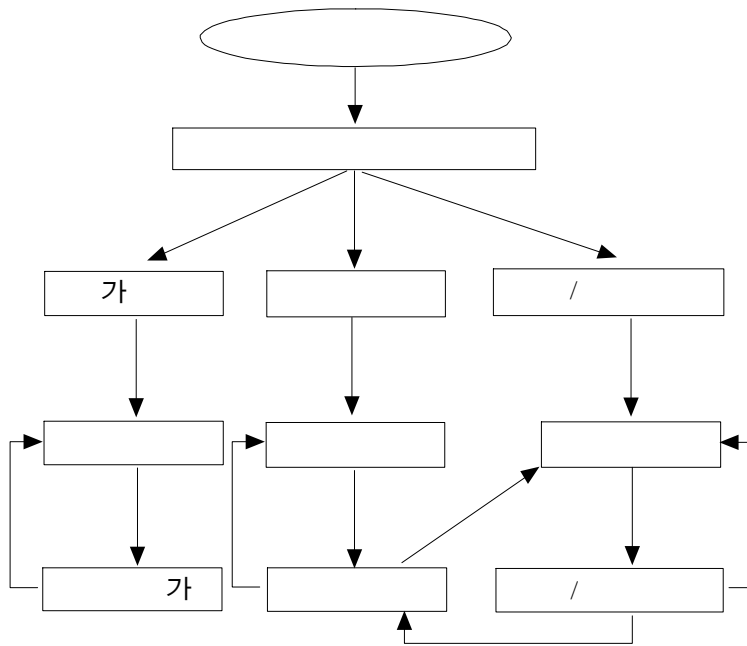


< 5-2>

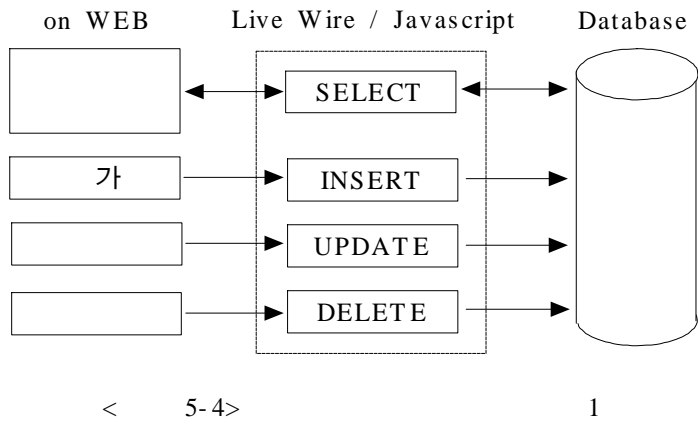
4

1. , /  
< 5-3> , /

< 5-4> SQL Javascript Live Wire



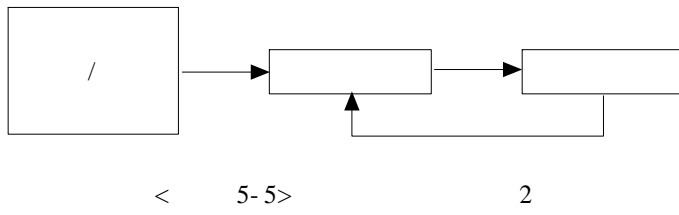
< 5-3> 1



2.

SELECT

< 5-5>

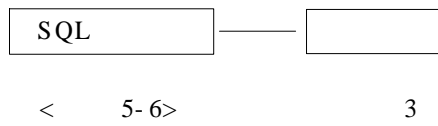


3.

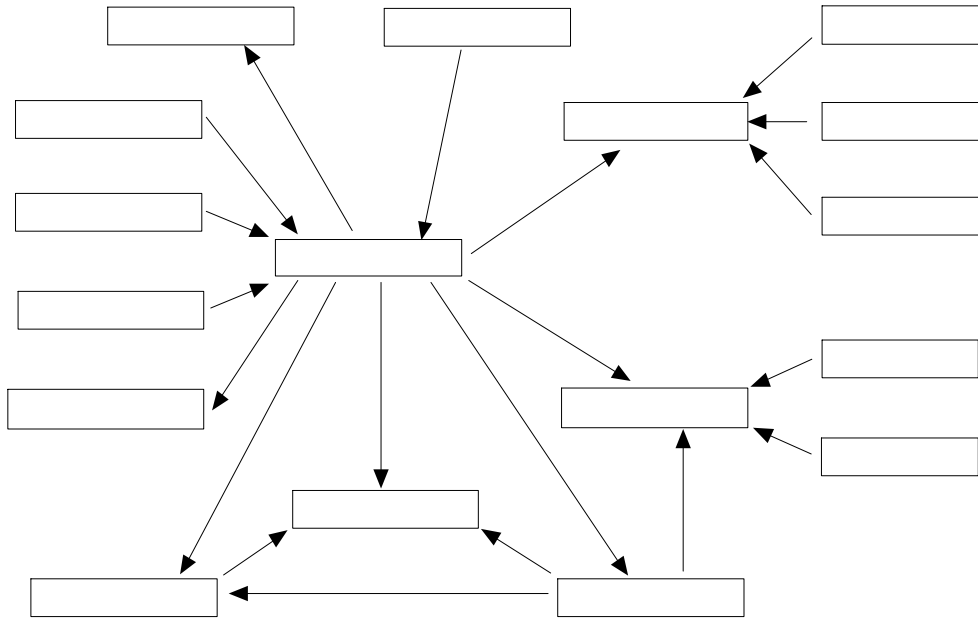
SQL

< 5-6>

Server-side JavaScript





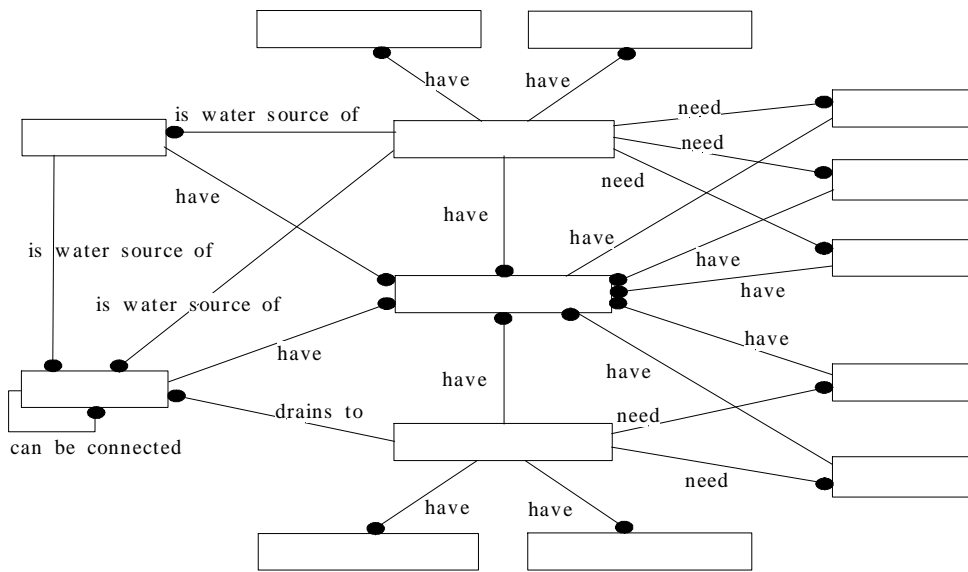


< 5-9>

ER(Entity- Relational) Diagram

<

5- 10>



< 5- 10>

ER(Entity- Relational) Diagram

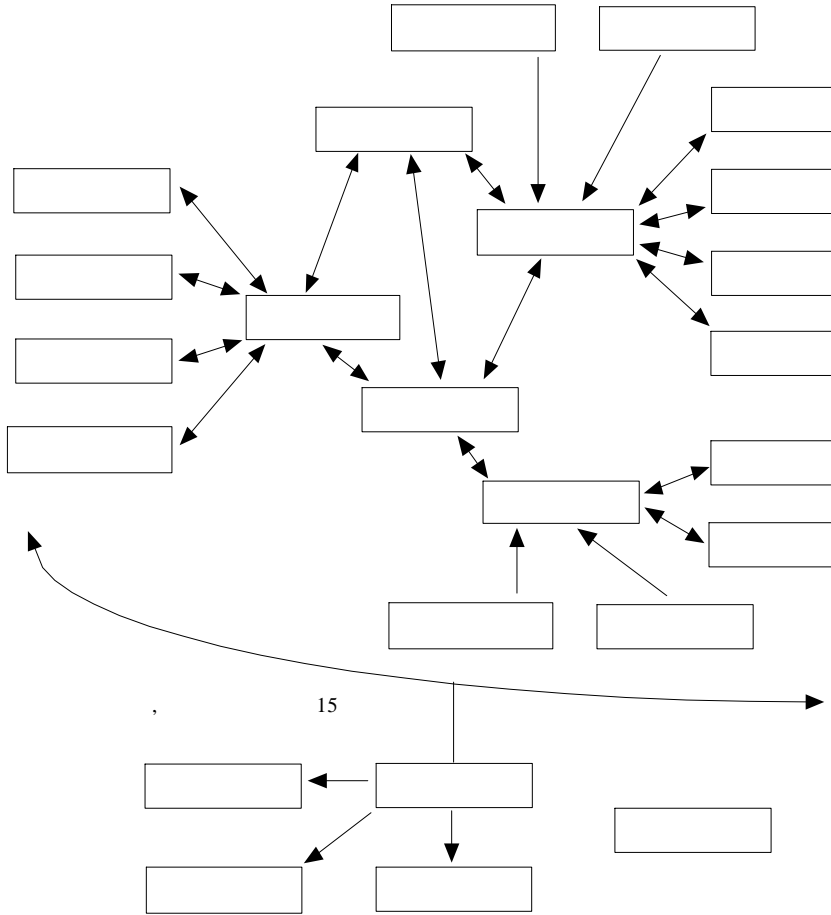
‘ ’ •

가

< 5-11>

‘1: ’ ( ‘1’,

‘ )



< 5-11>

가

CDM (Conceptual Data Model)

< 5-12>





가

< 5-2>

< 5-2>

Name	Code
	RESC
	REVOL
	REWEL
	DBANK
	SPIL
	INTA
	IRAC
	FWRC
	ESVOL
	ESWEL
	SEDI
	SLGA
	CANAL
	AST 1
	AST 2
	WGATE
	TBWL
	WEIR
	PUMP
	STN
	OFFICE
	MUNICIPAL
	MAPB

< >

RDBMS 7.3 for NT

Oracle Enterprise Manager

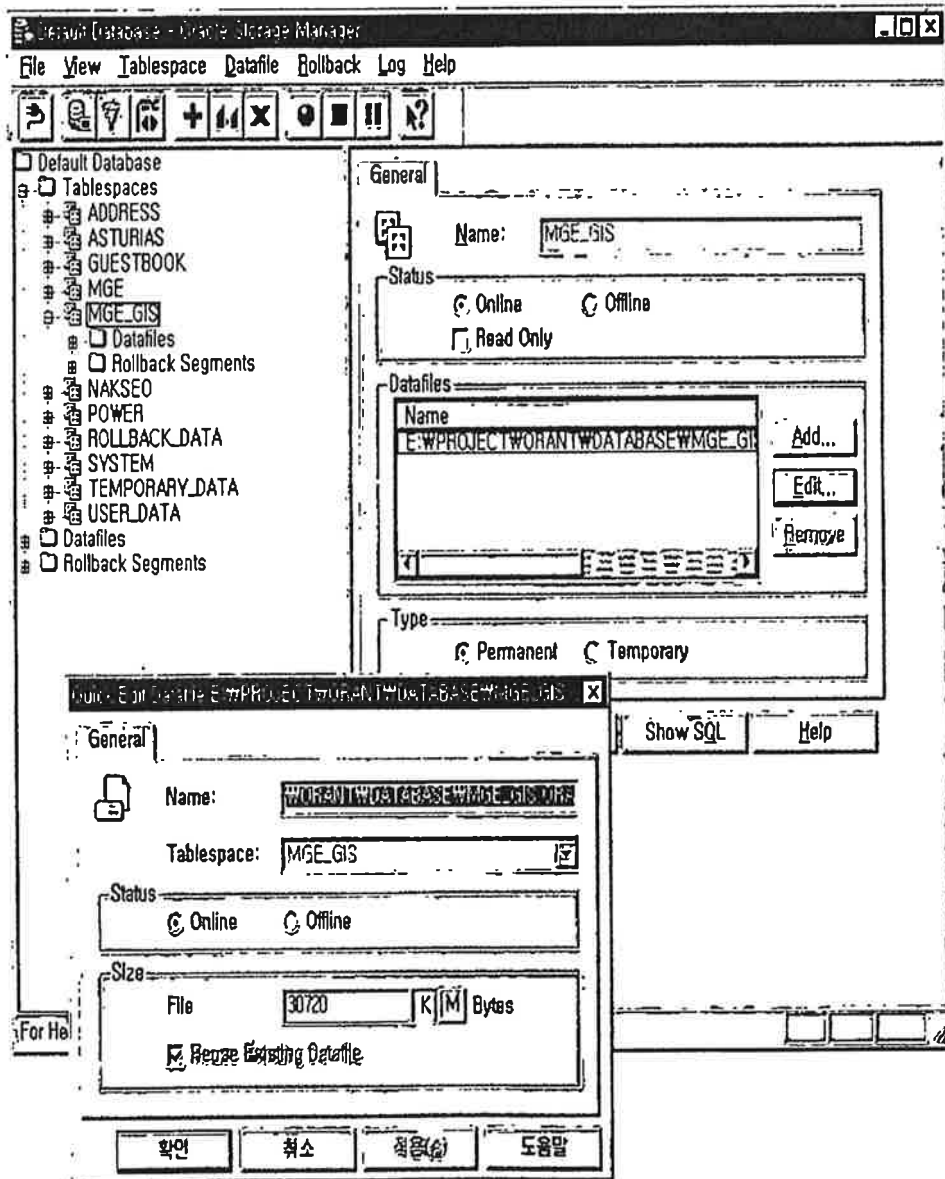
Storage Manager

가

system/manager

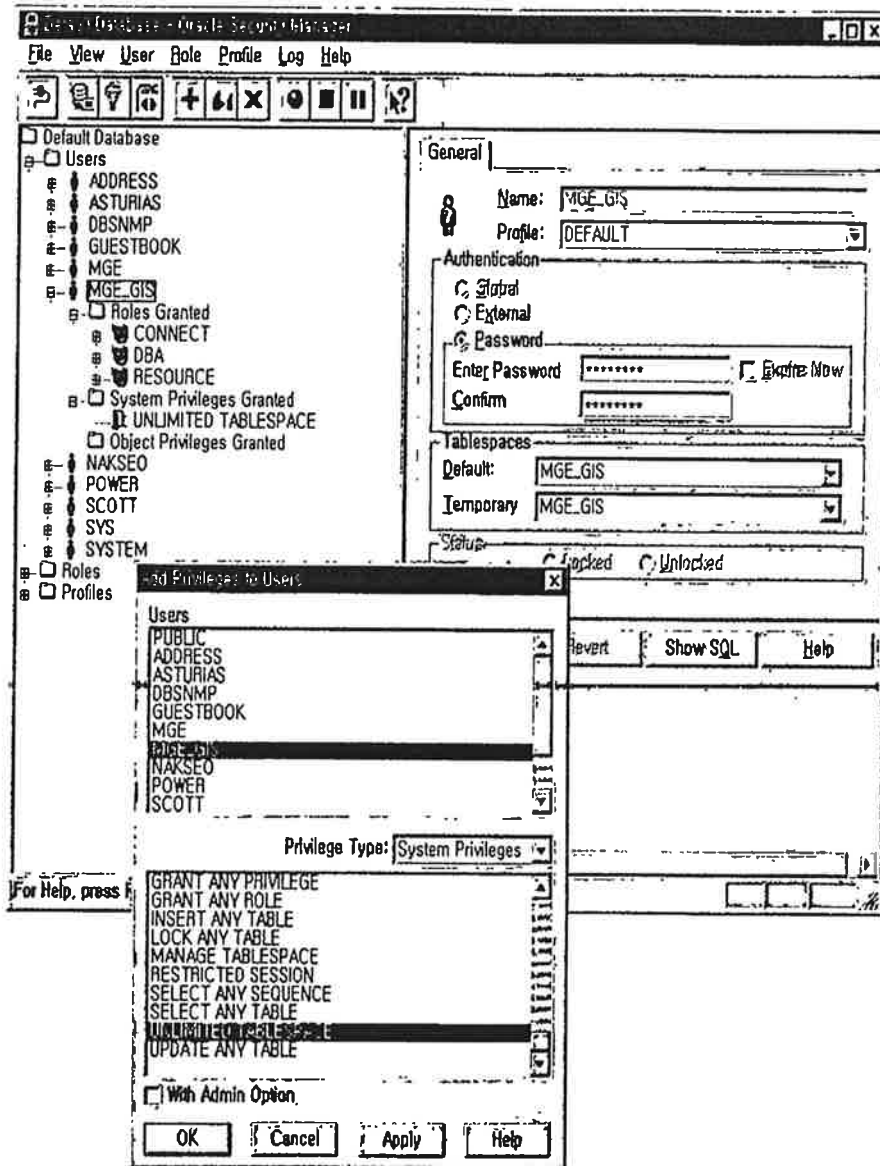
Tablespace

만든다. 데이터 파일이 위치할 곳은 오라클 디렉토리 Orant 내의 Database 디렉토리 내부이다. <그림 5-13>은 Storage Manager에서 구축한 Tablespace를 보여준다.



<그림 5-13> Storage Manager

그 다음에 Oracle enterprise Manager 내에 Security Manager에 같은 방법으로 로그인하여 Users에서 사용자의 이름, 암호, 권한을 설정한다. <그림 5-14>는 Security Manager에서 권한 설정을 보여주고 있다.



<그림 5-14> Security Manager

가

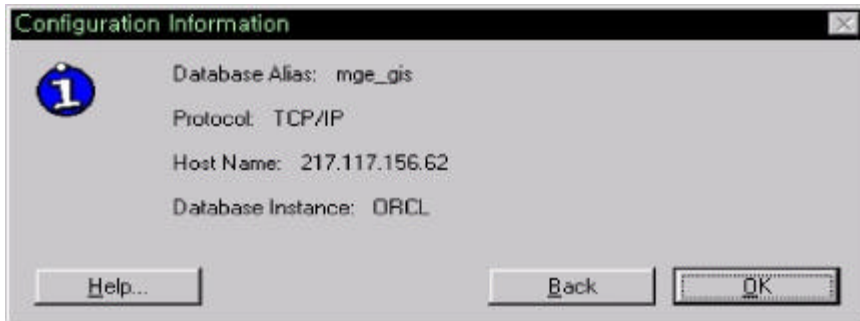
Oracle for Windows NT SQL Net Easy Configuration

alias, , IP

가

가

< 5- 15> SQL Net Easy Configuration



< 5- 36> SQL Net Easy Configuration

가 가

MGE

RIS

가

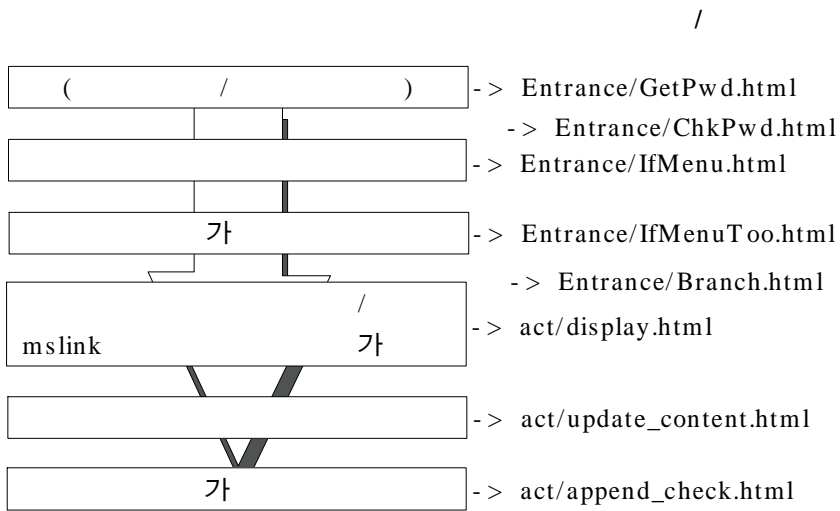
6

1.

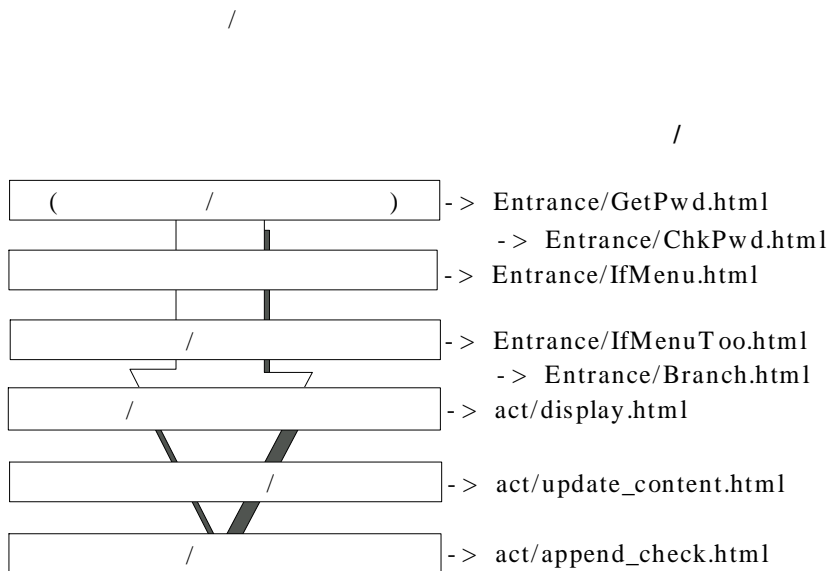
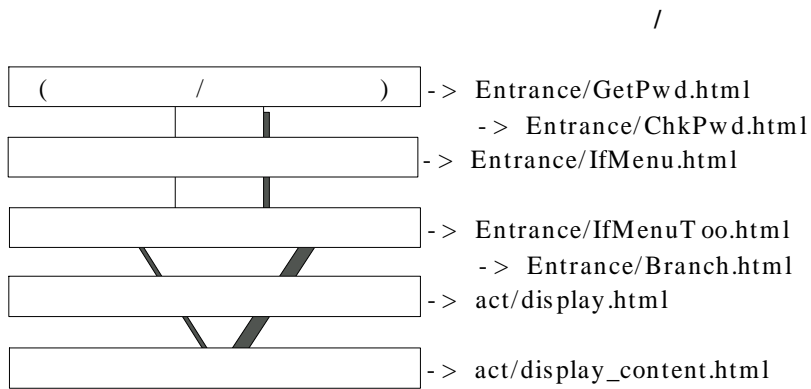
- , , /
- SELECT SQL
- 

fname 가 가 mslink 가 ( fcode, mslink )

가.



< 5-16>

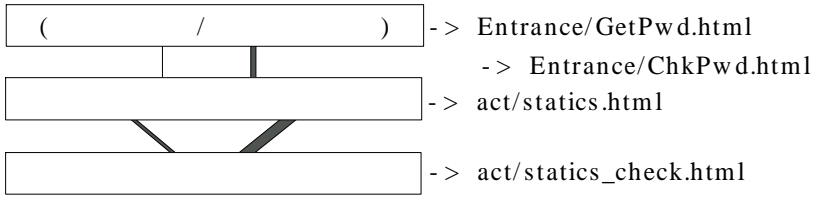


/ /

update\_content.html



/



< 5-21>

upload.exe, upload.ini

upload.exe

form action

upload.ini

(update\_content.html)

update\_content.html ->

trans.html ->

Home/success.htx

Home/error.htx 가

2.

### HTML

(1) Entrance / GetPwd.html

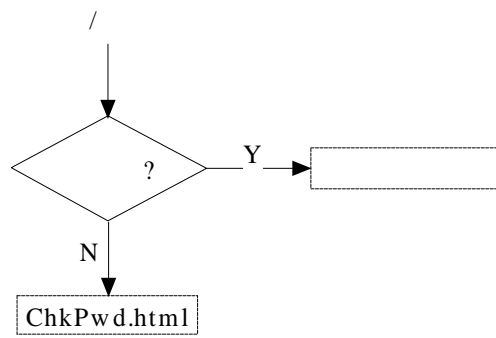
(password)

ChkPwd.html

가

< 5-22>





< 5-22> GetPwd.html

(2) Entrance / ChkPwd.html

GetPwd.html



< 5-23> ChkPwd.html

(3) Entrance / IfMenu.html

, /

가

IfMenuToo.html

(4) Entrance / IfMenuToo.html

, 가, / , / /  
guest 가, / .

가

Branch.html 가 .

(5) Entrance / Branch.html

act

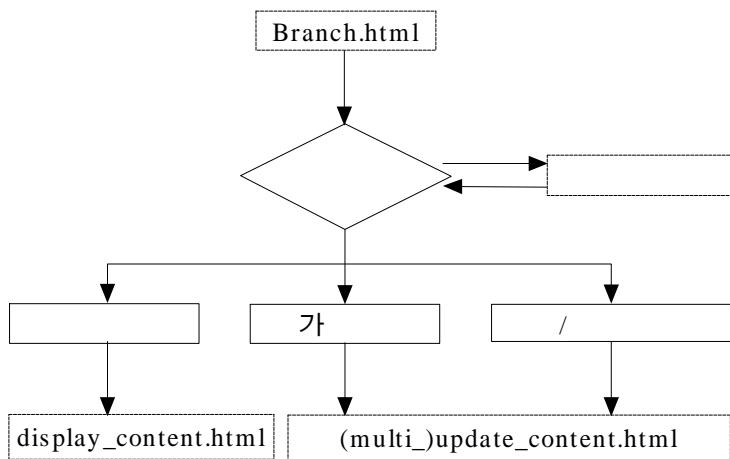
display.html .

(6) act / display.html

Branch.html

display\_content.

html, update\_content.html 가 .



< 5-24> Display.html

, mslink  
 Netscape  
 graph.js source file HTML Javascript

(7) act / display\_content.html

(8) act / update\_content.html

‘ 가’

(9) act / append\_check.html

update\_content

가 insert

, update , delete

(10) act / multi\_display.html

diplay.html

(11) act / multi\_update\_content.html

‘ / / ‘ / 가

update\_content.html

(12) act / multi\_append\_check.html

multi\_update\_content.html

, . append\_check.html .

(13) act / query.html

'SELECT ' ,  
where  
. where 5 . where  
checkbox  
form client-javascript .  
where

(14) act / query\_display.html

select  
가 .

(15) act / query\_display\_content.html

. display\_  
content.html .

(16) act / query\_free.html

SQL .  
SQL .

(17) act / query\_free\_check.html

SQL  
. SQL .

(18) act / statics.html

(19) act / statics\_check.html

(20) act / trans.html

Home

success.htx가 , error가

(21) act / exception.html

가

(22) act / wifis.js, wifis1.js, wifis2.js, wifis3.js

function source

가 function

function < >

7

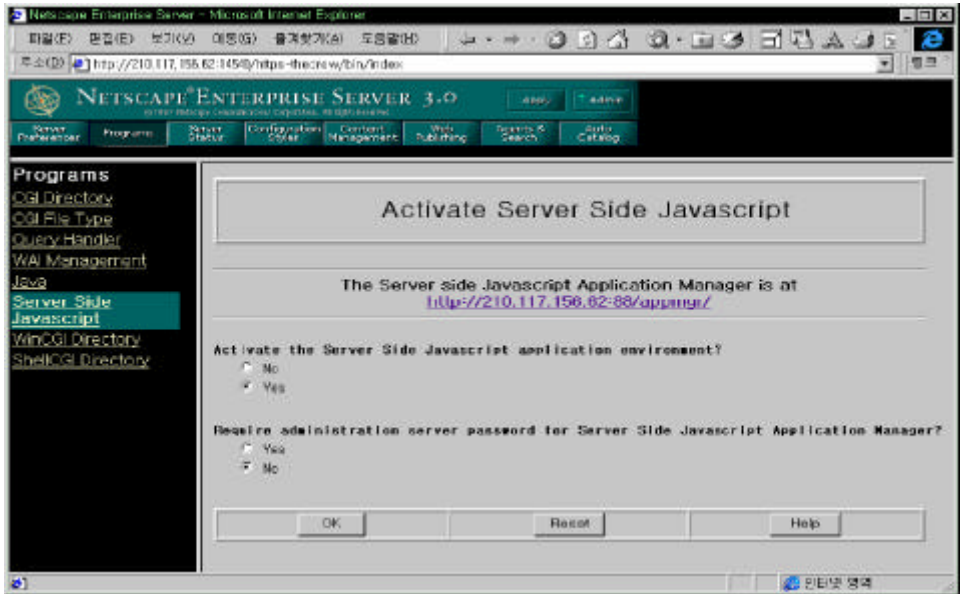
, 가, /

, / /

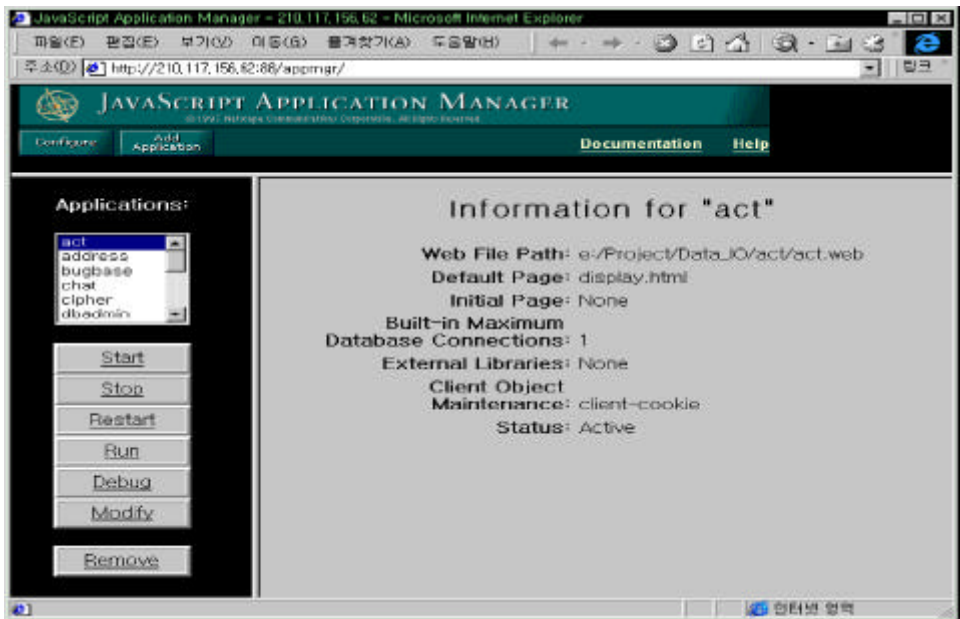
/ , /

default



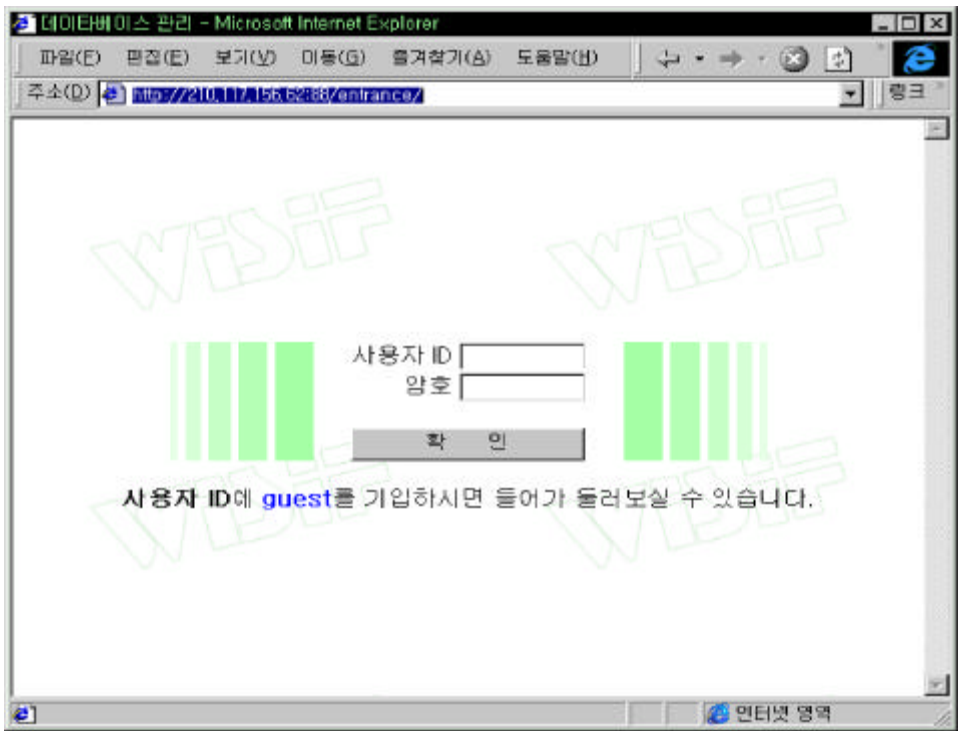


< 5-46> JavaScript



< 5-47>

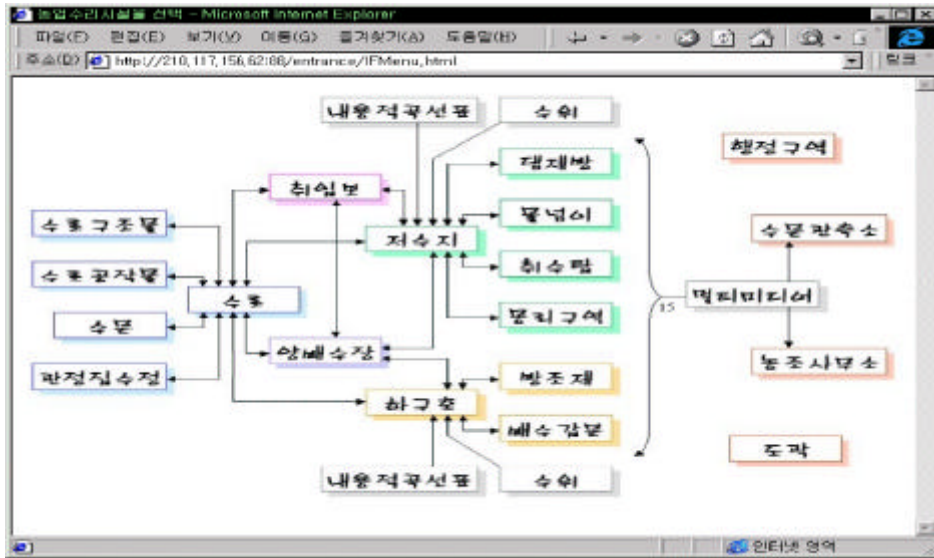
<http://210.117.156.62:88/entrance> , ,  
 / , <http://210.117.156.62:88/act/query.html> SELECT  
 , [http://210.117.156.62:88/act/query\\_free.html](http://210.117.156.62:88/act/query_free.html)  
 SQL , <http://210.117.156.62:88/act/statics.html>  
 WISIF web server Home  
 , WISIF



< 5-48 >

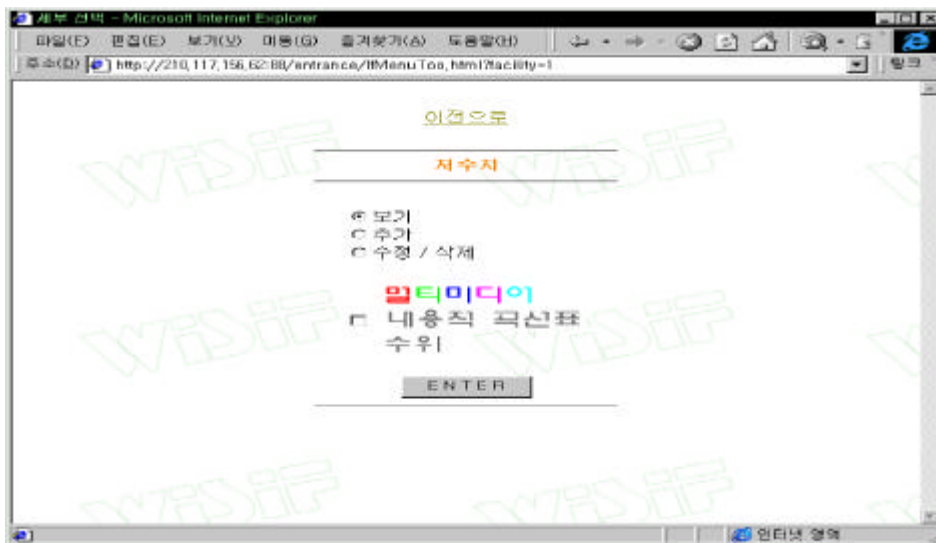


1. , , / ( http://210.117.156.62:88/entrance )



< 5-49> ( )

가. , 가, / , /

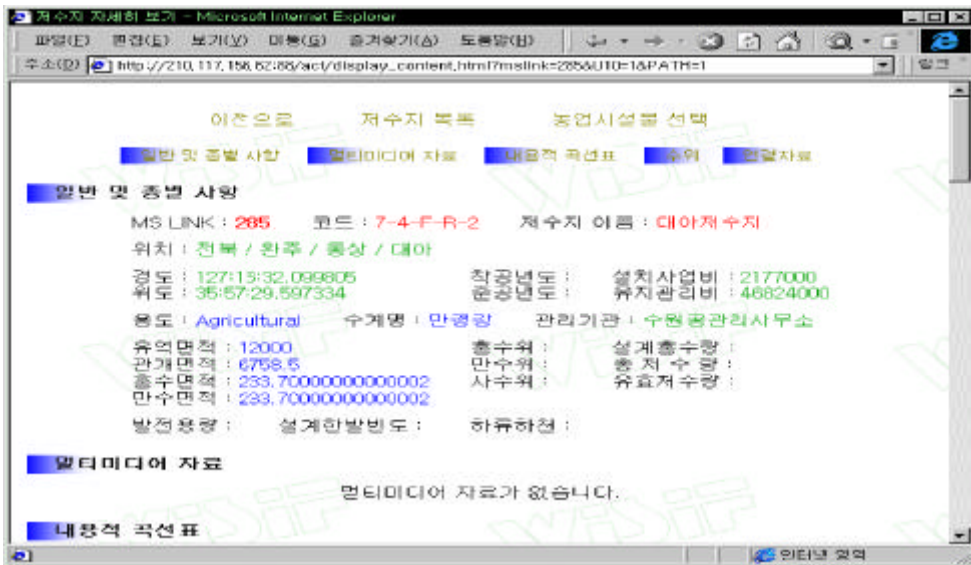


< 5-50>

( 가, / )



< 5-51 >



< 5-52 >

가

< 5-53 > 가

/

< 5-54 > /

2. SELECT ( http://210.117.156.62:88/act/query.html )



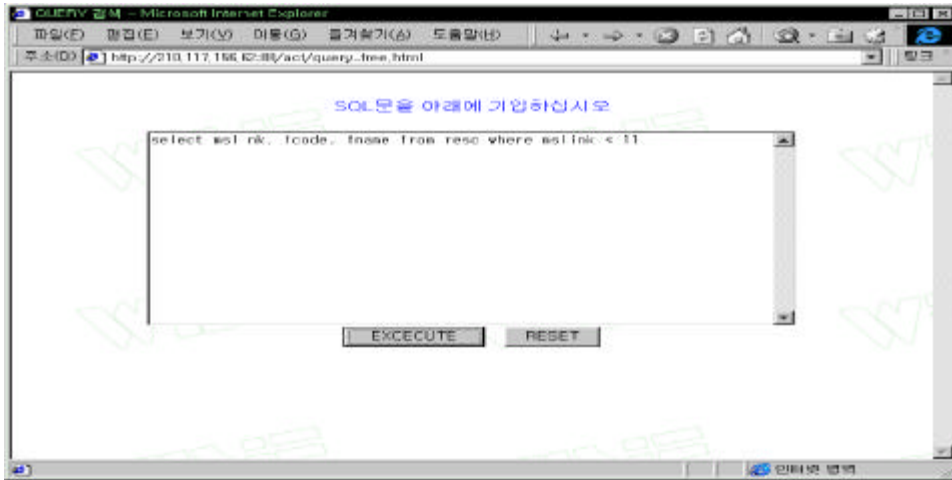
< 5-55> SELECT

가.



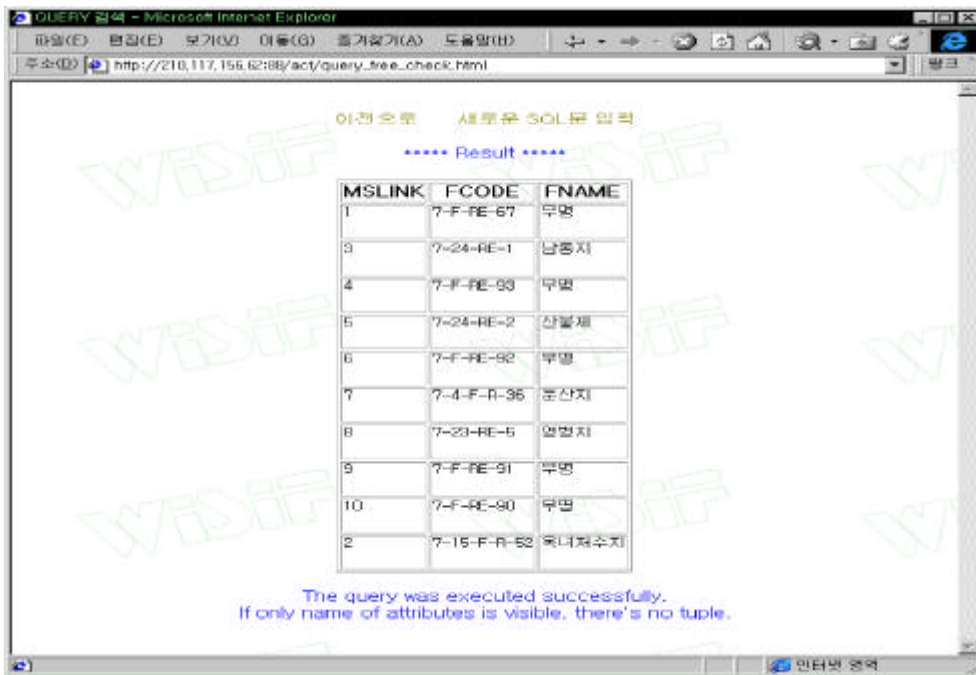
< 5-56> SELECT

3. SQL ( http://210.117.156.62:88/act/query\_free.html )



< 5-57> SQL

가.



< 5-58> SQL



6

1

2 WISIF

3

# 6

## 1

WISIF(Web based Information System for Irrigation Facilities)  
가

,

. WISIF

MGE

DGN ActiveCGM Map

(Geomedia Web Map)

## 2 WISIF

1.

WISIF < 6- 1>

Microsoft ISAPI

(Internet Server Application Programming Interface)

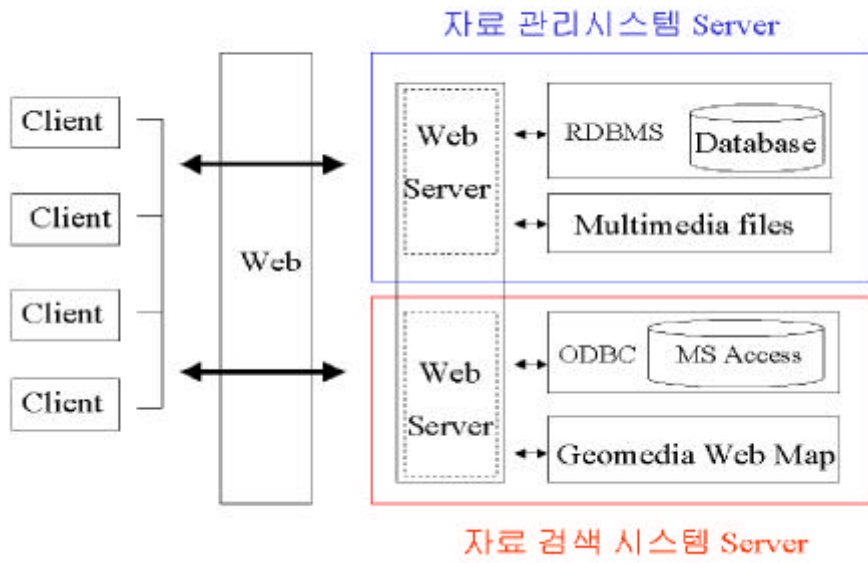
5

ODBC

Windows NT

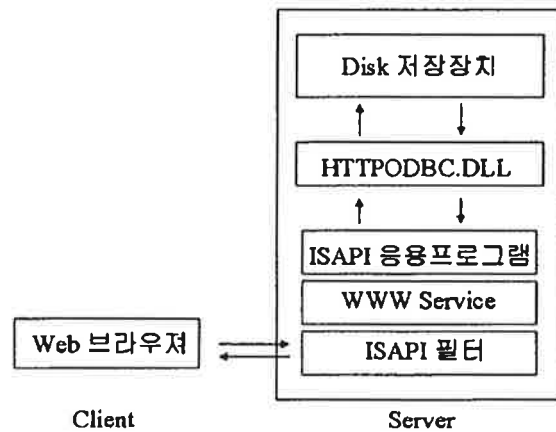
ISAPI CGI(Common Gateway Interface)





< 6-1 >

Geomedia Web Map  
 (GWM)  
 ISAPI < 6-2 > HTML 가 Web  
 HTML  
 HTML  
 ISAPI HTTP(Hypertext Transfer Protocol)  
 가 가 , ISAPI  
 , , ,  
 ISAPI Geomedia Web Map

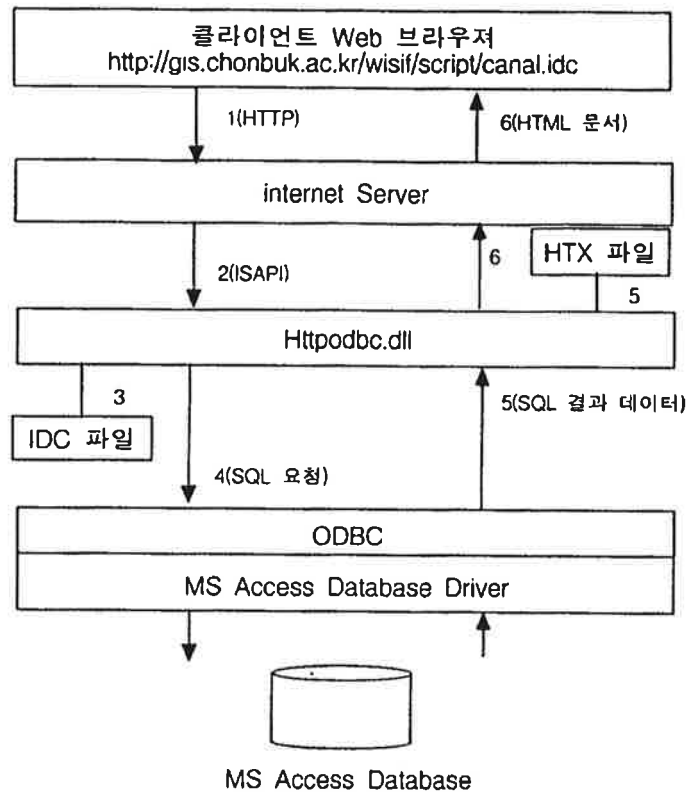


<그림 6-2> ISAPI 응용프로그램의 작동

이러한 ISAPI 필터와 Geomedia Web Map을 사용하여 복합적인 사이트를 만들었으며 ISAPI 확장명을 IDC와 결합하여 대화식으로 지도를 검색하는 사이트로 구성하였다.

IDC(Internet Database Connector)를 이용한 어플리케이션의 작업 과정은 몇 단계로 분리하여 이루어진다. 사용자로부터 IDC 파일의 요청이 Optional HTML 품의 변수 형태로 발생하면 IDC 파일에서 지정된 HTX(확장 HTML 템플릿) 파일에 보내는 결과 셋을 모으는 쿼리를 데이터베이스로 보내는 대응 입력 변수가 데이터베이스에 결과를 반환하는 쿼리를 수행시키고 입력변수에 관한 결과 셋은 IDC 파일에 선언되어진 HTX 파일에 대응 입력 변수와 대응 결과 셋으로 포함되어져 완전한 HTML 페이지를 재구성하여 사용자에게 전달된다.

예를 들어 수로를 검색하는 경우 IDC/HTX 파일은 <그림6-3>과 같은 절차를 통해 구동되며 그 내용은 다음과 같다.



< 그림 6-3> 수로검색을 위한 Canal.idc/htx의 동작

- (1) 클라이언트가 Web 브라우저 상에서 "수로 검색"을 선택하게 되면 클라이언트의 브라우저로부터 URL이 보내지고 Internet Information Server(IIS)가 URL을 수신한다.
- (2) IIS가 Httpodbc.dll을 읽어들이고 URL의 나머지 정보를 제공한다. IDC 파일은 httpodbc.dll에 매핑된다. Httpodbc.dll은 IIS에 전달된 URL에서 IDC 파일 이름과 그 밖의 항목을 읽어들인다.
- (3) Httpodbc.dll은 IDC 파일을 읽는다. 일반적인 IDC 파일의 필수구성항목은 <표 6-1>과 같다.

< 6-1> IDC

field	value	
Datasource	MS Access database	ODBC MS Access Database
Template	canal.htx	HTML
SQLStatement	SELECT * from canal...	SQL SQL

```

                                canal.idc
WISIF .                                ODBC MS Access Database
System DSN                                canal.idc
.
Datasource : MS Access database
Username : wisif (ODBC
: MS Access Database "wisif" )
Template : canal.htx (
canal.idc SQLStatement wisif.mdb "canal"
mslink canal.htx )
SQLStatement : +SELECT * from canal where mslink = %mslink%
(SQL SQL )

```

(4) IDC가 ODBC IDC(Interent Database Connector)  
 SQL . IDC ODBC  
 MS Access Database ODBC  
 IDC  
 SQLStatement MS Access Database ODBC MS  
 Access Database ODBC MS Access Database

(5) IDC가 HTML  
 SQL IDC canal.idc(canal.htx) HTML  
 HTML (.htx) SQL  
 가 IDC  
 HTML Tag

(6) IDC가 Internet Information Server  
 , canal.htx  
 HTML Web  
 mslink 가  
 IDC/HTX

WISIF  
 GIS  
 가  
 가 Element

(  
 JavaScript, VBScript, IDC/HTX, PerlScript Visual interDEV)  
 가 GIS, RDBMS  
 ODBC 가 HTML

2.

WISIF GIS

가

MGE

GIS

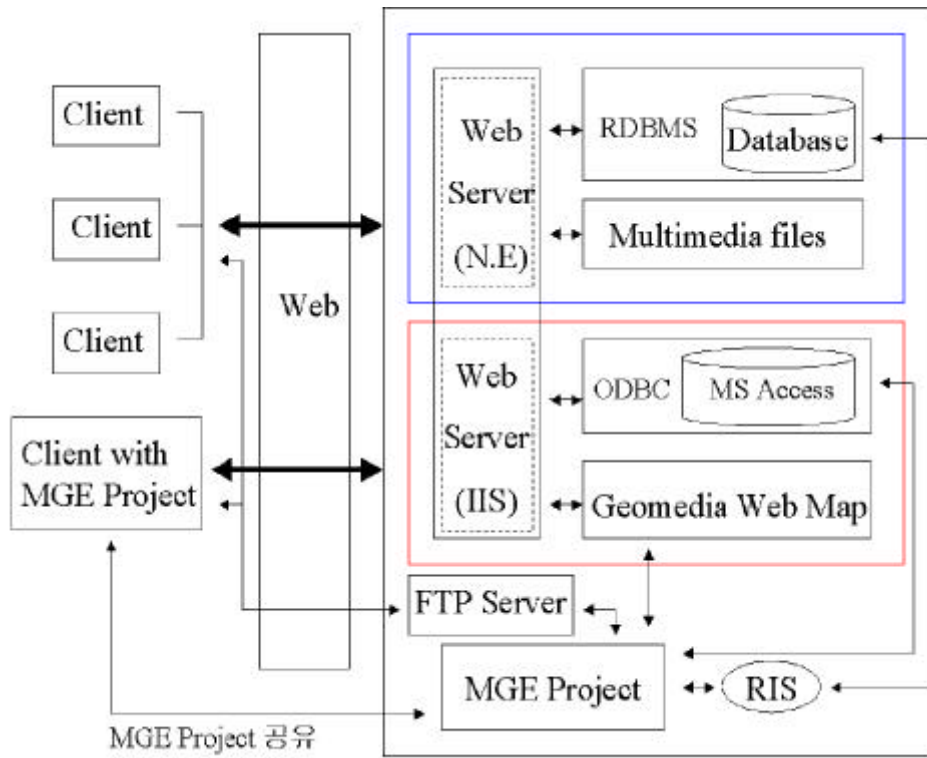
Geomedia Geomedia Web

Map

GIS

SERVER

< 6-4 >



< 6-4 >

MGE Databases

idc/htx . Active  
 CGM Map 가

Windows NT Server .  
 Windows NT Server 5.0 . IIS(Microsoft  
 Internet Information Server) 3.0 , 4.0

2 .  
 2  
 port .

WISIF 3.0  
 Geomedia Web Map ODBC ISAPI  
 IIS(Internet Information Server)

가.  
 ODBC SystemDSN  
 MGE 가 RDBMS  
 RIS 가 GWM  
 GWM 가 GWM IIS  
 가 가 .  
 GWM IIS  
 . \win32app\ingr\geow map\  
 \win32app\ingr\geow map\ GWM





가

CGI POST HTTP

HTML

“ ” CGI ,

ActiveCGM Map Geomedia Web Map

Script 가

가 URL CGI 가

Cmd.exe .cmd .bat

IDC(Internet Database Connector) .idc

Oracle

GWM

MS Access

Web GIS

가 WISIF ODBC

MGE .mdb

GWM .mdb

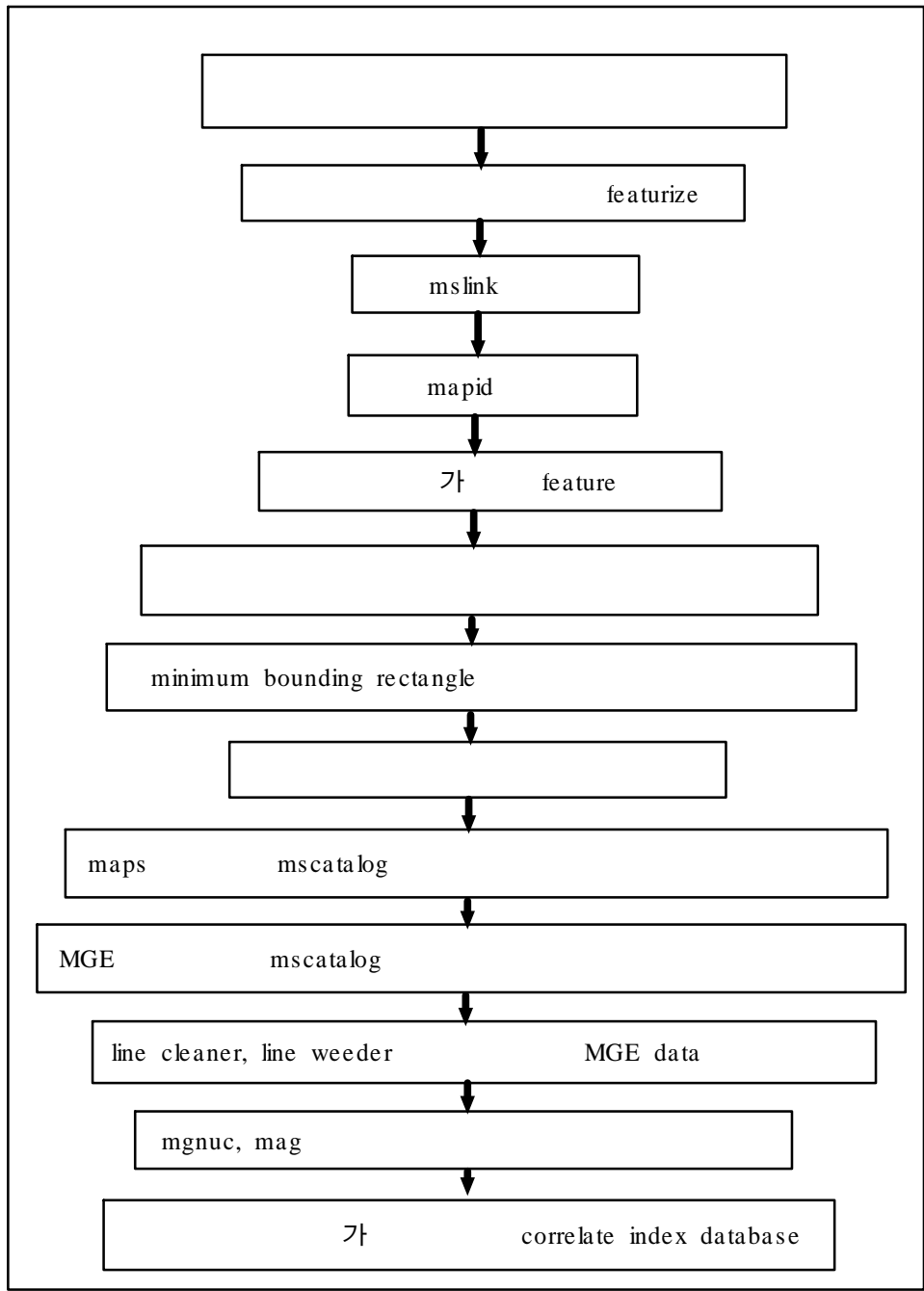
2

Database

Database

WISIF 2





< 6-6> MGE

GWM

.mdb  
idc/htx ODBC가  
가

가

IIS  
가 FTP  
가

IIS

가

WWW

WISIF

가

IIS

IUSR\_wisif

가

IUSR\_wisif

Perl

(.pl

)

IDC

(.idc, .htx

)

IUSR\_wisif

가

IUSR\_wisif

Server

WISIF

, BBS

FTP

가

MGE ActiveX  
 FTP  
 MGE 가  
 가 .

### 3 Geomedia web map(GWM)

Geomedia Web Map(GWM) Open GIS  
 2.0 asp  
 가 . ActiveCGM  
 3D  
 GWM Windows NT IIS GIS  
 . GWM ActiveCGM  
 가  
 가 Windows INI  
 MDF (Map Definition File)  
 ( ) GIS  
 , , ,  
 feature  
 GWM MGE, FRAMME, MGE Data Manager, Microstation  
 design files GWM GIS  
 가 ,  
 가

Microsoft IIS  
Active Server Page

가  
GWM ISAPI

5

### 1. ActiveCGM

Vector graphic ISO CGM standard (ISO 8632:1992) CGM Computer Graphic Metafile

ActiveCGM CGM

GWM ActiveCGM Map

. MGE

가 GWM .mdf

가

Geomedia Web

Mapcreatemap.exe

.dgn

ActiveCGM

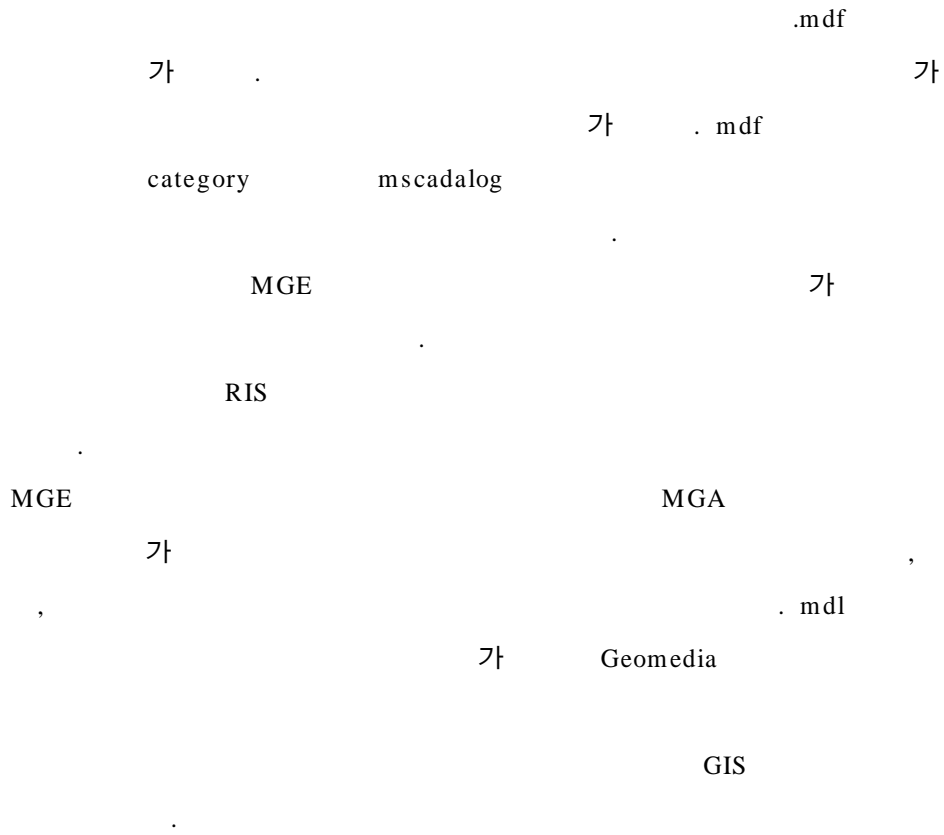
ActiveCGM

2.

			가	가
	RDBMS	Oracle		MS Access
Database	.			가
		oracle	Recode	
			RIS Unloader	
.dmp		.mdb		
	recode		가	
	MGE	Feature	Scheme maker	
Oracle database		MGE	.mpd	Export
ODBC		MGE	.mpd	Import
	RDBMS		가 .mdb	.
ORACLE		RIS	MS Access	
		가	.mdb	MGE
	Recode		.	
GWM				
		ODBC	Access	
	가			가
GWM		ActiveCGM	가	
			.	
	GWM	Perl	가	가
Element가			가	.
,	,	,	,	,
Java		GWM		GWM
				.

3.

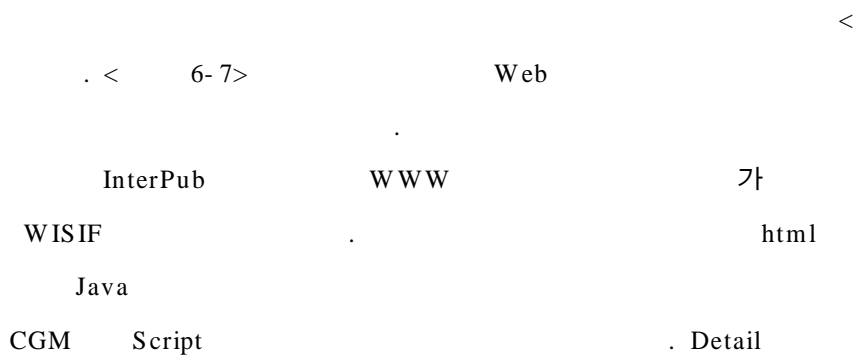
Web



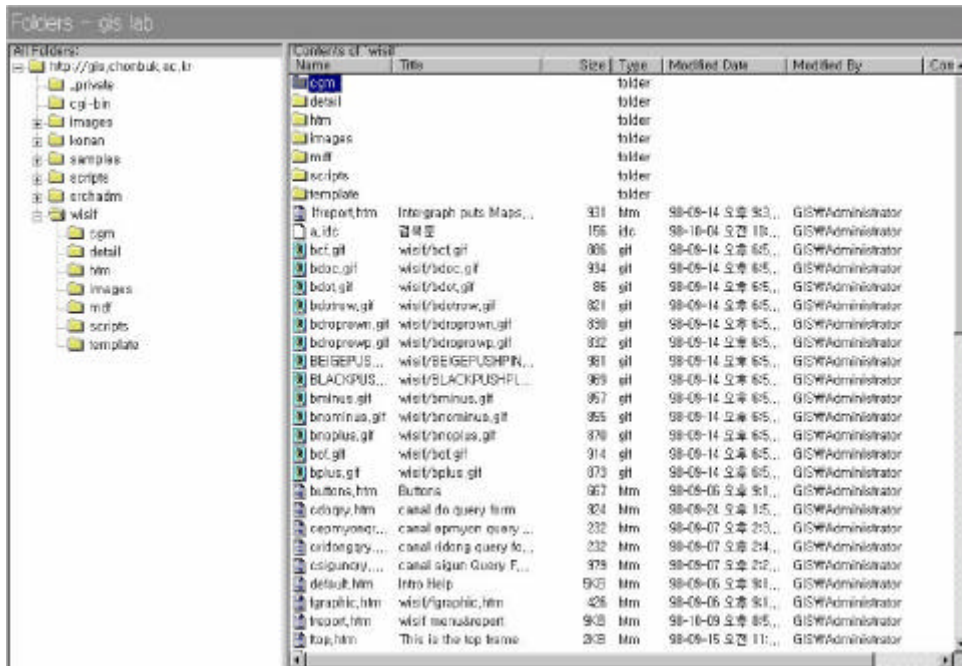
4. GWM

GWM

6-7>







< 6-7> Web

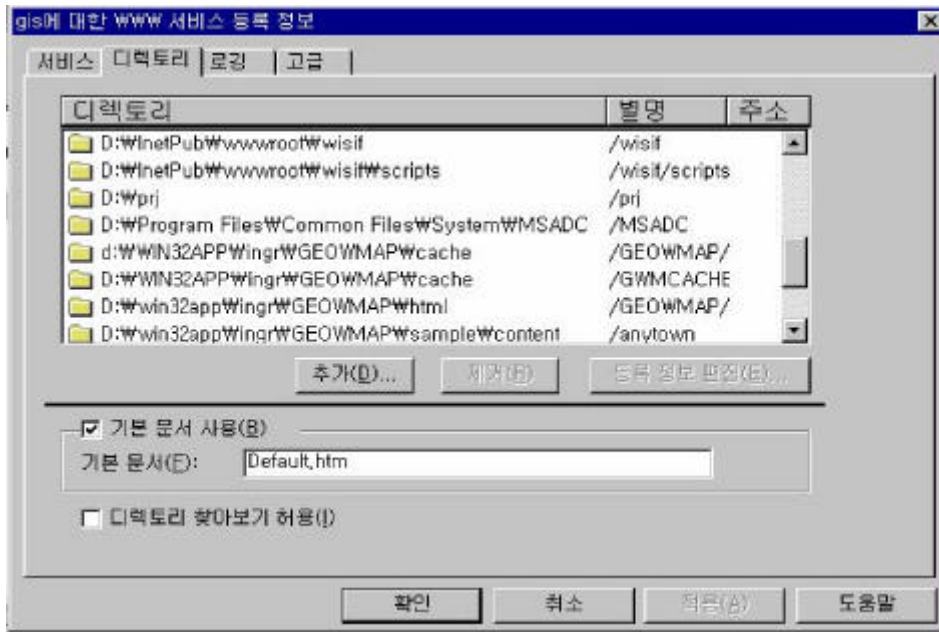
< 6-8> WWW 가

Internet Service Manager html 가  
가

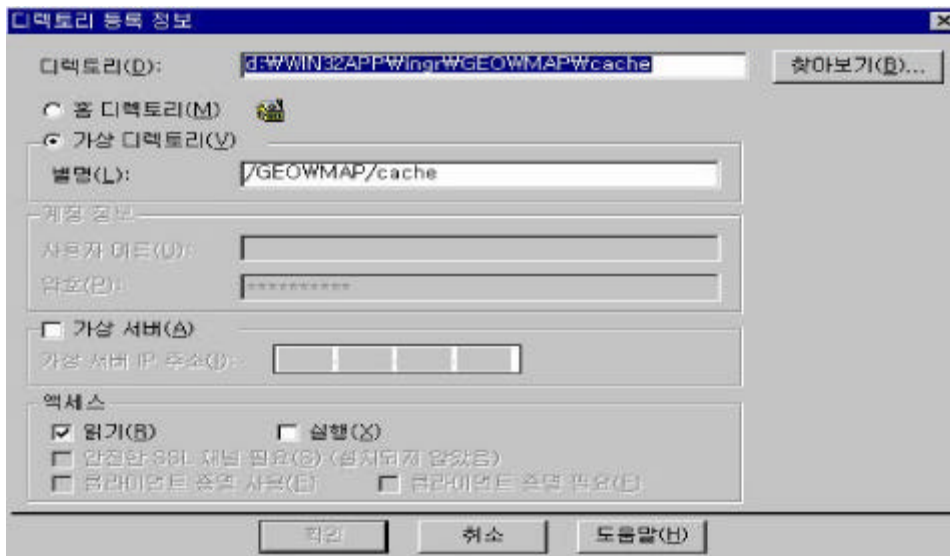
Geomedia Web Map Geomedia Web Map  
가 Cache . <

6-9> Cashe 가 Cache

GWM 가 가  
가 GWM 가



< 6-8> WWW 가



< 6-9> Cache 가

< 6- 10> GWM MDF 가  
 Script 가  
 가  
 mapbyqry.pl mapbyrng.pl  
 mapbythm.pl pkg\_cgi.pl pkg\_dgn.pl pkg\_html.pl pkg\_ini.pl pkg\_log.pl  
 pkg\_mdf.pl pkg\_mge.pl pkg\_reg.pl setgwm.pl custout.pl GWM  
 URL  
 Script



< 6- 10> Geomedia Web Map Scripts

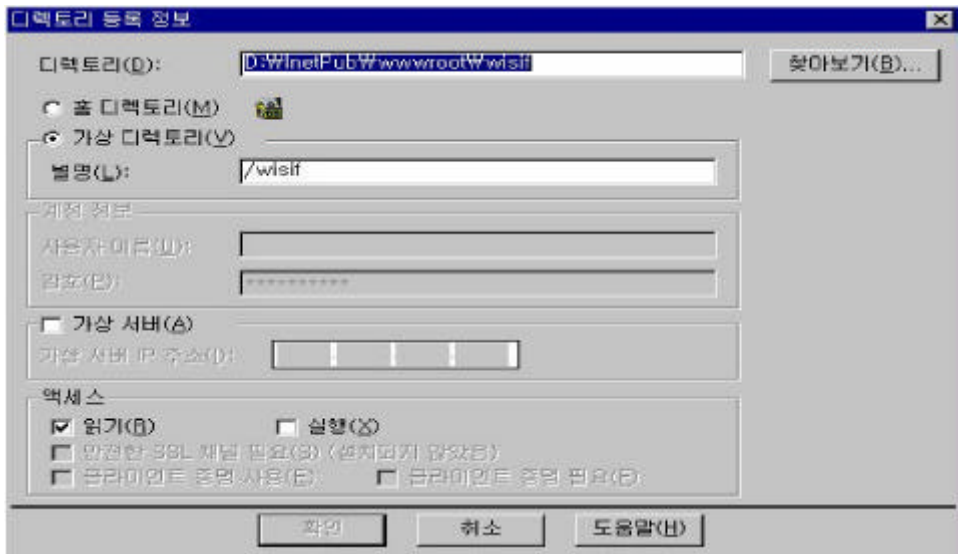
(WISIF)

< 6- 11>

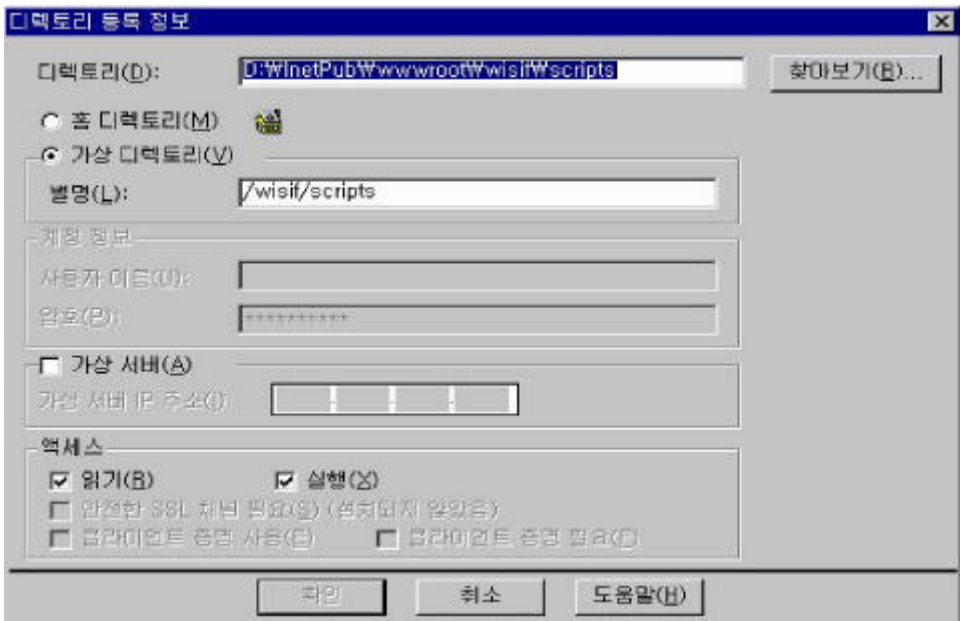
가

default.htm

< 6- 12> Scripts



< 6-11> WISIF 가



< 6-12> WISIF Script 가

가 idc/htx . Scripts

Geomedia Web

Map

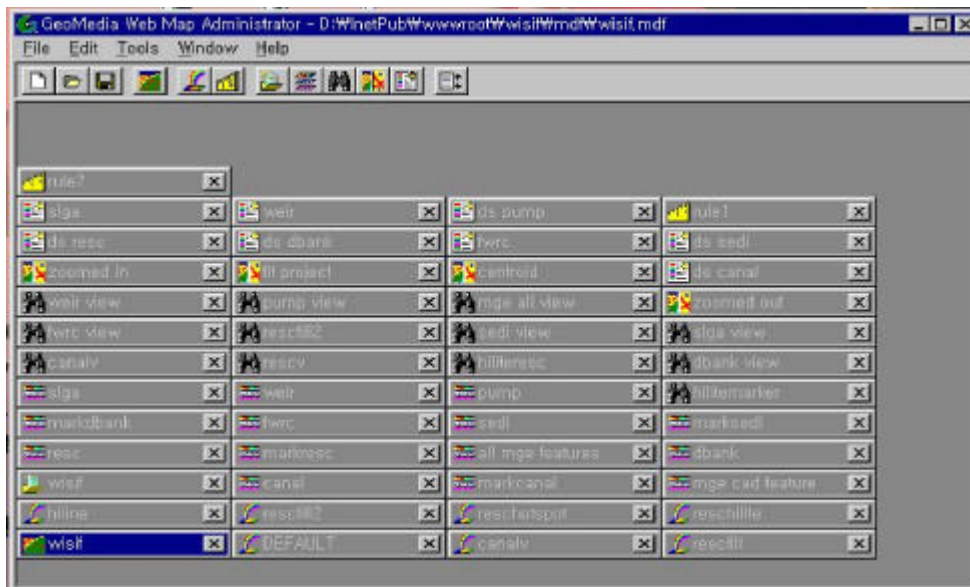
5. MDF

GWM

MDF

< 6- 13>

Geomedia Web Map Administrator



< 6- 13> GWM Administrator

## Map type



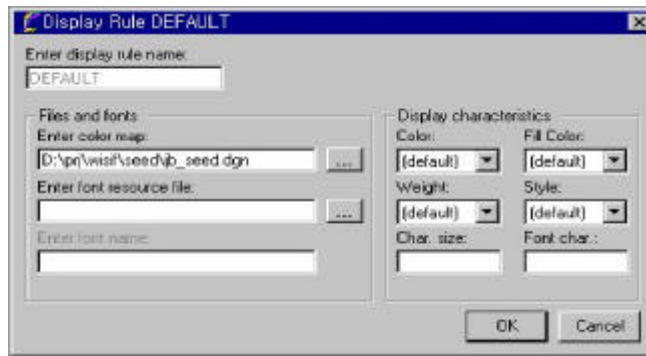
< 6-14> Map Type

## Data Source



< 6-15> Data Source

## Default Display



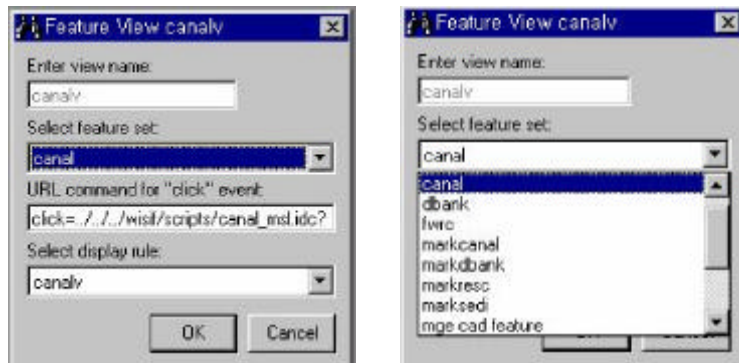
< 6-16> Default Display



## Feature View

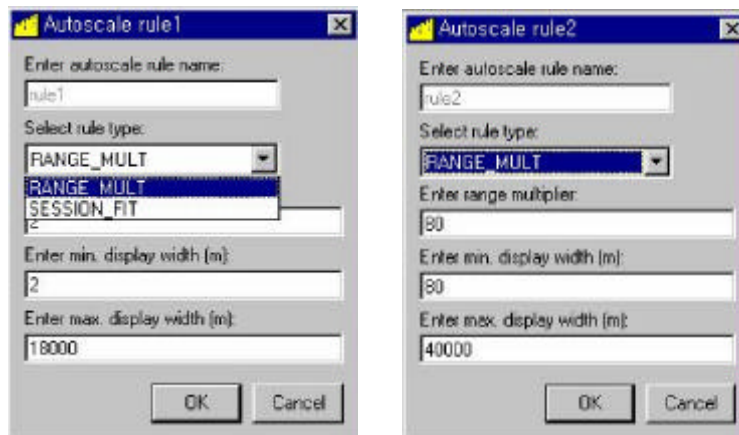
Feature Set canal

display rule



< 6-19> Feature View

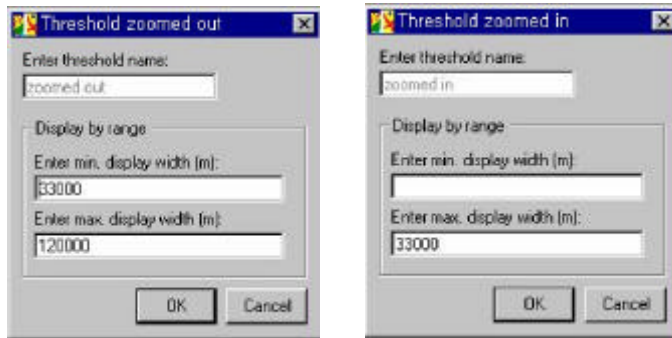
## Autoscale rule



< 6-20> Autoscale rule

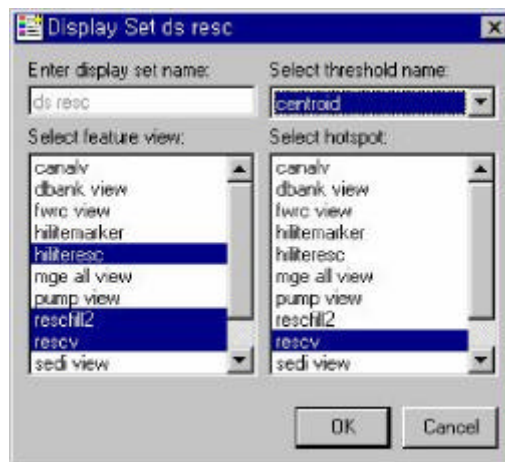


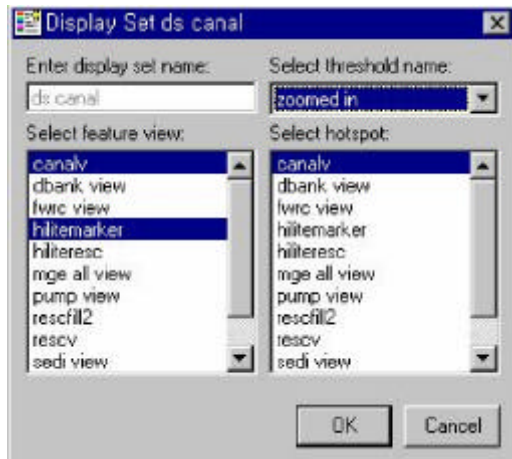
## Threshold



< 6-21> Threshold

## Display Set





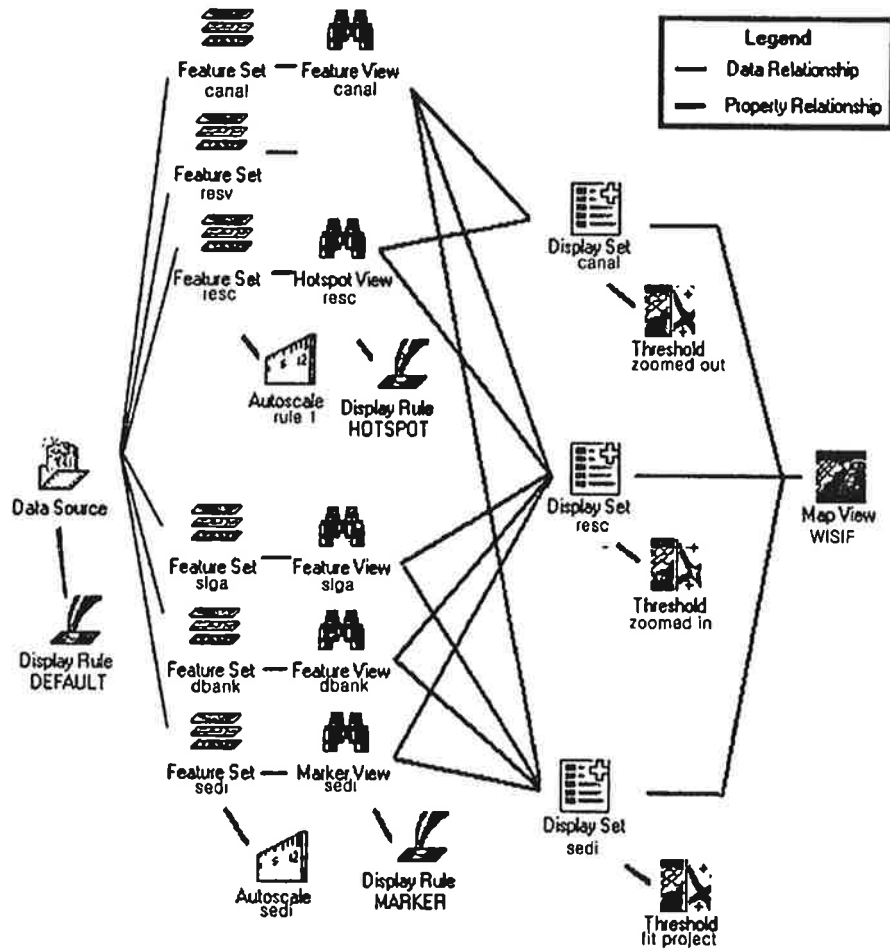
< 6-22> Display Set

Display property



< 6-23> Display property

MDF 파일에 설정된 요소의 상호관계는 <그림 6-24>와 같다.



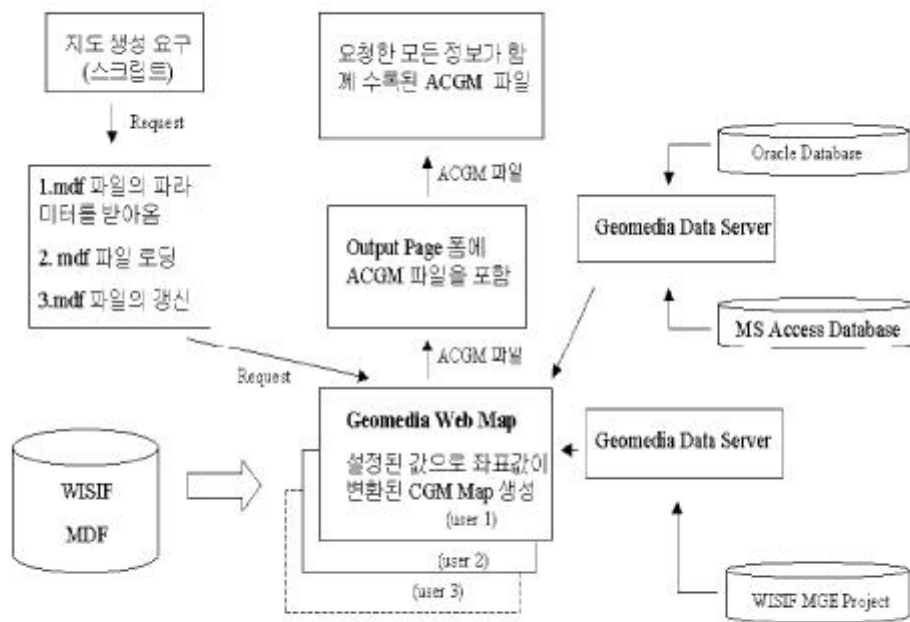
<그림 6-24> MDF파일 구성요소의 상호관계도

가

< 6- 25>

Geomedia Web Map setting, Perl interpreter setting, IIS server setting, IIS server MIME type, IIS web service, IIS www script map, IIS 가 , ODBC , ODBC DSN Geomedia Web Map

GIS



< 6- 25> GWM

7 WIS IF

1

2

## 7 WIS IF

### 1

WISIF Web based Information System for Irrigation Facilities  
WISIF Windows NT Server  
(Datagbase)

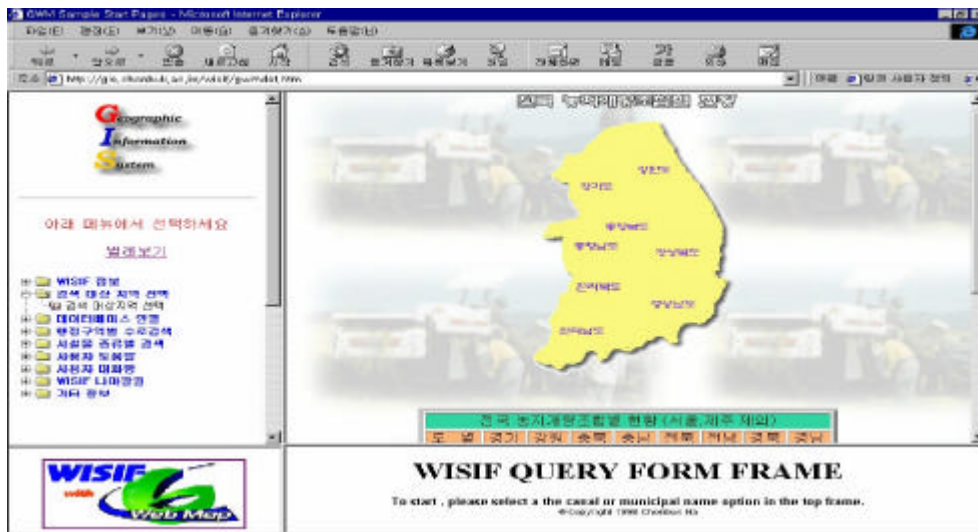
### 2

#### 1. WISIF

(Netscape  
Navigator 3.0 Internet Explorer3.0 ) WISIF  
Web URL <http://gis.chonbuk.ac.kr/wisif>  
< 7- 1> WISIF  
WISIF Netscape Navigator  
InterCap ActiveCGM Viewer Plugin  
Internet Explorer  
ActiveX 가  
WISIF MGE  
Geomedia WISIF FTP Data  
GIS  
가 가 WISIF  
(WISIF) < 7- 2> <http://gis.chonbuk.ac.kr/wisif/wisif.htm>



< 7-93> WISIF



< 7-2> WISIF wisif.htm

< 7-2>

가

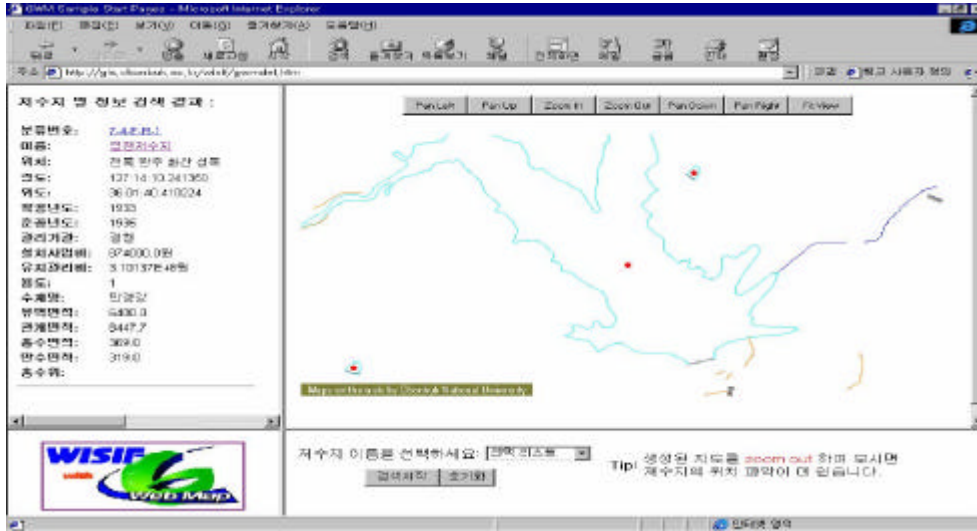
< 7-3>

가

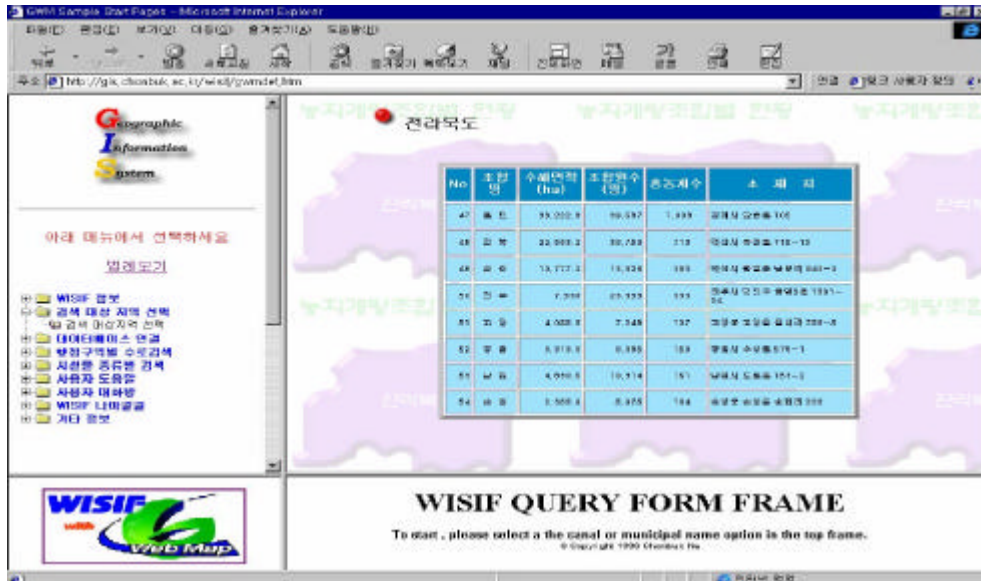
< 7-3>

< 7-4>

ActiveCGM 가



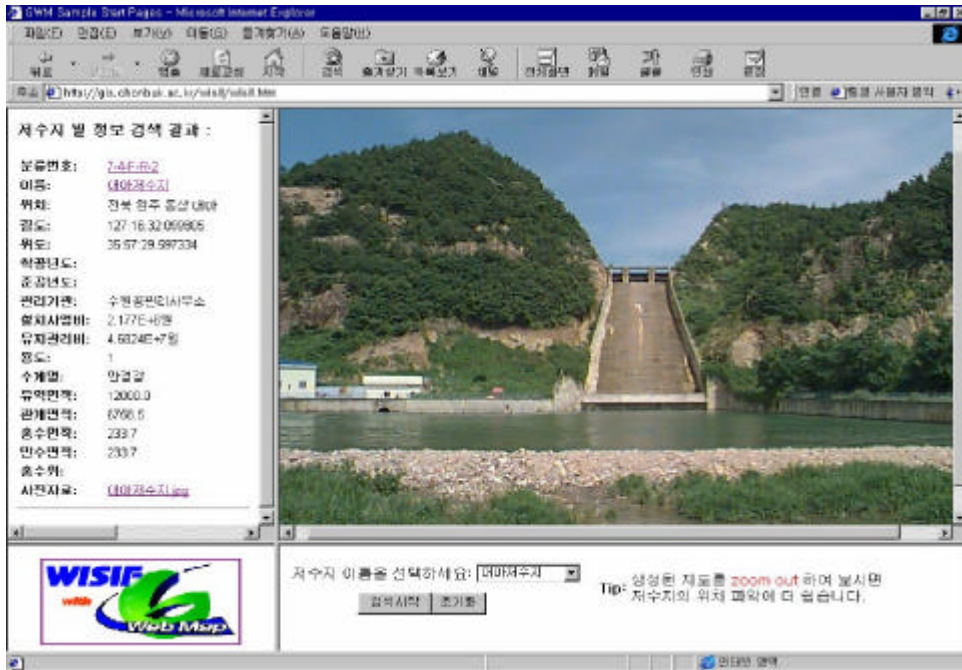
< 7-3> WISIF



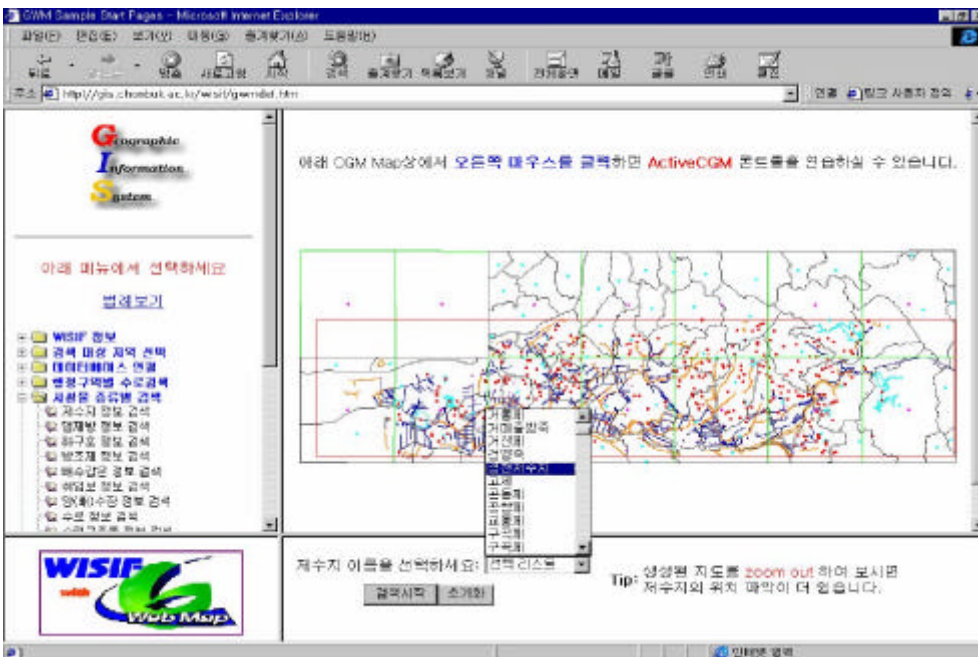
< 7-4>



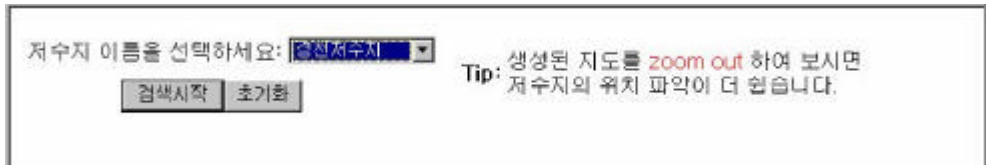




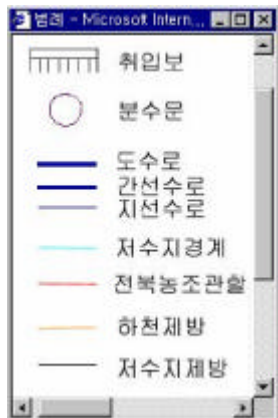
< 7-6 >



< 7-7 >



< 7-8 >



< 7-9 >

2. , , ,

MGE

가

, 가

MGE

. MGE

Local Network

가

. Local Network

MGE

가

Local Network MGE RIS Management  
 RIS MGE  
 Network . MGE  
 가 MGE Basemapper  
 , , .  
 Feature Attribute Manager Define Attribution  
 . ODBC MGE  
 MGE Export  
 RDBMS MGE Import  
 RDBMS MGE  
 Netscape Enterprise RDBMS  
 MS Access Database

3.

WISIF

가

4.

WISIF

5.

가

가

Database Connector) 1 IDC(Internet Attribute

Table 2

가 가

GWM ( )

가

.htx

가

가

가 WISIF

GIS

ActiveCGM ( CGM

-> )

FTP

.dgn

,

< 7-10>

가

ID

Password

<

7-11>

< 7-11>



< 7-10> WISIF

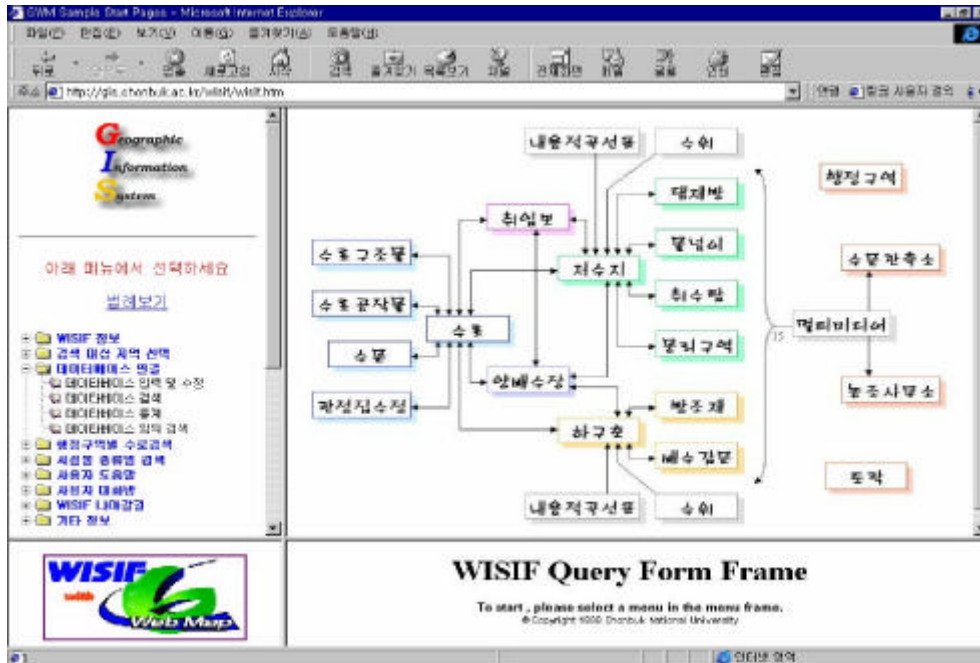
< 7-11>

< 7-12>

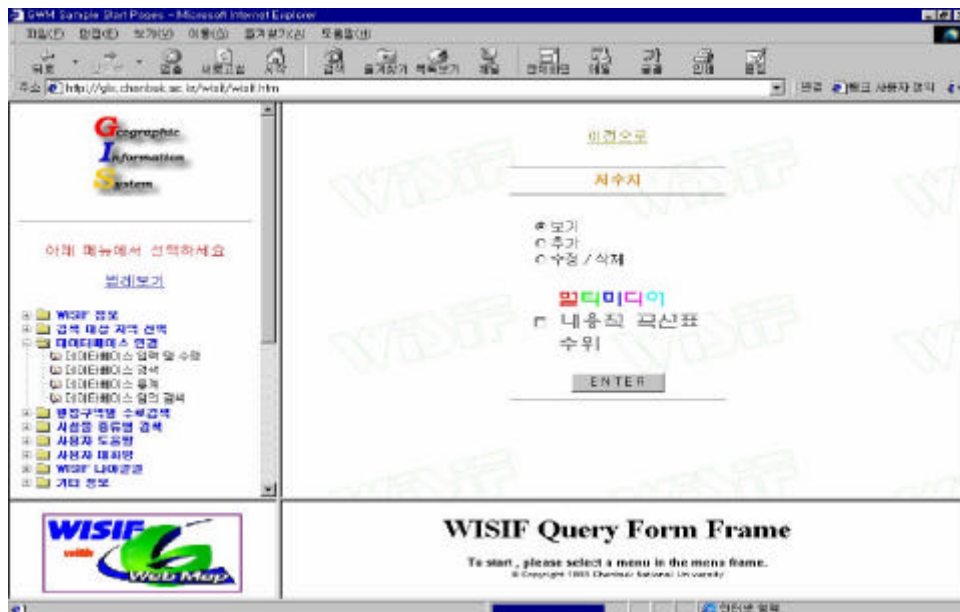
가

, 가, / , / /

MSLINK



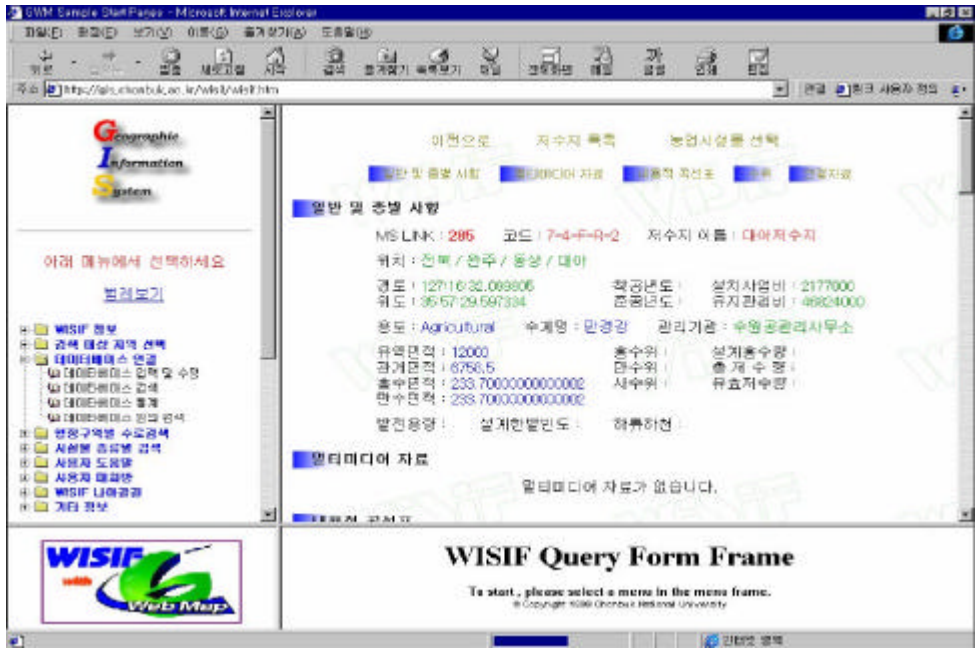
< 7-11 > ( )



< 7-12 > ( , 가, / , )

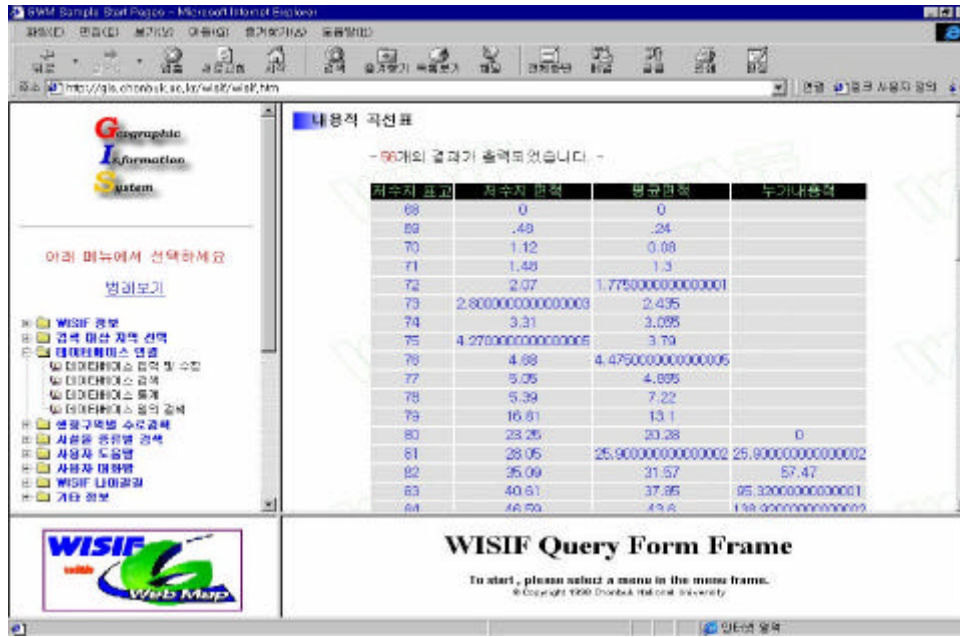


< 7-13 > ( )

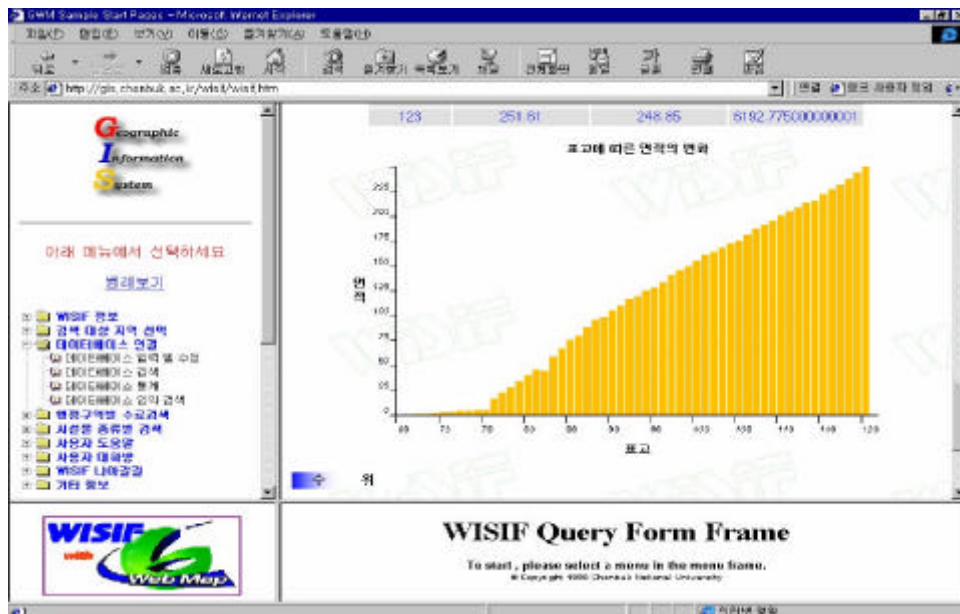


< 7-14 >





< 7-15 >

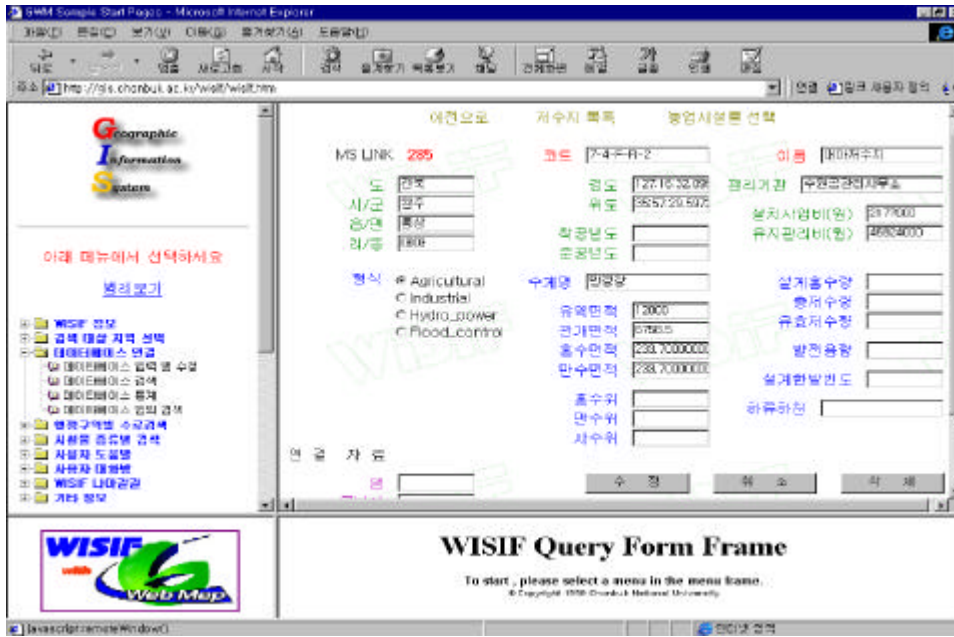


< 7-16 >

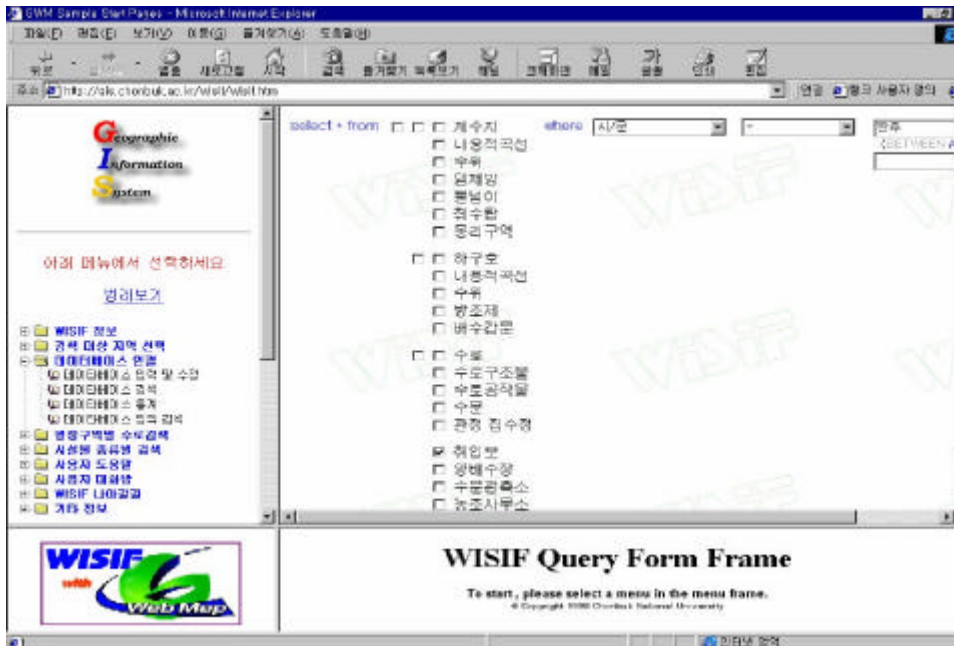
MSLINK 285 :

가 mslink 가 가

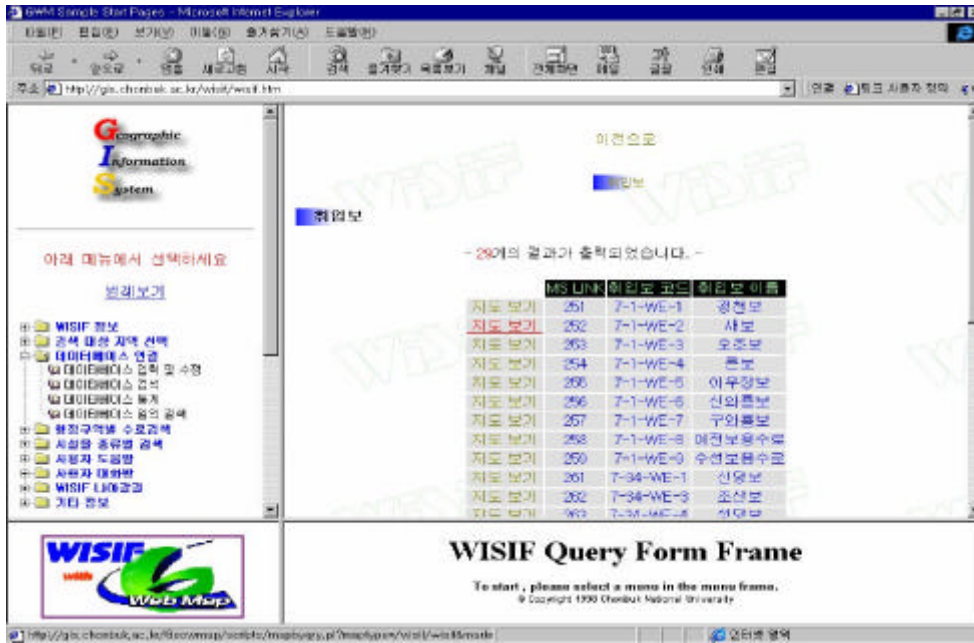




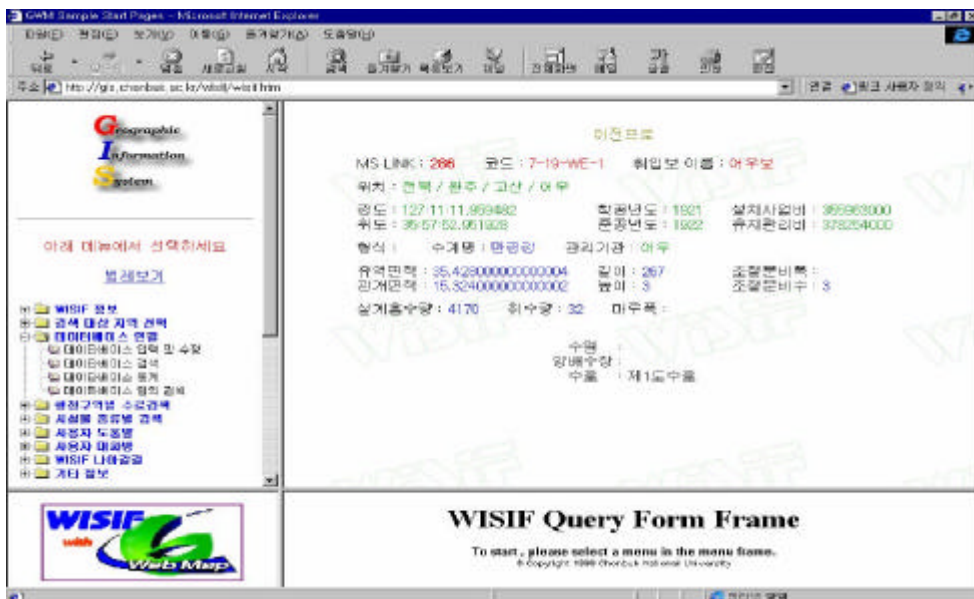
< 7-18 >



< 7-19 > Select



< 7-20 > Select



< 7-21 > Select

Select 가 . < 7- 19>  
 , < 7- 20>

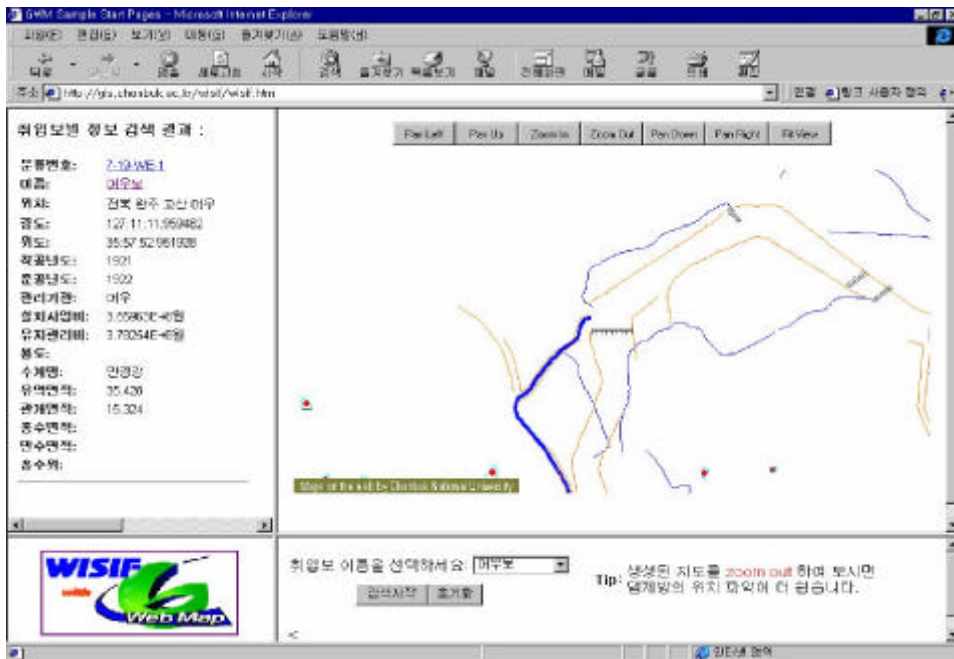
< 7- 22> 가  
 < 7- 23>

(MS

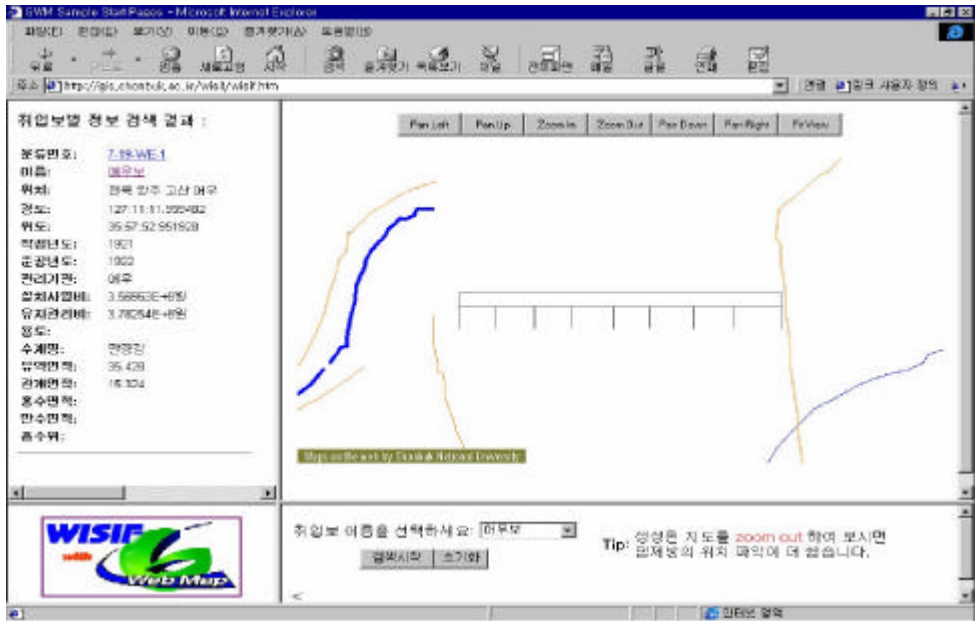
Access DB)

< 7- 24>  
 < 7- 25> . < 7- 26>

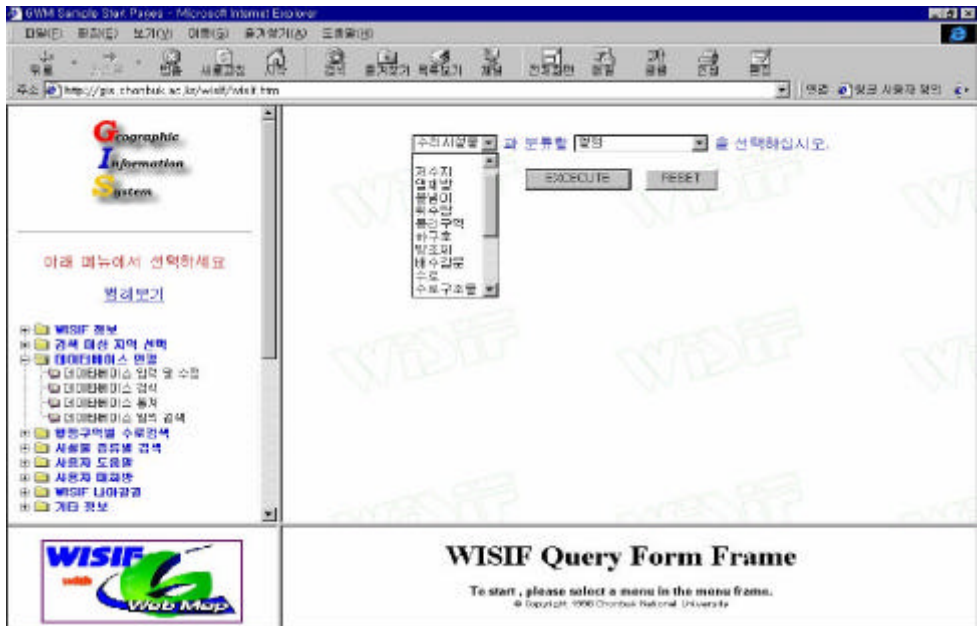
1920 MSLINK , ,



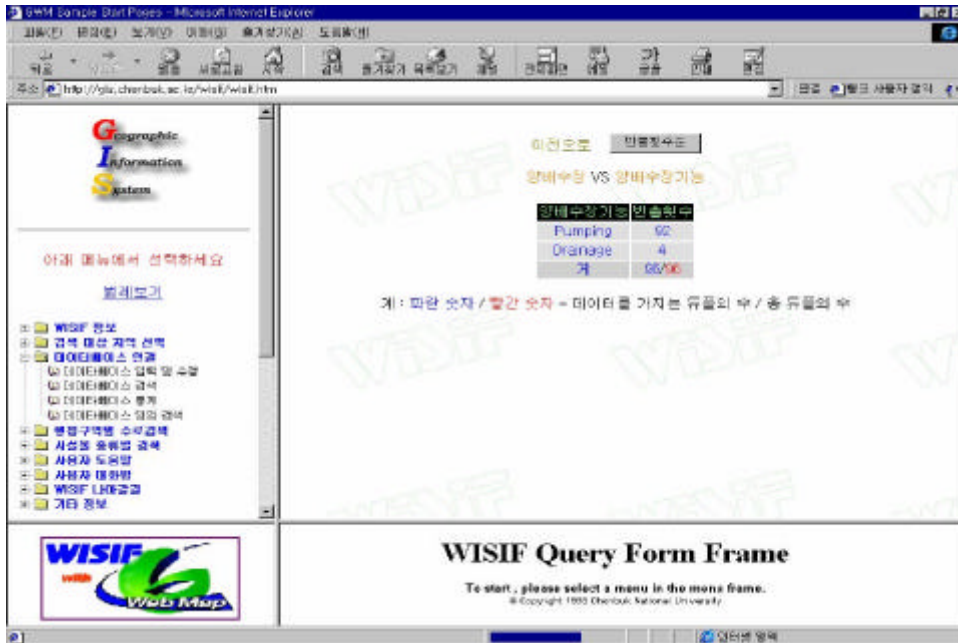
< 7- 22 > ( )



< 7-23 >

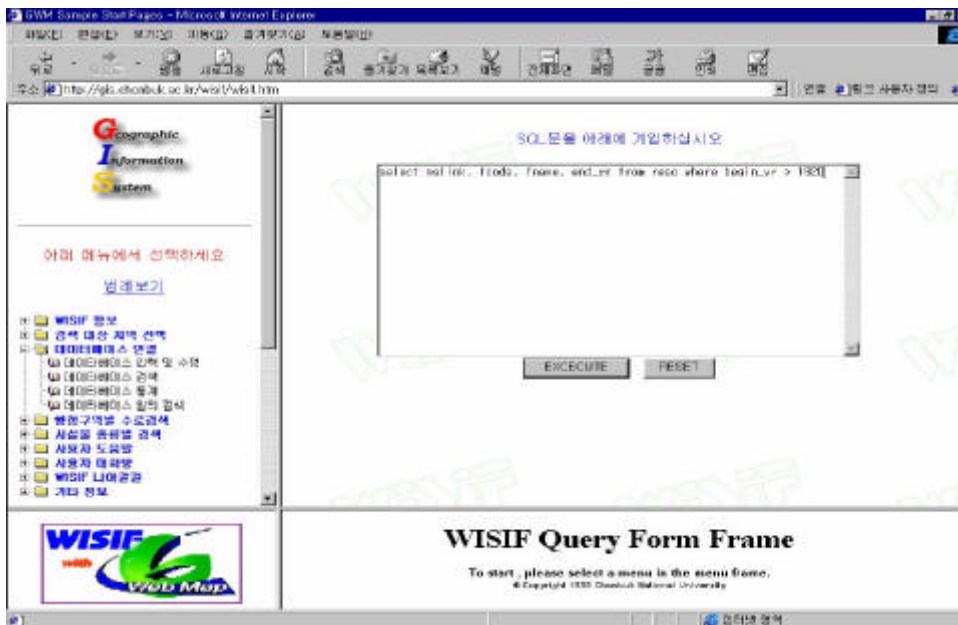


< 7-24 >



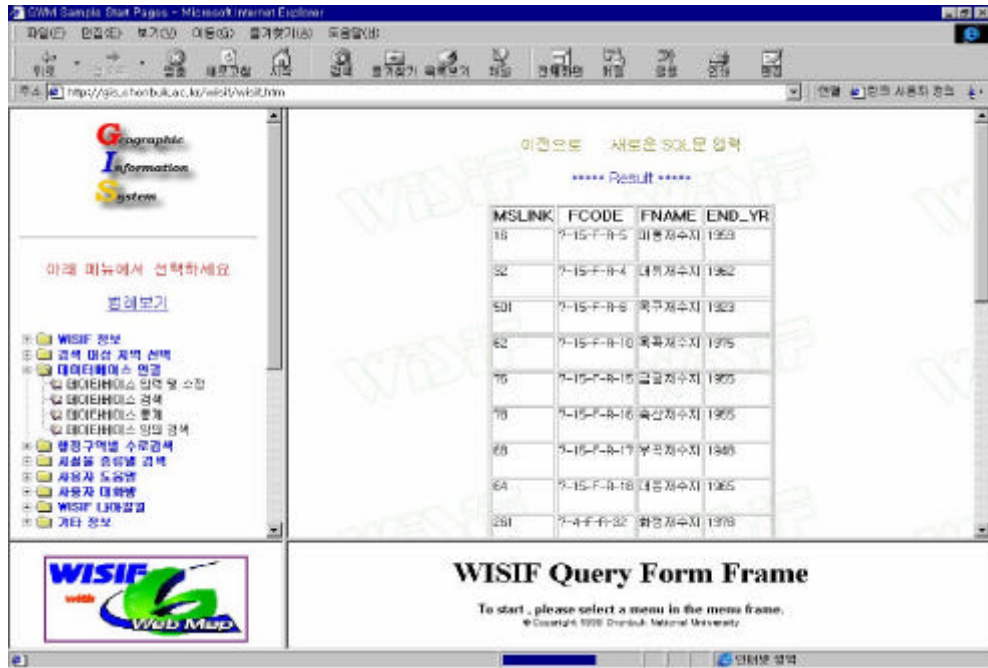
< 7-25 >

( )



< 7-26 >

SQL



< 7-27 > SQL

6.

FTP

MGE

RAW

Export

MGE

WISIF

E-mail

BBS(Bulletin board System)

Web

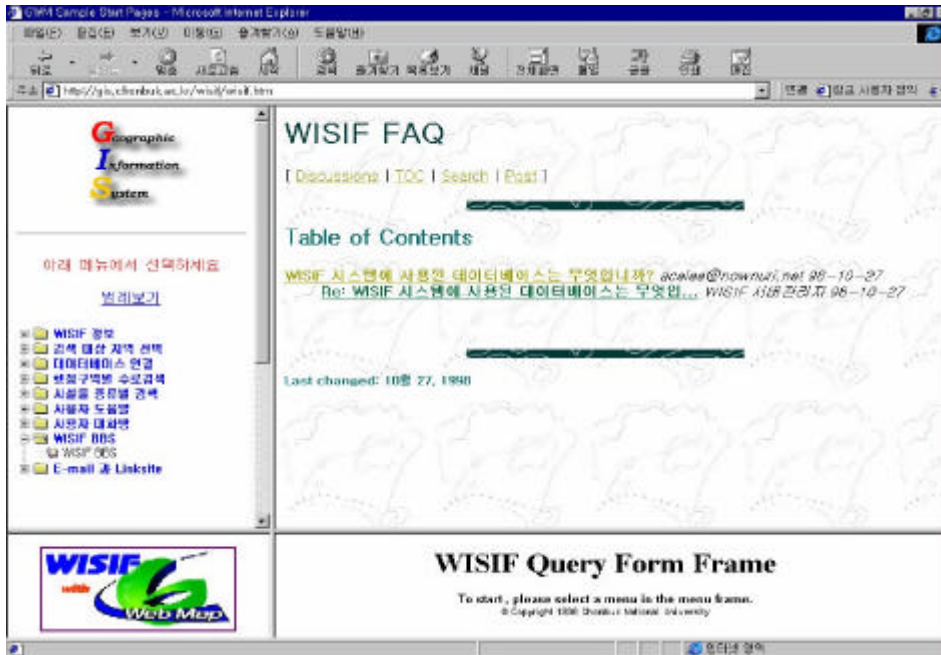
가

Web

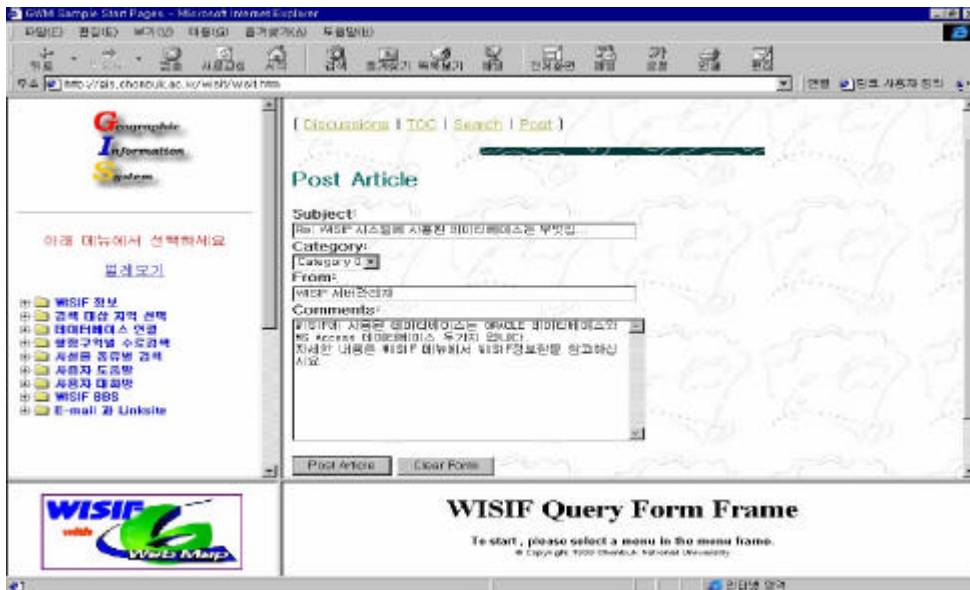
WISIF가

가

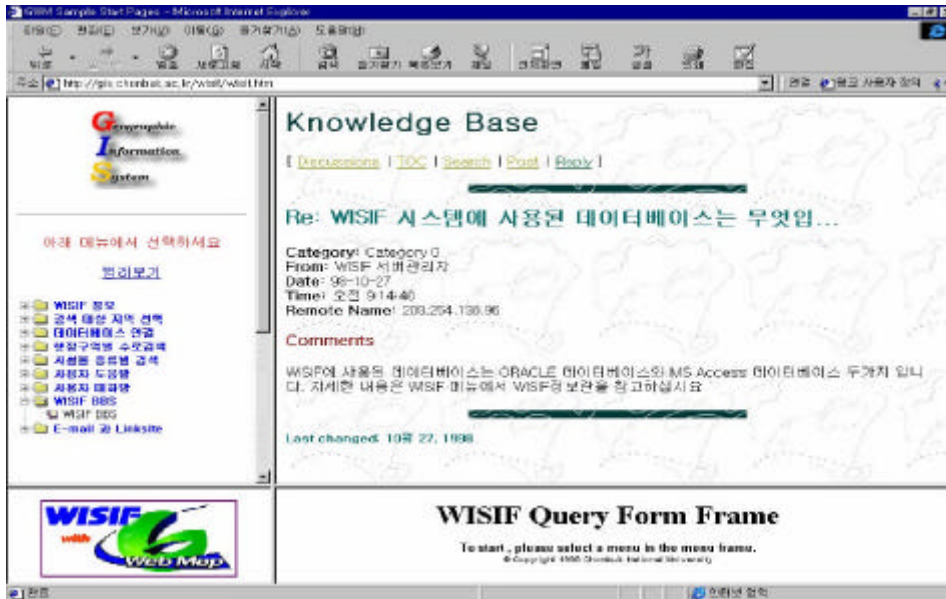




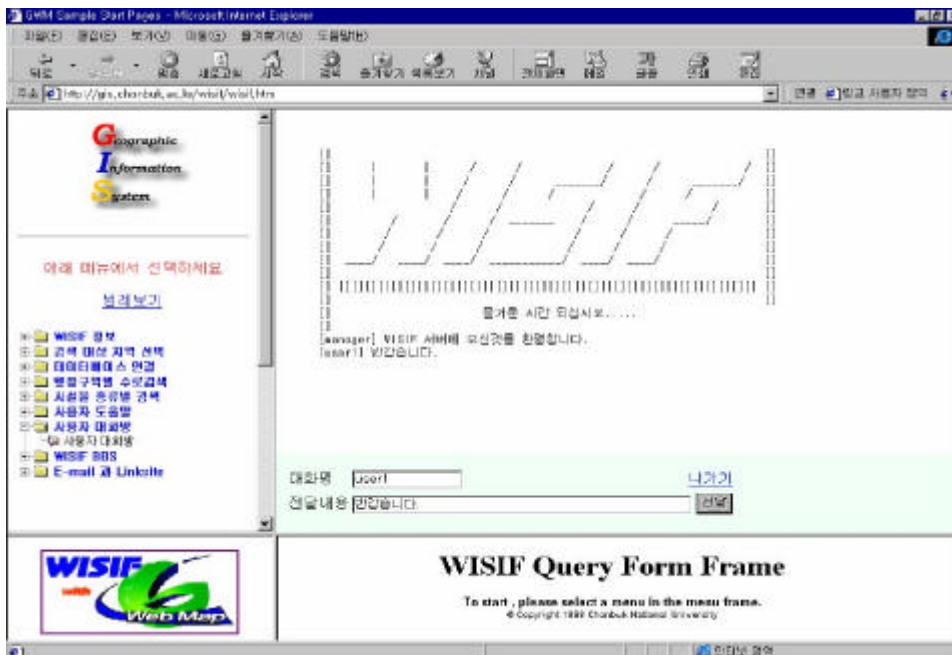
< 7-28 > WISIF BBS FAQ



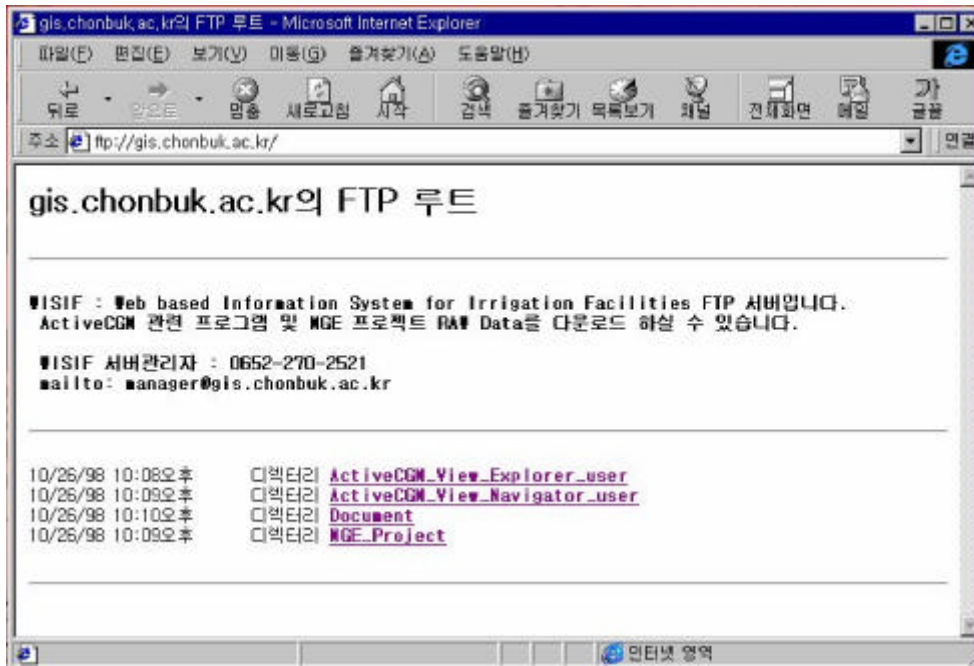
< 7-29 > WISIF BBS FAQ



< 7-30 > WISIF BBS FAQ



< 7-31 >



< 7-32 > WISIF FTP ( )

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GIS

2.

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GIS

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14

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, Oracle

GIS

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(WISIF)

Geomedia Web Map

HTML

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6.

6

WISIF(Web based

Information System for Irrigation Facilities)

. WISIF

가

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. WISIF

7. WISIF

7

가

WISIF

. WISIF Windows NT Server

WISIF

가

2

가

GIS

(WISIF)

가

가





1. , , , (1996),  
SQL , , 3(2) : 29 42
2. , , , (1996),  
, , 4(2) : 195 203
3. (1992),
4. (1997), (GEOCONV), , 2  
(16) : 56 61
5. , , (1996), WWW  
, 1996  
, 23(1) : 143 146
6. , (1996), WWW / ,  
1996 , 23(1) : 553 5562.
7. , (1995),  
( ) - , ,  
37(3/4) : 23 33
8. , , , (1995),  
( ) - GIS  
-, , 37(5) : 35 42
9. (1997), GIS , , 2(18) : 50  
57
10. (1998), , , 24 : 22 23
11. , , (1997), , ,  
39(6) : 41 53
12. , , , (1997), ,  
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13. , (1998) ,  
, 40(3) : 42- 53.

14. (1990), (5)-  
-, , 33 : 104 109
15. (1996), GIS ,  
, 4(2) : 147 157
16. (1996), 'GIS', , 1(4) :  
52 55
17. (1996), , , 1(1) :  
74 79
18. (1996), GIS,  
, 1(3) : 36 40
19. , , , , (1990),  
GIS , , 6(2) : 135 151
20. (1998), GIS , , 21 : 80 85
21. , , , (1998), CORBA STEP  
, CAD/CAM , 24 29
22. (1995),  
,
23. , (1997) GIS  
( ), - , , 39(1) : 41 47
24. , (1997) GIS  
( ), - AGNPS - , , 39(2) : 53 61
25. , (1997) GIS  
( ), - , , 39(3) : 138 143
26. (1994), GIS . (Q/A ), , 27(1)  
: 47 50
27. , , (1995),  
, , 3(1) : 55 63
28. (1996), GIS , ,  
1(1) : 70 71

29. (1997), ,
30. , (1991),
31. , (1995), '95 (RGIS)
32. , (1993), (I)  
(II),
33. (1991),
34. (1993), '93
35. (1995),
36. (1996),
37. (1994), ( ) :  
, 1994.
38. , (1996), 가 ,  
, 4(2) : 181 187
39. , (1995), , 28(2) : 115 124
40. (1988), Remote sensing System , , 36(5) :  
61 70
41. , (1994), GIS (J. R. Eastman),
42. (1998), GIS , , 26 : 26 31
43. (1995), Internet ,  
, 3(1) : 17 21
44. , (1995), ,  
, 13(3) : 8 29
45. (1996), Internet GIS , , 1(4) : 56 59
46. (1997), GIS ,

- , 2(11) : 74 81
47. (1992), ,
48. , , (1996), , ,  
94- 42 : 1- 39
49. (1996), 가  
, , 1(8) : 78 80
50. (1997), GIS , 2(12) : 2  
8 34
51. , , (1993),  
, , 1(1) : 153 158
52. , , , (1995),  
, , 3(2) : 173 181
53. , (1996), GPS  
, , 1(7) : 48 52
54. (1998), 가  
21 , , 24 : 18
55. , , (1996),  
GIS- , , 38(2) : 87 96
56. (1996), GIS , , 1(3)  
: 61 63
57. , (1994), GIS  
, , 2(1) : 93 101
58. , , , (1993),  
(I), , 1(1) : 203 215
59. 3 (1997),  
, , 10(3) : 43 53
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61. (1996), GIS ,  
, 1(7) : 4 42

62. (1996), 가 (NGIS) ,  
 , 1(2) : 27 31
63. , , (1997), -  
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64. (1996), , , 1(9) :  
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65. (1996), , , 1(10) :  
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66. (1997), , , 2(12) :  
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67. (1996), 가, , 1(8) : 84 86
68. (1997), 가, , 3(13) : 76 85
69. , (1998), GIS , -  
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70. , , (1997),  
 ( ) - , , 39(3) : 52 63
71. (1994), GIS . (Q/A ), , 27(2)  
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72. (1996), GIS, , 1(7) : 44 46
73. , (1997), ‘ ’ GIS ,  
 , 3(13) : 40 45
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 , , 9(2) : 17 26
77. (1994), ,  
 , 2(1) : 53 63

78. , (1997), ( ) - , 39(1) : 64 74
79. , (1997), ( ) - , 39(2) : 103 112
80. (1998), 가 HTML,
81. (1991),
82. (1995),
83. , (1996), VRML DEM 3 가 , 4(2) : 189 195
84. , , (1994), , 2(1) : 75 83
85. , (1996), GIS Internet , 12(3) : 97 115
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< >

< A> WISIF

< B>

< C> WISIF Source Code

< D> Source Code

< A >

# WIS IF

1.

가.

WISIF Windows 95, Windows 98 Windows NT OS(Operation System)가

가 Network Interface Card Hardware가 , TCP/IP( / ), HTTP( ), HTML( ) Software가 . Microsoft Internet Explorer Netscape Navigator가 .

Hardware 64,000가 , 1024 x 768 , 20Mbyte Temporary Internet Cache 가 .

WISIF .

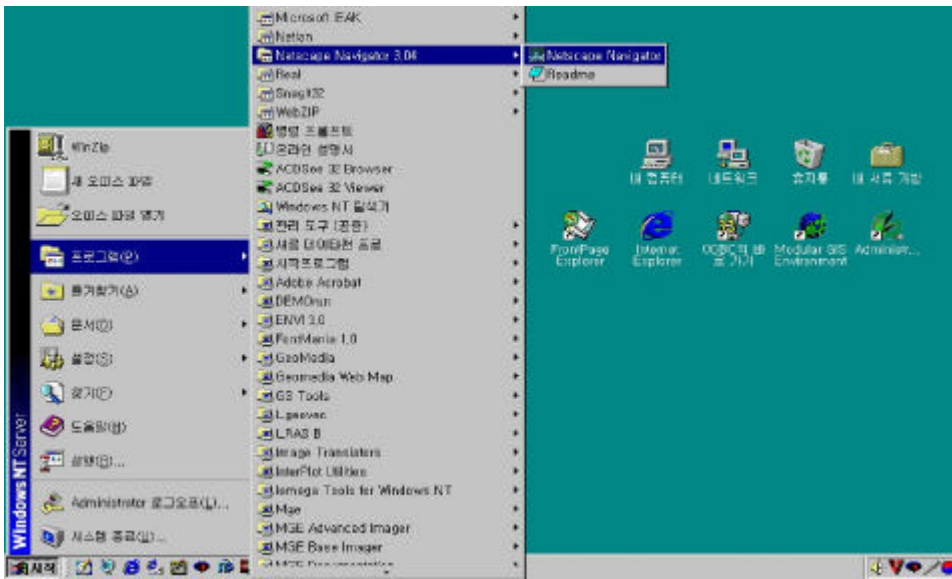
(1) Booting . Modem PPP Internet

(2)

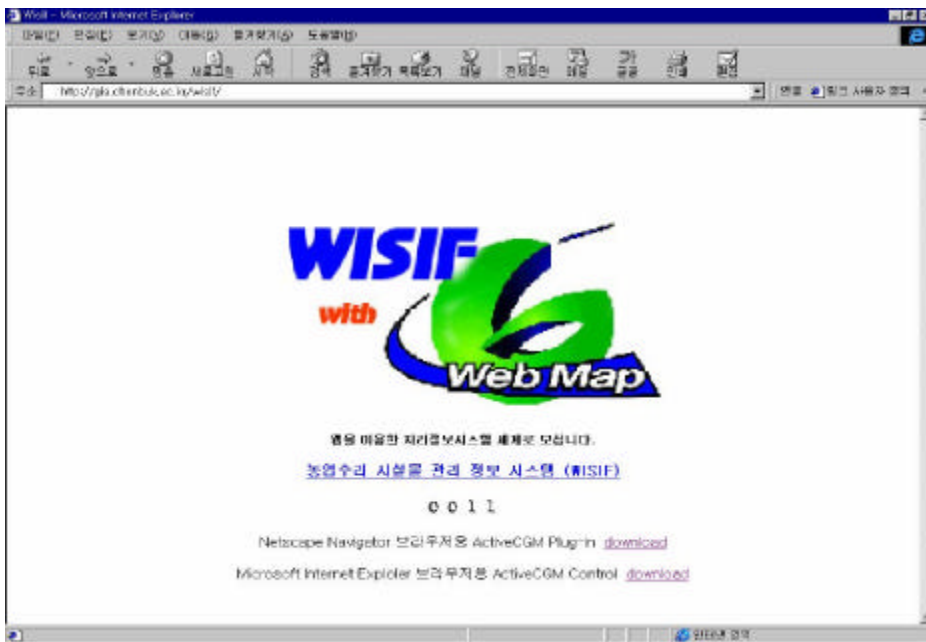
(3) 가 가

가 .

(4) WISIF URL <http://gis.chonbuk.ac.kr/wisif> .



< A-1> ( )



< A-127> WISIF

WISIF

가

가

Print

## 2. WISIF

(WISIF : Web based Information System for Management of Irrigation Facilities)

가

가. Web Browser

(1) Version

WISIF

가

가 Internet Explorer 3.0

Netscape Navigator 3.0

WISIF

ActiveCGM Map

ActiveCGM

Plug-In

(2)

Microsoft

Intergraph

InterCAP

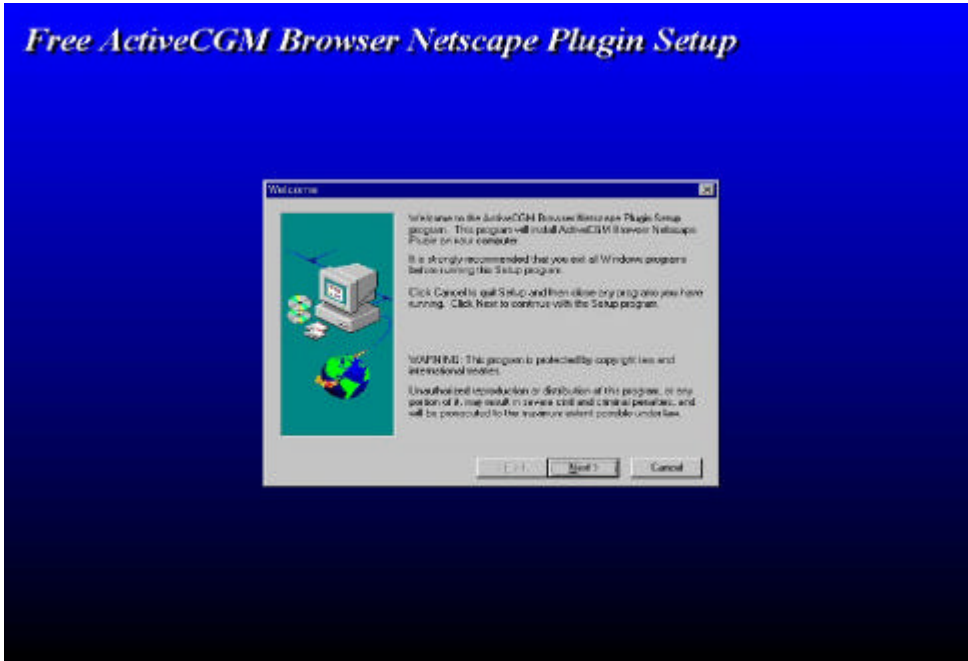
WISIF

WISIF



“InLineBrochure.exe”

. Plug- In 가



< A-129> Netscape Navigator Plug- In

(4) Internet Explorer

Internet Explorer

“ActiveSelf.exe”

ActiveCGM Browser ActiveX Control

가 . ActiveCGM Map

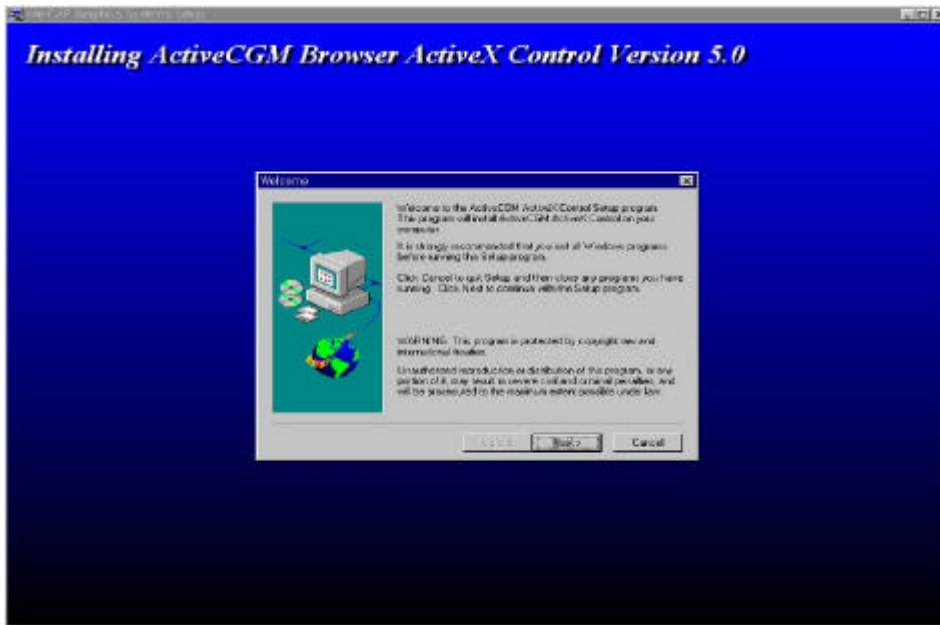
acgmcharset.exe

Multi-byte Character

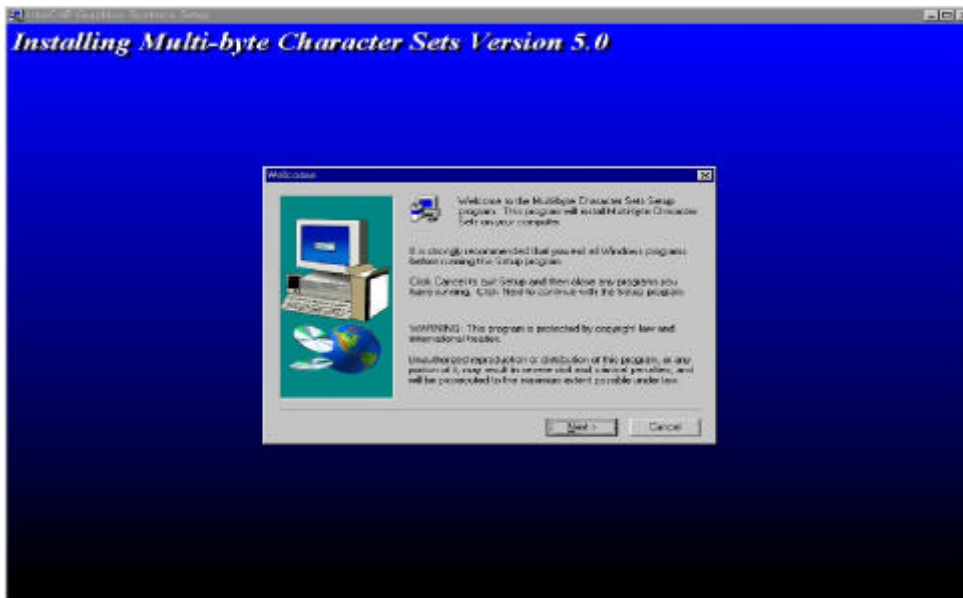
Sets

가

가



< A-130> Explorer ActiveX Control



< A-131> Explorer ActiveCGM Character Sets



. WISIF

(1)

WISIF

WISIF Logo

FTP

가

(WISIF)

(2)

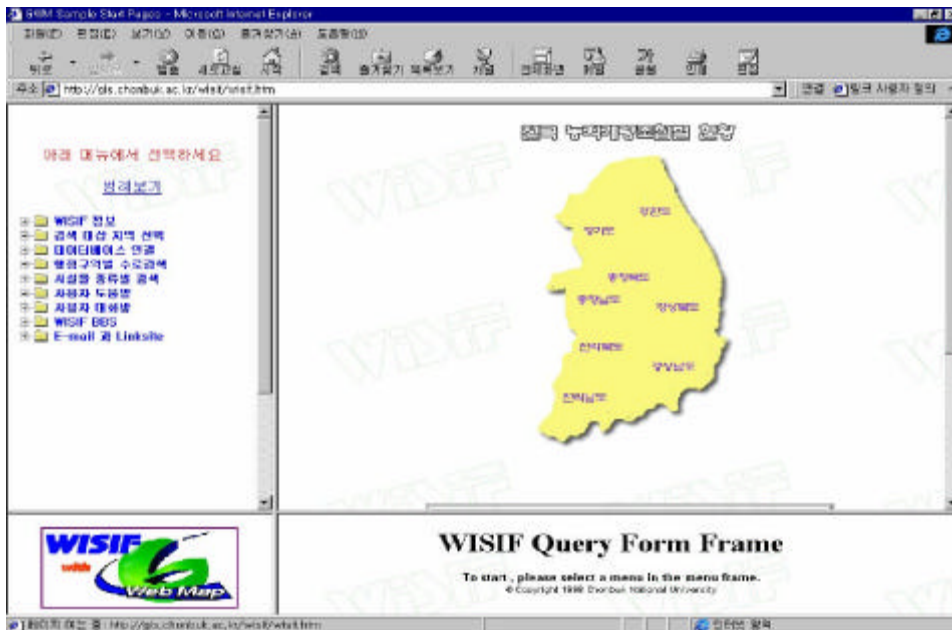
4

가

가

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“



< A-132> WISIF

WISIF

가 , WISIF BBS E-mail LinkSite .



< A-8> WISIF ( )

WISIF Logo 가

WISIF

가

가

가



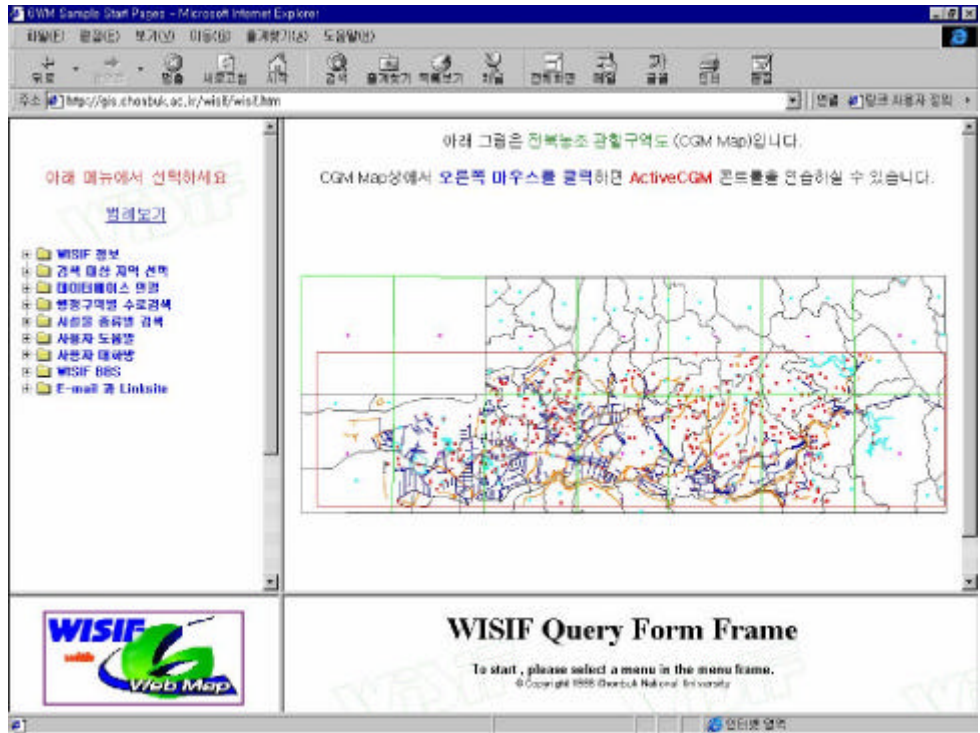
< A-9> WISIF Logo ( )

전라북도  
(아래에서 검색 대상 번호의 이름을 선택하십시오.)

No	호칭명	수리인원 (화)	호천인수 (명)	면적(제곱미터)	소재지
47	홍진	98,222.0	99,597	1,808	김제시 오송동 106
48	전북	22,683.2	90,750	718	익산시 죽전동 25-13
49	금강	10,777.2	13,626	363	익산시 삼백동 245-3
50	진주	7,506	23,939	330	정읍시 모진동 245-14
51	고양	4,055.6	7,245	137	고창군 고창동 읍내리 250-5
52	정읍	3,313.8	6,385	150	정읍시 수성동 270-1
53	남원	4,831.6	10,314	161	남원시 두동동 150-2
54	수성	2,355.9	5,975	104	순창군 수향동 순화리 220

**WISIF Query Form Frame**  
To start, please select a menu in the menu frame.  
© Copyright 1999 Chonbuk National University

< A-135> ( )



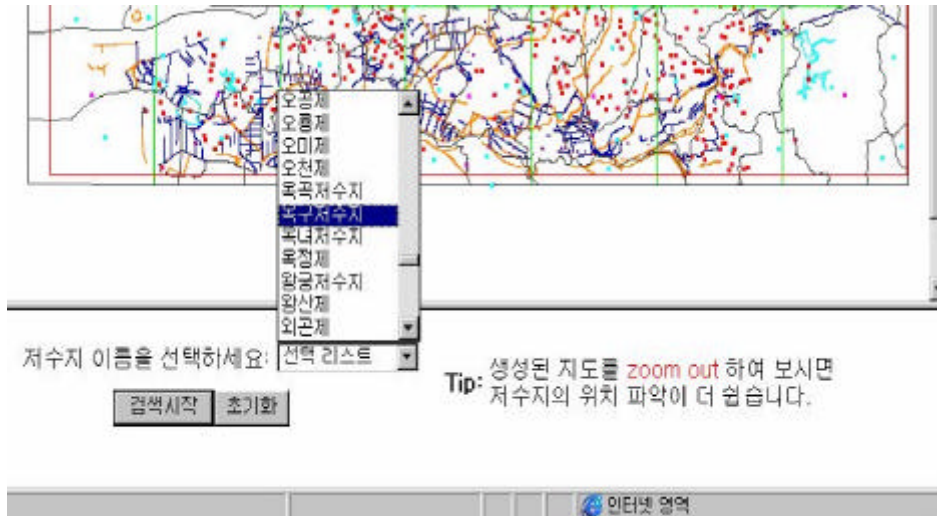
< A-136>

( )

,  
가

,  
가 .

•



< A-137>

( )

3.

가.

가

ActiveCGM Map

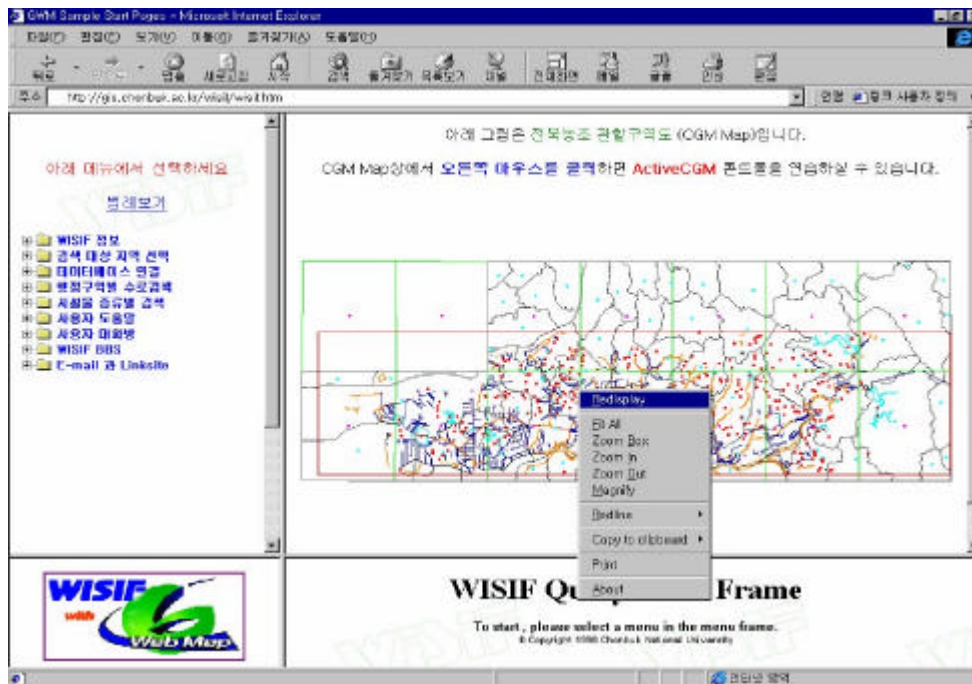
. ActiveCGM

ActiveCGM Map

Redisplay, Fit All, Zoom Box, Zoom In,

Zoom out, Magnify, Redline, Copy to clipboard, Print

(1) Redisplay



< A-138> ActiveCGM

(2) Fit All

ActiveCGM

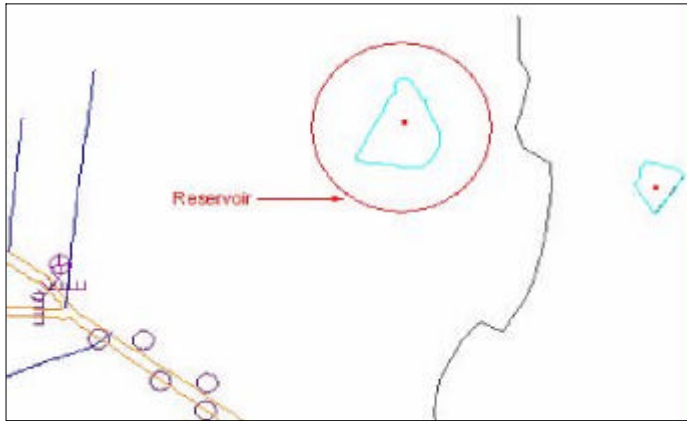
(3) Zoom Box

가

가

(4) Zoom In





< A-140> Redline

(8) Copy to Clipboard

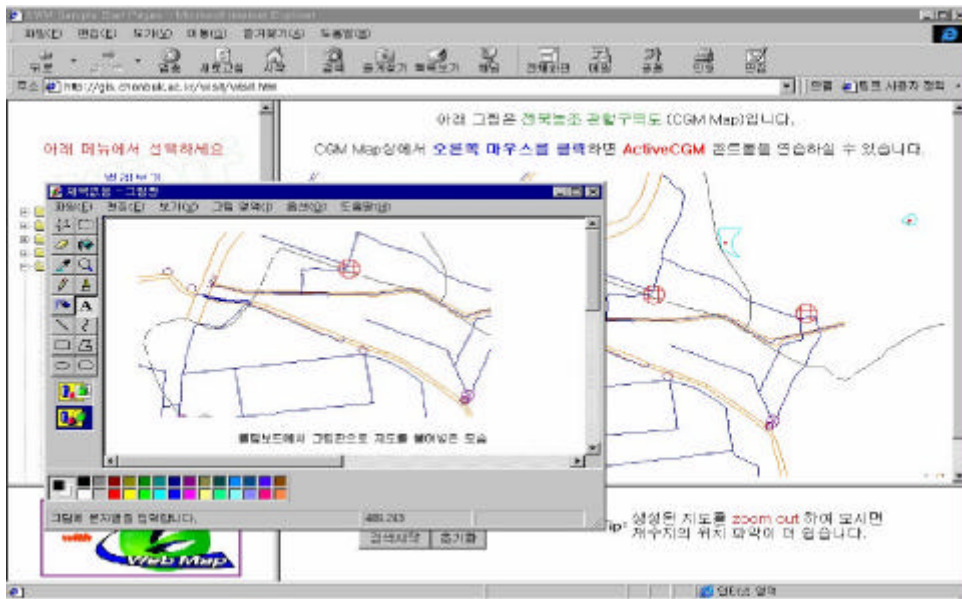
가

Entire Window    ActiveCGM Map  
, Region



< A-141> Copy to Clipboard





< A-142 >

(9) Print

Print

ActiveCGM Map

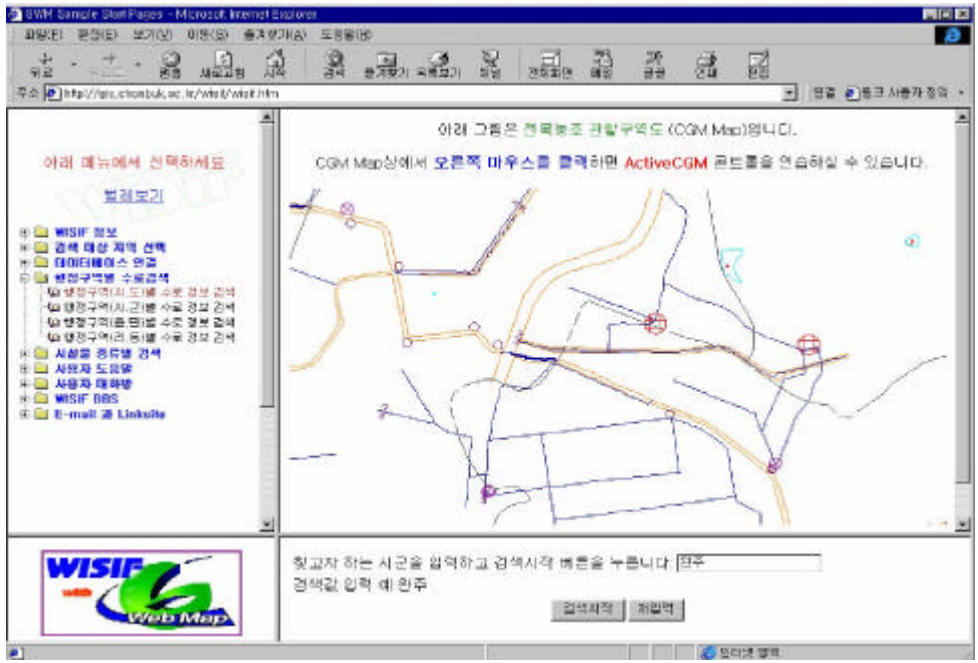
가

(1)

●

가

“ ( , )



< A-143 >

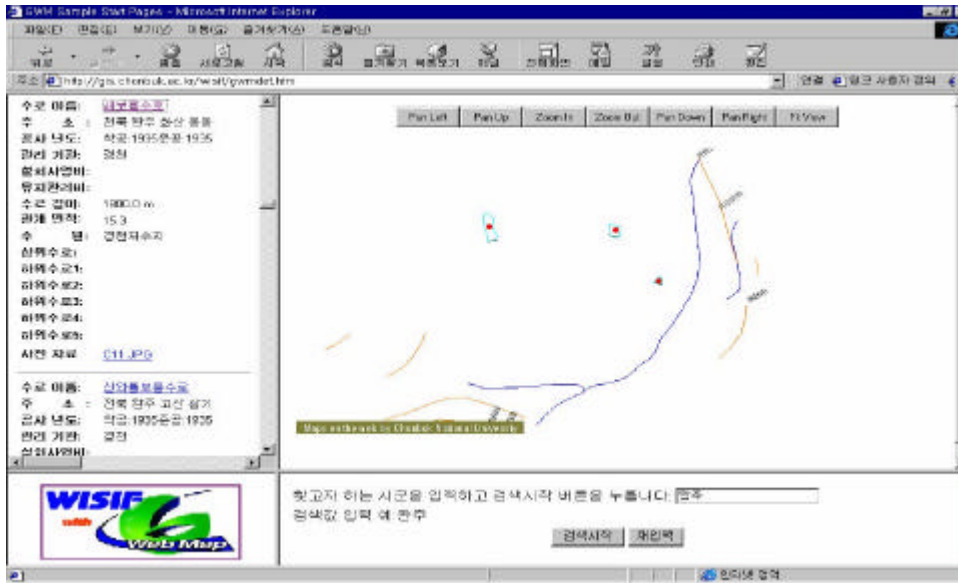
가

가

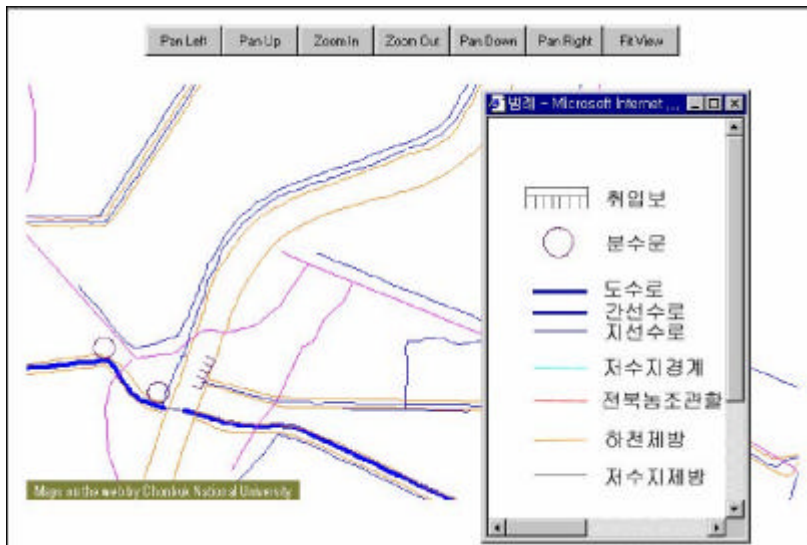
( : )

가

가



< A-144 >



< A-145 >

● 가  
 ActiveCGM Map 가  
 가 .  
 Pan Left, Pan up, Zoom In, Zoom Out, Pan Down,  
 Pan Right, Fit View가 . Pan  
 . Zoom . Fit  
 View 가  
 가

가



< A-146 >

(2)

가

가

가

가

“

” 가 , WISIF

가

. WISIF BBS

WISIF BBS

WISIF

WISIF

가 가

. E-mail Link site

E-mail Link site WISIF

가 , GIS

< B >

BBS	Bulletin Board System
CDM	Conceptual Data Model
CGI	Common Gateway Interface
CGM	Computer Graphic Metafile
DGN	Microstation Design File
DSN	Data Source Name
FAQ	Frequently Asked Questions
FTP	File transfer Protocol
GIS	Geographical Information System
GUI	Graphic User Interface
GWM	Geomedia Web Map
HTML	Hyper Text Markup Language
HTTP	Hyper Text Transfer Protocol
IDC	Internet Database Connector
IIS	Microsoft Internet Information Server
ISAPI	Internet Server Application Programming Interface
ISO	International Organization for Standardization
MDF	Map Definition File
MGE	Modular GIS Environment
NGIS	National Geographic Information System
ODBC	Open Database Connectivity
OLE	Object Linking Embedding
OS	Operating System

RDBMS	Relational Database Management System
RIS	Relational Interface System
SQL	Structured Query Language
TCP/IP	Transmission Control Protocol/Internet Protocol
TM	Transverse Mercator
UOR	Units of Resolution
URL	Uniform Resource Locator
UTM	Universal Transverse Mercator
WISIF	Web-based geographic Information System for Irrigation Facilities
WWW	World Wide Web





```

    }
    farwindow.location.href = 'legend.htm';
  }
}
//-->
</script>
<body bgproperties="fixed" background="../images/back.gif">
<p align="center"><font face="          " color="#FF0000">
    </font></p>
<a href="javascript:remoteWindow()">
<p align="center">          </a> </p>
<p align="center">
<applet code="ryTreeView.class" width="244" height="511"
codebase="http://gis.chonbuk.ac.kr/wisif/"> // report

. //
<param name="BgColor" value="ffffff">
<param name="DefaultTarget" value="report">
<param name="F1- Page1" value="WISIF          ">
<param name="F1- Page2" value="WISIF          ">
<param name="F1- Target1" value="graphic">
<param name="F1- Target2" value="graphic">
<param name="F1- URL1" value="http://210.117.156.62/wisif/pro- title.html">
<param name="F1- URL2" value="http://210.117.156.62/wisif/wifis- title.html">
<param name="F2- Page1" value="          ">
<param name="F2- Target1" value="graphic">
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```

```

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<param name="F3- Page3" value="          ">
<param name="F3- Page4" value="          ">
<param name="F3- Target1" value="graphic">
<param name="F3- Target2" value="graphic">
<param name="F3- Target3" value="graphic">
<param name="F3- Target4" value="graphic">
<param name="F3- URL1" value="http://210.117.156.62:88/entrance">
<param name="F3- URL2"
value="http://210.117.156.62:88/entrance/GetPwd.html?sql=search">
  <param name="F3- URL3"
value="http://210.117.156.62:88/entrance/GetPwd.html?sql=statics">
  <param name="F3- URL4"
value="http://210.117.156.62:88/entrance/GetPwd.html?sql=free">
  <param name="F4- Page1" value="          ( , )          ">
  <param name="F4- Page2" value="          ( , )          ">
  <param name="F4- Page3" value="          ( , )          ">
  <param name="F4- Page4" value="          ( , )          ">
  <param name="F4- Target1" value="query">
  <param name="F4- Target2" value="query">
  <param name="F4- Target3" value="query">
  <param name="F4- Target4" value="query">
  <param name="F4- URL1" value="http://gis.chonbuk.ac.kr/wisif/cdoqry.htm">
  <param name="F4- URL2"
value="http://gis.chonbuk.ac.kr/wisif/csigunqry.htm">
  <param name="F4- URL3"
value="http://gis.chonbuk.ac.kr/wisif/cepmyonqry.htm">
  <param name="F4- URL4"

```

```
value="http://gis.chonbuk.ac.kr/wisif/cridongqry.htm">
  <param name="F5- Page1" value="" ">
  <param name="F5- Page10" value="" ">
  <param name="F5- Page11" value="" ">
  <param name="F5- Page12" value="" ">
  <param name="F5- Page13" value="" ">
  <param name="F5- Page14" value="" ">
  <param name="F5- Page15" value="" ">
  <param name="F5- Page16" value="" ( ) ">
  <param name="F5- Page2" value="" ">
  <param name="F5- Page3" value="" ">
  <param name="F5- Page4" value="" ">
  <param name="F5- Page5" value="" ">
  <param name="F5- Page6" value="" ">
  <param name="F5- Page7" value="" ( ) ">
  <param name="F5- Page8" value="" ">
  <param name="F5- Page9" value="" ">
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  <param name="F5- Target10" value="query">
  <param name="F5- Target11" value="query">
  <param name="F5- Target12" value="query">
  <param name="F5- Target13" value="query">
  <param name="F5- Target14" value="query">
  <param name="F5- Target15" value="query">
  <param name="F5- Target16" value="query">
  <param name="F5- Target2" value="query">
  <param name="F5- Target3" value="query">
  <param name="F5- Target4" value="query">
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<param name="F5- Target5" value="query">  
<param name="F5- Target6" value="query">  
<param name="F5- Target7" value="query">  
<param name="F5- Target8" value="query">  
<param name="F5- Target9" value="query">  
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value="http://gis.chonbuk.ac.kr/wisif/scripts/normal.idc">  
<param name="F5- URL10"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/wgate.idc">  
<param name="F5- URL11"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/tbwl.idc">  
<param name="F5- URL12"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/office.idc">  
<param name="F5- URL13"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/stn.idc">  
<param name="F5- URL14"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/rescel.idc">  
<param name="F5- URL15"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/fwrcel.idc">  
<param name="F5- URL16"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/mapb.idc">  
<param name="F5- URL2"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/dbank.idc">  
<param name="F5- URL3"  
value="http://gis.chonbuk.ac.kr/wisif/fwrcqry.htm">  
<param name="F5- URL4"  
value="http://gis.chonbuk.ac.kr/wisif/scripts/sedi.idc">  
<param name="F5- URL5" value="http://gis.chonbuk.ac.kr/wisif/slgaqry.htm">

```

    <param name="F5- URL6"
value="http://gis.chonbuk.ac.kr/wisif/scripts/weir.idc">
    <param name="F5- URL7"
value="http://gis.chonbuk.ac.kr/wisif/scripts/pump.idc">
    <param name="F5- URL8"
value="http://gis.chonbuk.ac.kr/wisif/scripts/canal2.idc">
    <param name="F5- URL9"
value="http://gis.chonbuk.ac.kr/wisif/scripts/ast.idc">
    <param name="F6- Page1" value="          ">
    <param name="F6- Target1" value="graphic">
    <param name="F6- URL1" value="http://gis.chonbuk.ac.kr/wisif/help.htm">
    <param name="F7- Page1" value="          ">
    <param name="F7- Target1" value="graphic">
    <param name="F7- URL1" value="http://210.117.156.62:88/chat">
    <param name="F8- Page1" value="WISIF BBS">
    <param name="F8- Target1" value="graphic">
    <param name="F8- URL1"
value="http://gis.chonbuk.ac.kr/wisifbbs/discuss.htm">
    <param name="F9- Page1" value="          ">
    <param name="F9- Page2" value="GIS          ">
    <param name="F9- Page3" value="          ">
    <param name="F9- Page4" value="          ">
    <param name="F9- Page5" value="          ">
    <param name="F9- Target1" value="graphic">
    <param name="F9- Target2" value="graphic">
    <param name="F9- Target3" value="graphic">
    <param name="F9- Target4" value="graphic">
    <param name="F9- Target5" value="graphic">

```

```

<param name="F9- URL1" value="http://gis.chonbuk.ac.kr/wisif/email.htm">
<param name="F9- URL2" value="http://gis.chonbuk.ac.kr/wisif/gissite.htm">
<param name="F9- URL3"
value="http://gis.chonbuk.ac.kr/wisif/htmlsite.htm">
<param name="F9- URL4"
value="http://gis.chonbuk.ac.kr/wisif/network.htm">
<param name="F9- URL5" value="http://gis.chonbuk.ac.kr/wisif/society.htm">
<param name="Folder1" value="WISIF ">
<param name="Folder2" value=" ">
<param name="Folder3" value=" ">
<param name="Folder4" value=" ">
<param name="Folder5" value=" ">
<param name="Folder6" value=" ">
<param name="Folder7" value=" ">
<param name="Folder8" value="WISIF BBS">
<param name="Folder9" value="E- mail Linksite">
<param name="FolderColor" value="0000ff">
<param name="FolderCount" value="9">
<param name="FolderFocusColor" value="FF8C00">
<param name="FolderFont" value="Arial,bold,12">
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<param name="HeaderFont" value="Arial,bold,15">
<param name="HeaderOffset" value="0">
<param name="Message1" value="wisif .">
<param name="Message2" value=" .">
<param name="Message3"
value="Oracle , , , , , .">

```

```

<param name="Message4" value="
    .">
<param name="Message5" value="                .">
<param name="Message6" value="                .">
<param name="Message7" value="Wisif                .">
<param name="Message8"
value="                FAQ가                WISIF Broadcasting Board System
    .">
<param name="Message9" value="                .">
<param name="OutlineShading" value="dark">
<param name="PageColor" value="000000">
<param name="PageCount1" value="2">
<param name="PageCount2" value="1">
<param name="PageCount3" value="4">
<param name="PageCount4" value="4">
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<param name="PageCount8" value="1">
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</applet>
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</body>
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```

. cdoqry.htm

```
//                                html
<form action="scripts/locado.idc" method="POST" target="report">
  <table border="0">
    <tr>
      <td>                                <font
      face="Arial">: </font></td>
      <td><font face="Arial"><input type="text" size="20" name="locado"
value="      "></font></td>
    </tr>
    <tr>
      <td>                                <font face="Arial">:</font>    </td>
      <td></td>
    </tr>
  </table>
  <div align="center"><center><table border="0" width="110">
    <tr>
      <td><input type="submit" name="B1" value="      "></td>
      <td><input type="reset" name="B2" value="      "></td>
    </tr>
  </table>
```

. graphic.html

```
//                                CGM Map
<object CLASSID="clsid:F5D98C43- DB16- 11CF- 8ECA- 0000C0FD59C7"
```



```
CODEBASE="/acgm.cab"
WIDTH="650" HEIGHT="350">
  <param name="FileName" value="cgm/world.cgm"><embed WIDTH="650"
HEIGHT="350" SRC="cgm/world.cgm">
</object>
```

. fwrc.html

```
//                                html
<form action="scripts/fwrcode.idc" method="POST" target="report">
  <table border="0" width="428">
    <tr>
      <td width="208">                                <font face="Arial">:
</font></td>
      <td width="212"><font face="Arial"><input type="text"
size="20"name="fwrcname"
      value="                                "></font></td>
    </tr>
    <tr>
      <td width="208">                                <font
face="Arial">:</font>                                </td>
      <td width="212"></td>
    </tr>
  </table>
<div align="center"><center><table border="0" width="110">
  <tr>
    <td><input type="submit" name="B1" value="                                "></td>
    <td><input type="reset" name="B2" value="                                "></td>
```

. overview.html

```
//Active CGM                                html
//   가                                    가
.
<p align="center">
<object id="AXCgm"
classid="clsid:F5D98C43- DB16- 11cf- 8ECA- 0000C0FD59C7"
codebase="/GEOWMAP/HT ML/acgm.cab" align="baseline" border="0"
width="100% " height="85% "
object target="report">
  <param name="FileName" value="cgm/a_agfa.CGM"><embed
src="cgm/a_agfa.CGM" align="baseline" border="0" width="100% "
height="85% ">
</object>
```

## 2. Script ( )

가. canal.htm

.....

```
<p><strong>                                <font
face="Arial">:</font></strong></p>
<% begintable%><div align="left">
<table border="0" width="604" height="108">
  <tr>   <td height="18" width="89"><strong><font
size="2">                                </font><font size="2"
```

```

face="Arial">:</font></strong></td>
    <td height="18" width="507"><a target="graphic"
href=" ../Geow map/scripts/mapbyqry.pl?maptype=/wisif/wisif&markrule=ca
nallMarker&connect=wisif&feature=&where=< % mapid% >,55,< % m
slink% >&autoscale=rule1,1.857&session=&htmlspec=/wisif/spec1"
>

//
                                GWM                                mapbyqry.pl
                                .                                , marker
                                , feature    , mscatalog            , mapid,
mslink                                autoscale
htmlspec

.
<fontsize="2" face="Arial"><% fcode% > </font></a></td>
</tr>
<tr>
    <td height="15" width="89"><strong><font size="2">    </font><font
size="2" face="Arial">:</font></strong></td>
//
    <td height="15" width="507"><a target="graphic"
href=" ../Geow map/scripts/mapbyqry.pl?maptype=/wisif/wisif&markrule=ca
nallMarker&connect=wisif&feature=&where=< % mapid% >,55,< % m
slink% >&autoscale=rule1,1.857&session=&htmlspec=/wisif/spec1"
><font
    size="2" face="Arial"><% fname% ></font></a></td></tr>
<tr>
<td height="22" width="89"><strong><font size="2">    </font><font
size="2" face="Arial">:</font></strong></td>

```

```

    <td height="22" width="507"><font size="2"
face="Arial"><% location_do%><% location_sigun%><% location_epmyon%><% l
ocation_ridong%></font></td>
</tr>
<tr>
    <td height="1" width="89"><strong><font size="2">    </font><font
size="2" face="Arial">:</font></strong></td>
    <td height="1" width="507">
<font size="2" face="Arial"><% coord_long%></font></td>
</tr>
<tr>
    <td height="2" width="89"><strong><font size="2">    </font><font
size="2" face="Arial">:</font></strong></td>
    <td height="2" width="507"><font
size="2"face="Arial"><% coord_lat%></font></td>
</tr>
<tr>
    <td height="12" width="89"><strong><font
size="2">    </font><font size="2"
face="Arial">:</font></strong></td>
    <td height="12" width="507"><font size="2"
face="Arial"><% begin_yr%></font></td>
</tr>
<tr>
    <td height="8" width="89"><strong><font size="2">    </font><font
size="2"
face="Arial">:</font></strong></td>
    <td height="8" width="507"><font size="2"

```

```

face="Arial"><%end_yr%></font></td>
</tr>
<tr>
<td height="3" width="89"><strong><font size="2"> </font><font
size="2"
face="Arial">:</font></strong></td>
<td height="3" width="507"><font size="2"
face="Arial"><%manage_organ%></font></td>
</tr>
<tr>
<td height="1" width="89"><strong><font
size="2"> </font><font size="2"
face="Arial">:</font></strong></td>
<td height="1" width="507"><font size="2"
face="Arial"><%project_cost%></font><font size="2"> </font></td>
</tr>
<tr>
<td height="7" width="89"><strong><font
size="2"> </font><font size="2"
face="Arial">:</font></strong></td>
<td height="7" width="507"><font size="2"
face="Arial"><%mainte_cost%></font><font size="2"> </font></td>
</tr>
<tr>
<td height="16" width="89"><strong><font size="2"> </font><font
size="2" face="Arial">:</font></strong></td>
<td height="16" width="507"><font size="2"
face="Arial"><%dam_use%></font></td>

```

```

</tr>
<tr>
  <td height="1" width="89"><strong><font size="2">          </font><font
size="2"
  face="Arial"> :</font></strong></td>
  <td height="1" width="507"><font size="2"
face="Arial"><% river_system% ></font></td>
</tr>
<tr>
  <td height="1" width="89"><strong><font size="2">          </font><font
size="2"
  face="Arial"> :</font></strong></td>
  <td height="1" width="507"><font size="2"
face="Arial"><% wshed_area% ></font></td>
</tr>
<tr>
  <td height="1" width="89"><strong><font size="2">          </font><font
size="2"
  face="Arial"> :</font></strong></td>
  <td height="1" width="507"><font size="2"
face="Arial"><% irr_area% ></font></td>
</tr>
<tr>
  <td width="81" height="12"><strong><font
size="2">          </font><font size="2"
  face="Arial"> :</font></strong></td>
  <td width="857" height="12"><font size="2"
face="Arial"><% link_upcanal% ></font></td>

```

```

</tr>
<tr>
  <td width="81" height="13"><strong><font
size="2">          </font><font size="2"
  face="Arial"> 1:</font></strong></td>
  <td width="857" height="13"><font size="2"
face="Arial"><% link_downcanal1%></font></td>
</tr>
<tr>
  <td width="81" height="10"><strong><font
size="2">          </font><font size="2"
  face="Arial"> 2:</font></strong></td>
  <td width="857" height="10"><font size="2"
face="Arial"><% link_downcanal2%></font></td>
</tr>
<tr>
  <td width="81" height="6"><strong><font size="2">          </font><font
size="2"
  face="Arial"> 3:</font></strong></td>
  <td width="857" height="6"><font size="2"
face="Arial"><% link_downcanal3%></font></td>
</tr>
<tr>
  <td width="81" height="3"><strong><font size="2">          </font><font
size="2"
  face="Arial"> 4:</font></strong></td>
  <td width="857" height="3"><font size="2"
face="Arial"><% link_downcanal4%></font></td>

```

```

</tr>
<tr>
  <td width="81" height="20"><strong><font
size="2">          </font><font size="2"
  face="Arial"> 5:</font></strong></td>
  <td width="857" height="21"><font size="2"
face="Arial"><% link_downcanal5%></font></td>
</tr>
<tr>
  <td width="81" height="25"><strong><font
size="2">          </font></strong></td>
  <td width="857" height="16"><font size="2" face="Arial"><a
target="graphic"
  href=" ../detail/<% sub_photo%> "
  style="background- image: url(' ../images/back.gif'); padding- left: 0px;
background- position: center"><% sub_photo% ></a></font></td>
</tr></table></div><hr>
<% enddetail%><% if currentrecord EQ 0%>
//          가
htx          htx
          가

<p>          가          </p>
<p>          <% endif%> </p>

. canal.idc

//

```



Datasource: wisif  
SQLStatement: select \* from canal where fname = %name%  
Template: canal\_all.htx

. canal\_mslidc

//

Datasource: wisif  
SQLStatement: select \* from canal where mslink = %msl%  
Template: canal\_all.htx

### 3. Map Definition File

Map Definition File      GWM

가. wisif.mdf

; GeoMedia Web Map - MDF File.    Created 98-12-07 5:45:55      by  
Administrator

//

=====

[GWM\_MAPTYPE]

name=wisif

description=Maps on the web by Chonbuk National University

framecolor=#ffffff

bordercolor=#ffffff

;=====

; Data Source Connections

[DATASOURCE wisif]

type=MGEdirect

dbname=D:\prj\wisif.mge

ODBC=DSN=wisif;UID=;PWD=;

seedfile=D:\prj\wisif\seed\jb\_seed.dgn

fentity=4

displayrule=DEFAULT

;=====

; Feature Sets

[FEATURESET canal]

connect=wisif

class=6

features=127,128,126,124,122,125,123

[FEATURESET markcanal]

connect=GWM\_SESSION\_MARKERS

features=canalmarker

[FEATURESET mge cad feature]

connect=wisif

class=2,6,3,4,5,7,9,8,1

features=68,70,69,91,102,89,94,127,128,126,44,81,82,96,46,90,124,122,125,123,80,92,39,9  
8,97,47,100,99,79,8,7,11,12,73,77,75,74,22,21,25,16,76,20,57,103,104,120,121,106,117,2,11

8,107,105

[FEATURESET resc]

connect=wisif

class=5

features=129,16

[FEATURESET markresc]

connect=GWM\_SESSION\_MARKERS

features=rescmarker

[FEATURESET all mge features]

connect=wisif

class=2,6,3,4,5,7,9,8,1

features=68,70,71,69,91,102,93,45,95,101,89,94,127,128,126,44,81,82,96,46,90,124,122,12

5,123,80,92,39,98,97,47,100,99,79,8,7,11,12,73,77,75,74,22,21,25,16,76,78,20,57,103,104,12

0,121,116,106,117,2,118,9,10,107,105

[FEATURESET dbank]

connect=wisif

class=5

features=73

[FEATURESET markdbank]

connect=GWM\_SESSION\_MARKERS

features=dbankmarker

[FEATURESET fwrc]

connect=wisif  
class=5  
features=75,74

[FEATURESET sedi]  
connect=wisif  
class=5  
features=77,25,76

[FEATURESET marksedl]  
connect=GWM\_SESSION\_MARKERS  
features=sedimarker

[FEATURESET slga]  
connect=wisif  
class=5  
features=78

[FEATURESET weir]  
connect=wisif  
class=6  
features=102,79

[FEATURESET pump]  
connect=wisif  
class=6  
features=81,82,80

[FEATURESET ast1]

connect=wisif

class=6

features=91,89,90,92,39

[FEATURESET markast1]

connect=GWM\_SESSION\_MARKERS

features=ast1marker

[FEATURESET wgate]

connect=wisif

class=6

features=95,94,96,98,97,99

[FEATURESET markwgate]

connect=GWM\_SESSION\_MARKERS

features=wgatemarker

[FEATURESET tbw1]

connect=wisif

class=6

features=101,100

[FEATURESET marktbw1]

connect=GWM\_SESSION\_MARKERS

features=tbw1marker

[FEATURESET office]

connect=wisif  
class=7  
features=104

[FEATURESET road]  
connect=wisif  
class=1  
features=117,2,118

;  
=====

[FEATUREVIEW hilitemarker]  
featureset=resc  
displayrule=hiline

[FEATUREVIEW canalv]  
featureset=canal  
displayrule=canalv  
click=click=../../wisif/scripts/canal\_msl.idc?msl=%mslink% target report

[FEATUREVIEW rescv]  
featureset=resc  
displayrule=DEFAULT  
click=click=../../wisif/scripts/resc\_msl.idc?msl=%mslink% target report

[FEATUREVIEW dbank view]  
featureset=dbank

displayrule=DEFAULT

click=click=../../wisif/scripts/dbank\_msl.idc?msl=%mslink% target report

[FEATUREVIEW fwrc view]

featureset=fwrc

displayrule=DEFAULT

click=click=../../wisif/scripts/fwrc\_msl.idc?msl=%mslink% target report

[FEATUREVIEW sedi view]

featureset=sedi

displayrule=DEFAULT

click=click=../../wisif/scripts/sedi\_msl.idc?msl=%mslink% target report

[FEATUREVIEW slga view]

featureset=slga

displayrule=DEFAULT

click=click=../../wisif/scripts/slga\_msl.idc?msl=%mslink% target report

[FEATUREVIEW weir view]

featureset=weir

displayrule=DEFAULT

click=click=../../wisif/scripts/weir\_msl.idc?msl=%mslink% target report

[FEATUREVIEW pump view]

featureset=pump

displayrule=DEFAULT

click=click=../../wisif/scripts/pump\_msl.idc?msl=%mslink% target report

[FEATUREVIEW mge all view]

featureset=all mge features

displayrule=DEFAULT

[FEATUREVIEW ast1 view]

featureset=ast1

displayrule=DEFAULT

click=click=../../wisif/scripts/ast\_msl.idc?msl=%mslink% target report

[FEATUREVIEW wgate view]

featureset=wgate

displayrule=DEFAULT

click=click=../../wisif/scripts/wgate\_msl.idc?msl=%mslink% target report

[FEATUREVIEW tbw1 view]

featureset=tbw1

displayrule=DEFAULT

click=click=../../wisif/scripts/tbw1\_msl.idc?msl=%mslink% target report

[FEATUREVIEW office view]

featureset=office

displayrule=hiline

click=click=../../wisif/scripts/office\_msl.idc?msl=%mslink% target report

[FEATUREVIEW road view]

featureset=road

displayrule=DEFAULT



```
;=====
```

```
; Display Thresholds
```

```
[THRESHOLD zoomed out]
```

```
type=GWM_BY_RANGE
```

```
minwidth=33000
```

```
maxwidth=120000
```

```
[THRESHOLD zoomed in]
```

```
type=GWM_BY_RANGE
```

```
minwidth=
```

```
maxwidth=33000
```

```
[THRESHOLD fit project]
```

```
type=GWM_BY_RANGE
```

```
minwidth=120000
```

```
maxwidth=
```

```
[THRESHOLD centroid]
```

```
type=GWM_BY_RANGE
```

```
minwidth=50
```

```
maxwidth=400000
```

```
;=====
```

```
; Display Sets
```

```
[DISPLAYSET ds canal]
```

```
threshold=zoomed in
```

display=canalv,hilitemarker

hotspot=canalv

[DISPLAYSET ds resc]

threshold=centroid

display=canalv,dbank view,hilitemarker,rescv

hotspot=rescv

[DISPLAYSET ds dbank]

threshold=zoomed in

display=dbank view

hotspot=dbank view,hilitemarker

[DISPLAYSET fwrc]

threshold=zoomed in

display=fwrc view

hotspot=canalv,fwrc view,hilitemarker,rescv

[DISPLAYSET ds sedi]

threshold=zoomed in

display=sedi view

hotspot=hilitemarker,sedi view

[DISPLAYSET slga]

threshold=zoomed in

display=slga view

hotspot=canalv,fwrc view,hilitemarker,rescv,slga view

[DISPLAYSET weir]  
threshold=zoomed in  
display=weir view  
hotspot=canalv,dbank view,rescv,weir view

[DISPLAYSET ds pump]  
threshold=zoomed in  
display=pump view  
hotspot=canalv,hilitemarker,pump view,rescv,weir view

[DISPLAYSET ds ast1]  
threshold=zoomed in  
display=ast1 view,pump view  
hotspot=ast1 view,canalv,rescv

[DISPLAYSET ds wgate]  
threshold=zoomed in  
display=weir view,wgate view  
hotspot=weir view,wgate view

[DISPLAYSET ds tbw1]  
threshold=zoomed in  
display=canalv,dbank view,fwrc view,pump view,rescv,tbw1 view  
hotspot=canalv,dbank view,fwrc view,pump view,rescv,tbw1 view

[DISPLAYSET ds office]  
threshold=zoomed in  
display=canalv,dbank view,hilitemarker,office view,pump view,road view

hotspot=office view

;=====

; Display Rules

[DISPLAYRULE DEFAULT]

colormap=D:\prj\wisif\seed\jb\_seed.dgn

[DISPLAYRULE canalv]

colormap=D:\prj\wisif\seed\jb\_seed.dgn

color=1

[DISPLAYRULE hiline]

colormap=D:\prj\wisif\seed\jb\_seed.dgn

color=3

weight=3

;=====

; Autoscale Rules

[AUTOSCALE rule1]

type=GWM\_RANGE\_MULT

rangemult=2

minwindow=2

maxwindow=18000

[AUTOSCALE rule2]

type=GWM\_RANGE\_MULT

```
rangemult=80
minwindow=80
maxwindow=40000
```

#### 4. HTTP

가. spec1.htm

```
// graphic
                                javascript
<p><script language="JavaScript">
<!--
function AutoZoom(){
AXCgm.MLCommand("zoom  - xy  <% view_xmin%>  <% view_ymin%>  - xy
<% view_xmax%>  <% view_ymax%>");
}
function PanLeftJ(){
nx=<% xc%> - <% width%>/2;
n                                u                                r                                l
="mapbyrng.pl?maptype=<% maptype%>&htmlspec=<% htmlspec%>&center="+n
x+",<% yc%>&width=<% width%>,<% aspect%>&session=<% session%>";
location.href= nurl;
}
function PanUpJ(){
ny=<% yc%> + <% width%>/2;
location.href="mapbyrng.pl?maptype=<% maptype%>&htmlspec=<% htmlspec%>
&center=<% xc%>,"+ny+"&width=<% width%>,<% aspect%>&session=<% sessio
```

```

n%>";
}
function ZoomInJ(){
location.href="mapbyrng.pl?maptype=< % matype% >&htmlspec=< % htmlspec% >
&center=< % xc% >,< % yc% >&width=< % zoomin_width% >,< % aspect% >&session
=< % session% >";
}
function ZoomOutJ(){
location.href="mapbyrng.pl?maptype=< % matype% >&htmlspec=< % htmlspec% >
&center=< % xc% >,< % yc% >&width=< % zoomout_width% >,< % aspect% >&sessio
n=< % session% >";
}
function PanDownJ(){
ny=< % yc% > - < % width% > / 2;
location.href="mapbyrng.pl?maptype=< % matype% >&htmlspec=< % htmlspec% >
&center=< % xc% >,"+ny+"&width=< % width% >,< % aspect% >&session=< % sessio
n% >";
}
function PanRightJ(){
nx=< % xc% > + < % width% > / 2;
n          u          r          l          =
"mapbyrng.pl?maptype=< % matype% >&htmlspec=< % htmlspec% >&center="+nx
+",< % yc% >&width=< % width% >,< % aspect% >&session=< % session% >";
location.href=nurl;
}
//-->
</script>
<script language="VBScript"> // ActiveCGM map

```

## VBScript

```
<!--  
Sub AXCgm_OnProgress(completed)  
If completed = -1 Then AXCgm.MLCommand("zoom -xy <% view_xmin% >  
<% view_ymin% > -xy <% view_xmax% > <% view_ymax% >")  
End Sub  
Sub IEPanLeftB_Click()  
call PanLeftJ()  
end sub  
Sub IEPanUpB_Click()  
call PanUpJ()  
end sub  
Sub IEZoomInB_Click()  
call ZoomInJ()  
end sub  
Sub IEZoomOutB_Click()  
call ZoomOutJ()  
end sub  
Sub IEPanDownB_Click()  
call PanDownJ()  
end sub  
Sub IEPanRightB_Click()  
call PanRightJ()  
end sub  
Sub IEFitViewB_Click()  
'alert("This will call the fit view function")  
call FitView  
end sub
```

```

sub FitView()
' This is the Autozoom routine required for Internet Explorer.
AXCgm.MLCommand("clearbuffer")
AXCgm.MLCommand("zoom - xy <% view_xmin%> <% view_ymin%> - xy
<% view_xmax%> <% view_ymax%> ")
end sub
-->
</script> </p>
<form method="POST ">
<div align="center"><center><table border="0" cellpadding="0"
cellspacing="0">
<tr>
<td><p align="left"><object id="IEPanLeftB"
name="IEPanLeftB"
classid="clsid:D7053240- CE69- 11CD- A777- 00DD01143C57"
align="baseline" border="0" width="67" height="27"><param
name="Caption" value="Pan Left"><param name="Size"
value="1764;706"><param name="FontCharSet" value="0"><param
name="FontPitchAndFamily" value="2"><param
name="ParagraphAlign" value="3"><input type="button"
name="NSPanLeftB" value="Pan Left" language="JavaScript"
onclick="PanLeftJ()"></object><object
id="IEPanUpB" name="IEPanUpB"
classid="clsid:D7053240- CE69- 11CD- A777- 00DD01143C57"
align="baseline" border="0" width="67" height="27"><param
name="Caption" value="Pan Up"><param name="Size"
value="1764;706"><param name="FontCharSet" value="0"><param
name="FontPitchAndFamily" value="2"><param

```



```

name="ParagraphAlign" value="3"><input type="button"
name="NSPanUpB" value="Pan Up" language="JavaScript"
onclick="PanUpJ()"></object><object
id="IEZoomInB" name="IEZoomInB"
classid="clsid:D7053240-CE69-11CD-A777-00DD01143C57"
align="baseline" border="0" width="67" height="27"><param
name="Caption" value="Zoom In"><param name="Size"
value="1764;706"><param name="FontCharSet" value="0"><param
name="FontPitchAndFamily" value="2"><param
name="ParagraphAlign" value="3"><input type="button"
name="NSZoomInB" value="Zoom In" language="JavaScript"
onclick="ZoomInJ()"></object><object
id="IEZoomOutB" name="IEZoomOutB"
classid="clsid:D7053240-CE69-11CD-A777-00DD01143C57"
align="baseline" border="0" width="67" height="27"><param
name="Caption" value="Zoom Out"><param name="Size"
value="1764;706"><param name="FontCharSet" value="0"><param
name="FontPitchAndFamily" value="2"><param
name="ParagraphAlign" value="3"><input type="button"
name="NSZoomOutB" value="Zoom Out" language="JavaScript"
onclick="ZoomOutJ()"></object><object
id="IEPanDownB" name="IEPanDownB"
classid="clsid:D7053240-CE69-11CD-A777-00DD01143C57"
align="baseline" border="0" width="67" height="27"><param
name="Caption" value="Pan Down"><param name="Size"
value="1764;706"><param name="FontCharSet" value="0"><param
name="FontPitchAndFamily" value="2"><param
name="ParagraphAlign" value="3"><input type="button"

```

```

name="NSPanDownB" value="Pan Down" language="JavaScript"
onclick="PanDownJ()"></object><object
id="IEPanRightB" name="IEPanRightB"
classid="clsid:D7053240-CE69-11CD-A777-00DD01143C57"
align="baseline" border="0" width="67" height="27"><param
name="Caption" value="Pan Right"><param name="Size"
value="1764;706"><param name="FontCharSet" value="0"><param
name="FontPitchAndFamily" value="2"><param
name="ParagraphAlign" value="3"><input type="button"
name="NSPanRightB" value="Pan Right" language="JavaScript"
onclick="PanRightJ()"></object>
<object
id="IEFitViewB" name="IEFitViewB"
classid="clsid:D7053240-CE69-11CD-A777-00DD01143C57"
align="baseline" border="0" width="67" height="27"><param
name="Caption" value="Fit View"><param name="Size"
value="1764;706"><param name="FontCharSet" value="0"><param
name="FontPitchAndFamily" value="2"><param
name="ParagraphAlign" value="3"></object>
</td>
</tr>
</table>
</center></div>
</form>
<!-- generate hybrid Netscape / Internet Explorer syntax -->
<p align="center"><object id="AXCgm"
classid="CLSID:F5D98C43-DB16-11CF-8ECA-0000C0FD59C7"
codebase="/GEOWMAP/HTML/acgm.cab" align="baseline" border="0"

```

```
width="100%" height="85%" object target="report"><param
name="FileName"
value="<% cgmfile%>"><embed src="<% cgmfile%>#zoom - box - xy
<% view_xmin%> <% view_ymin%> - xy <% view_xmax%>
<% view_ymax%>" align="baseline" border="0" width="100%"
height="85%"></object></p><br>
```

< D>

## Source Code

< D-1>

가 , ,

< D-1> (RESC)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL

< >

			/
	dam_use	VARCHAR2(20)	NULL
	river_system	VARCHAR2(20)	NULL
	wshed_area	FLOAT(21)	NULL
	irr_area	FLOAT(21)	NULL
	HWL_warea	FLOAT(21)	NULL
	FWL_warea	FLOAT(21)	NULL
	HWL	FLOAT(21)	NULL
	FWL	FLOAT(21)	NULL
	DWL	FLOAT(21)	NULL
	design_flood	FLOAT(21)	NULL
	total_storage	FLOAT(21)	NULL
	effect_storage	FLOAT(21)	NULL
	prwer_capacity	FLOAT(21)	NULL
	drought_freq	NUMBER(10)	NULL
	downstream	VARCHAR2(20)	NULL
	link_dam	VARCHAR2(20)	NULL
	link_spillway	VARCHAR2(20)	NULL
	link_intake	VARCHAR2(20)	NULL
	link_canal	VARCHAR2(20)	NULL

< D- 2>

(REVOL)

			/
	re_el	NUMBER(10)	NULL
	re_area	FLOAT(21)	NULL
	reev_area	FLOAT(21)	NULL
가	reas_area	FLOAT(21)	NULL
	re_link	NUMBER(10)	NOT NULL / PRIMARY KEY

< D- 3> (REWEL)

			/
	rewe_l_yr	NUMBER(10)	NULL
	rewe_l_mon	NUMBER(10)	NULL
	rewe_l_day	NUMBER(10)	NULL
	re_wel	NUMBER(10)	NULL
	re_link	NUMBER(10)	NOT NULL / PRIMARY KEY

< D- 4> (DBANK)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	dbank_type	VARCHAR2(20)	NULL
	dbank_length	FLOAT(21)	NULL
	dbank_height	FLOAT(21)	NULL
	crest_EL	FLOAT(21)	NULL
	inner_slope	FLOAT(21)	NULL
	outer_slope	FLOAT(21)	NULL
	freeboard	FLOAT(21)	NULL
	dbank_protection	VARCHAR2(20)	NULL
	link_reservoir	VARCHAR2(20)	NULL

< D- 5> (SPIL)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	spil_type	VARCHAR2(20)	NULL
	spil_width	FLOAT(21)	NULL
	overdepth	FLOAT(21)	NULL
	chute_length	FLOAT(21)	NULL
	sill_EL	FLOAT(21)	NULL
	gate_num	NUMBER(10)	NULL
	still_basin	VARCHAR2(20)	NULL
	link_reservoir	VARCHAR2(20)	NULL

< D- 6> (INT A)

			/
	ms link	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	inta_type	VARCHAR2(20)	NULL
	section_shape	VARCHAR2(20)	NULL
	inta_height	FLOAT(21)	NULL
	section_size	FLOAT(21)	NULL
	inta_capacity	FLOAT(21)	NULL
	hole_num	NUMBER(10)	NULL
	cond_type	VARCHAR2(20)	NULL
	cond_section	VARCHAR2(20)	NULL
	cond_length	FLOAT(21)	NULL
	cond_sectsize	FLOAT(21)	NULL
	link_reservoir	VARCHAR2(20)	NULL

< D- 7> (IRAC))

			/
	ms link	NUMBER(10)	NULL
	fcode	VARCHAR2(20)	NULL
	fcode	VARCHAR2(20)	NULL
	fname	FLOAT(21)	NULL
	irac_area	VARCHAR2(20)	NULL
	irac_organ	VARCHAR2(20)	NULL



< D- 8> (FWRC)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	dam_use	VARCHAR2(20)	NULL
	river_system	VARCHAR2(20)	NULL
	wshed_area	FLOAT(21)	NULL
	irr_area	FLOAT(21)	NULL
	HWL_warea	FLOAT(21)	NULL
	FWL_warea	FLOAT(21)	NULL
	HWL	FLOAT(21)	NULL
	FWL	FLOAT(21)	NULL
	DWL	FLOAT(21)	NULL
	total_storage	FLOAT(21)	NULL
	effect_storage	FLOAT(21)	NULL
	drought_freq	NUMBER(10)	NULL
	link_sea dike	VARCHAR2(20)	NULL
	link_slgate	VARCHAR2(20)	NULL
	link_pumps	VARCHAR2(20)	NULL
	link_canal	VARCHAR2(20)	NULL

< D- 9> (REVOL)

			/
	es_el	NUMBER(10)	NULL
	es_area	FLOAT(21)	NULL
	esev_area	FLOAT(21)	NULL
가	esas_area	FLOAT(21)	NULL
	es_link	NUMBER(10)	NOT NULL / PRIMARY KEY

< D- 10> (REWEL)

			/
	eswel_yr	NUMBER(10)	NULL
	eswel_mon	NUMBER(10)	NULL
	eswel_day	NUMBER(10)	NULL
	es_wel	NUMBER(10)	NULL
	es_link	NUMBER(10)	NOT NULL / PRIMARY KEY

< D- 11> (SEDI)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	sedi_class	VARCHAR2(20)	NULL
	sedi_type	VARCHAR2(20)	NULL
	sedi_length	FLOAT(21)	NULL
	sedi_height	FLOAT(21)	NULL
	crest_EL	FLOAT(21)	NULL
	crest_width	FLOAT(21)	NULL
	max_basewidth	FLOAT(21)	NULL
	inner_slope	FLOAT(21)	NULL
	outer_slope	FLOAT(21)	NULL
	link_FWRC	VARCHAR2(20)	NULL

< D- 12> (SLGA)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	design_flood	FLOAT(21)	NULL
	flood_freq	NUMBER(10)	NULL
	slga_length	FLOAT(21)	NULL
	sill_EL	FLOAT(21)	NULL
	basin_EL	FLOAT(21)	NULL
	bridge_EL	FLOAT(21)	NULL
	bridge_width	FLOAT(21)	NULL
	gate_type	VARCHAR2(20)	NULL
	gate_width	FLOAT(21)	NULL
	gate_height	FLOAT(21)	NULL
	gate_num	NUMBER(10)	NULL
	bgate_boat	VARCHAR2(20)	NULL
	bgate_width	FLOAT(21)	NULL
	bgate_length	FLOAT(21)	NULL
	bgate_sill_EL	FLOAT(21)	NULL
	bgate_type	VARCHAR2(20)	NULL
	fishway_type	VARCHAR2(20)	NULL
	fishway_slope	FLOAT(21)	NULL
	fishway_width	FLOAT(21)	NULL
	stoplog_type	VARCHAR2(20)	NULL
	stoplog_control	VARCHAR2(20)	NULL
	link_FWRC	VARCHAR2(20)	NULL

< D-13> (CANAL)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	canal_function	NUMBER(10)	NULL
	canal_class	NUMBER(10)	NULL
	canal_type	NUMBER(10)	NULL
	irr_area	FLOAT(21)	NULL
	canal_flow	FLOAT(21)	NULL
	canal_slope	FLOAT(21)	NULL
	BP_long	VARCHAR2(20)	NULL
	BP_lat	VARCHAR2(20)	NULL
	EP_long	VARCHAR2(20)	NULL
	EP_lat	VARCHAR2(20)	NULL
	canal_length	FLOAT(21)	NULL
	link_wsource	VARCHAR2(20)	NULL
	link_upcanal	VARCHAR2(20)	NULL
	link_downcanal_1	VARCHAR2(20)	NULL
	link_downcanal_2	VARCHAR2(20)	NULL
	link_downcanal_3	VARCHAR2(20)	NULL
	link_downcanal_4	VARCHAR2(20)	NULL
	link_downcanal_5	VARCHAR2(20)	NULL

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	astl_class	VARCHAR2(20)	NULL
	BP_long	VARCHAR2(20)	NULL
	BP_lat	VARCHAR2(20)	NULL
	EP_long	VARCHAR2(20)	NULL
	EP_lat	VARCHAR2(20)	NULL
	astl_length	VARCHAR2(20)	NULL
	section_shape	VARCHAR2(20)	NULL
	section_size	VARCHAR2(20)	NULL
	link_canal	VARCHAR2(20)	NULL

< D- 15>

(AST2)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	ast1_class	VARCHAR2(20)	NULL
	ast2_class	VARCHAR2(20)	NULL
	long_point	FLOAT(21)	NULL
	ast2_length	FLOAT(21)	NULL
	ast2_width	FLOAT(21)	NULL
	ast2_height	FLOAT(21)	NULL
	drophead	VARCHAR2(20)	NULL
	section_shape	FLOAT(21)	NULL
	section_size	VARCHAR2(20)	NULL

< D- 16> (WGATE)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	wgate_class	VARCHAR2(20)	NULL
	long_point	VARCHAR2(20)	NULL
	wgate_type	VARCHAR2(20)	NULL
	wgate_num	NUMBER(10)	NULL
	per_width	FLOAT(21)	NULL
	wgate_height	FLOAT(21)	NULL
	section_size	VARCHAR2(20)	NULL

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	tbwl_type	VARCHAR2(20)	NULL
	irr_area	FLOAT(21)	NULL
	total_water	FLOAT(21)	NULL
	diameter	FLOAT(21)	NULL
	tbwl_depth	FLOAT(21)	NULL
	hole_num	NUMBER(10)	NULL
	water_hole	FLOAT(21)	NULL
	pump_type	VARCHAR2(20)	NULL
	pump_head	FLOAT(21)	NULL
	pump_size	FLOAT(21)	NULL
	pump_num	NUMBER(10)	NULL
	pump_maker	VARCHAR2(20)	NULL
	link_canal	VARCHAR2(20)	NULL



< D- 18> (WEIR)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	weir_type	VARCHAR2(20)	NULL
	river_system	VARCHAR2(20)	NULL
	wshed_area	FLOAT(21)	NULL
	irr_area	FLOAT(21)	NULL
	design_flood	FLOAT(21)	NULL
	water_intake	FLOAT(21)	NULL
	weir_length	FLOAT(21)	NULL
	weir_height	FLOAT(21)	NULL
	crest_width	FLOAT(21)	NULL
	gate_width	FLOAT(21)	NULL
	gate_num	NUMBER(10)	NULL
	link_wsource	VARCHAR2(20)	NULL
	link_pumpstn	VARCHAR2(20)	NULL
	link_canal	VARCHAR2(20)	NULL

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	end_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	project_cost	FLOAT(21)	NULL
	mainte_cost	FLOAT(21)	NULL
	pump_function	VARCHAR2(20)	NULL
	irr_area	FLOAT(21)	NULL
	pump_area	FLOAT(21)	NULL
	total_capacity	FLOAT(21)	NULL
	pump_type	VARCHAR2(20)	NULL
	pump_head	FLOAT(21)	NULL
	pump_dia	FLOAT(21)	NULL
	pump_num	NUMBER(10)	NULL
	water_per_pump	FLOAT(21)	NULL
	motot_type	VARCHAR2(20)	NULL
	motor_size	FLOAT(21)	NULL
	motor_num	NUMBER(10)	NULL
	motor_maker	VARCHAR2(20)	NULL
	pump_num	VARCHAR2(20)	NULL
	link_canal	VARCHAR2(20)	NULL

< D- 20> (STN)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	location_do	VARCHAR2(20)	NULL
	location_sigun	VARCHAR2(20)	NULL
	location_epmyon	VARCHAR2(20)	NULL
	location_ridong	VARCHAR2(20)	NULL
	coord_long	VARCHAR2(20)	NULL
	coord_lat	VARCHAR2(20)	NULL
	begin_yr	NUMBER(10)	NULL
	manage_organ	VARCHAR2(20)	NULL
	stn_class	VARCHAR2(20)	NULL
	river_system	VARCHAR2(20)	NULL
	river_name	VARCHAR2(20)	NULL
	record_type	VARCHAR2(20)	NULL
	elevation	FLOAT(21)	NULL

< D- 21> (OFFICE)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	office_class	VARCHAR2(20)	NULL

< D- 22> (MUNICIPAL)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	muni_do	VARCHAR2(20)	NULL
	muni_sigun	VARCHAR2(20)	NULL
	muni_epmyon	VARCHAR2(20)	NULL
	muni_ridong	VARCHAR2(20)	NULL
	area_sqkm	FLOAT(21)	NULL

< D- 23> (MAPB)

			/
	mslink	NUMBER(10)	NOT NULL / PRIMARY KEY
	fcode	VARCHAR2(20)	NULL
	fname	VARCHAR2(20)	NULL
	map_name	VARCHAR2(20)	NULL
	map_scale	FLOAT(21)	NULL
	map_no	VARCHAR2(20)	NULL

< D- 24> (MULTIMEDIA)

			/
	mdr_map	NUMBER(10)	NULL
	mst_map	VARCHAR2(20)	NULL
	mlg_map	VARCHAR2(20)	NULL
	mphoto	VARCHAR2(20)	NULL
	m_id	NUMBER(10)	NULL
	m_mslink	NUMBER(10)	NULL

## < D- II >

### II- 1. Entrance / GetPwd.html

```
<server>
//      sql
sql=request.sql;

//      가      sql

// sql      'undefined'      /      '
//      'search'      '
//      'statics'      '
//      'free'      '

if(client.checked=="true" && sql=="undefined") redirect("IfMenu.html");
else if(client.checked=="true" && sql=="search")
redirect("http://210.117.156.62:88/act/query.html");
else if(client.checked=="true" && sql=="statics")
redirect("http://210.117.156.62:88/act/statics.html");
else if(client.checked=="true" && sql=="free")
redirect("http://210.117.156.62:88/act/query_free.html");
</server>
```

## II- 2. Entrance / ChkPwd.html

```
<server>
//      sql
sql=request.sql;

//      가
.
project.lock();

//      가      가      가
//
client.type = "ORACLE";
client.server = request.dbid;
client.dbid = request.dbid;
client.dbpwd = request.dbpwd;
client.database = "";
client.checked = "false";

//      , guest
// guest      ,      . ->
mge_gis/mge_gis
if(client.server!="guest")
{
    //      SQL Net
database.connect(?)
    database.connect( client.type,
        client.server,
```

```

        client.dbid,
        client.dbpwd,
        client.database );
    }
else
    {
        client.dbid="mge_gis";
        client.dbpwd="mge_gis";
    }

//      RDBMS
database.connected()  false
//
    (      )
if( !database.connected() && client!="guest")
{
    project.unlock();
    redirect("GetPwd.html?sql="+sql);
}

//
database.disconnect();

//
project.unlock();

//      checked  'true'
//

```

```

//
.
client.checked = "true";

//
가
가
가
.
A = scramble(client.dbid);
B = scramble(client.dbpwd);
C = scramble(client.checked);
D = scramble("1"); //

//
sql
가
.
// select
if(sql=="search")
redirect("http://210.117.156.62:88/act/query.html?A="+A+"&B="+B+"&C="+C+"&D
="+D);
//
else if(sql=="statics")
redirect("http://210.117.156.62:88/act/statics.html?A="+A+"&B="+B+"&C="+C+"&
D="+D);
//
sql
// guest
가
.
else if(sql=="free" && client.server!="guest")
redirect("http://210.117.156.62:88/act/query_free.html?A="+A+"&B="+B+"&C="+C
+"&D="+D);
else if(sql=="free" && client.server=="guest")
redirect("exception.html?id=22");

```



```
// , /
else redirect("IFMenu.html"); //
</server>
```

### II- 3. Entrance / IfMenu.html

```
...
<!-- 가
. -->

<MAP name=select>
<AREA shape=rect coords="260,150,346,179" href="IfMenuT oo.html?facility=1"
alt="RESC">
<AREA shape=rect coords="362,64,448,94" href="IfMenuT oo.html?facility=2"
alt="DBANK">
<AREA shape=rect coords="362,121,448,151" href="IfMenuT oo.html?facility=3"
alt="SPIL">
<AREA shape=rect coords="362,178,448,207" href="IfMenuT oo.html?facility=4"
alt="INT A">
<AREA shape=rect coords="362,235,448,264" href="IfMenuT oo.html?facility=5"
alt="IRAC">
<AREA shape=rect coords="260,332,346,361" href="IfMenuT oo.html?facility=6"
alt="FWRC">
<AREA shape=rect coords="362,303,448,333" href="IfMenuT oo.html?facility=7"
alt="SEDI">
<AREA shape=rect coords="362,360,448,389" href="IfMenuT oo.html?facility=8"
alt="SLGA">
<AREA shape=rect coords="123,218,210,247" href="IfMenuT oo.html?facility=9"
alt="CANAL">
```

```
<AREA shape=rect coords="5,133,108,162" href="IfMenuT oo.html?facility=10"
alt="AST 1">
<AREA shape=rect coords="5,190,108,219" href="IfMenuT oo.html?facility=11"
alt="AST 2">
<AREA shape=rect coords="21,246,108,276" href="IfMenuT oo.html?facility=12"
alt="WGATE">
<AREA shape=rect coords="5,303,108,333" href="IfMenuT oo.html?facility=13"
alt="TBWL">
<AREA shape=rect coords="186,93,272,122" href="IfMenuT oo.html?facility=14"
alt="WEIR">
<AREA shape=rect coords="186,275,272,304" href="IfMenuT oo.html?facility=15"
alt="PUMP">
<AREA shape=rect coords="555,138,658,168" href="IfMenuT oo.html?facility=16"
alt="STN">
<AREA shape=rect coords="555,286,658,315" href="IfMenuT oo.html?facility=17"
alt="OFFICE">
<AREA shape=rect coords="538,382,624,412" href="IfMenuT oo.html?facility=18"
alt="MAPB">
<AREA shape=rect coords="533,48,619,77" href="IfMenuT oo.html?facility=24"
alt="MUNICIPAL">
</MAP>
<IMG SRC="select_cover.jpg" border=0 usemap=#select alt="select one
facility">
...
```

#### **II- 4. Entrance / IfMenuT oo.html**

```
<server>
```

```

//          guest
    ' 가, / '
if(client.server!="guest") write('<input type="radio" name="update"
value="2"> 가<br>');
if(client.server!="guest") write('<input type="radio" name="update"
value="3"> &nbsp;/&nbsp; ');
if(client.server=="guest") write('<p> guest .<p>')
</server>

```

## II- 5. Entrance / Branch.html

```

<server>
// ' ' ' 가
    client.checked가 'true'/'false'
pwd_check();

//          가 가
    가
A = scramble(client.dbid);
B = scramble(client.dbpwd);
C = scramble(client.checked);
D = scramble("1");

//          ' ' , 가, /
    ' ' / / ' 가
PATH=request.PATH;
UPDATE=request.update;
MULTI=request.multi;

```

```

// guest                                UPDATE

if(client.server=="guest") UPDATE=1;

//                                /                /
                                가                .

if(PATH=="18 && MULTI=="on")
redirect("http://210.117.156.62:88/act/exception.html?id=13&PATH="+request.PATH);
if(PATH!="undefined")
redirect("http://210.117.156.62:88/act/display.html?A="+A+"&B="+B+"&C="+C+"&D="+D+"&PATH="+PATH+"&U10="+UPDATE+"&MULTI="+MULTI);
</server>

```

## II- 6. act / display.html

```

...
<HEAD>
<SCRIPT LANGUAGE="JavaScript1.2" SRC="graph.js"></SCRIPT>
</HEAD>
...
<SERVER>
...
// '                /                /                '
// display_choice_str() :                                -> wifis.js

if(request.MULTI=="undefined" || request.U10!="1")
    display_choice_str();

```

```

//          (          )          ,
.

if( unscramble(request.D) == "1" )
{
    client.type = "ORACLE";
    client.server = unscramble(request.A);
    client.dbid = unscramble(request.A);
    client.dbpwd = unscramble(request.B);
    client.database = "";
    client.checked = unscramble(request.C);
}

//          가
.

project.lock();

//          SQL Net          database.connect(?)
database.connect( client.type,
                  client.server,
                  client.dbid,
                  client.dbpwd,
                  client.database );

//          ' ' ' ' '
.

if( !database.connected() )
{

```

```

project.unlock();
redirect("http://210.117.156.62:88/entrance/GetPwd.html");
}

// ' / / '
if(request.MULTI=="undefined")
{
    //
    count=0;

    //
    mslink, fcolde, fname

    //
    select sql ->
wifis.js
    // SQLStr select
    SQLStr_list();

    //
    select
    database.cursor(?)
    cur = database.cursor(SQLStr);

    //
    가 가 , 가
    . -> exception.html

    if( !cur.next() )
    {
        cur.close();
        database.disconnect();
        project.unlock();
    }
}

```

```

if(request.U10=="2")
    redirect("exception.html?id=3&PATH="+request.PATH);
    redirect("exception.html?id=19&PATH="+request.PATH);
}

```

```

// wifit.js          -> <table border=0>

```

```

table_feature_start("border=0");

```

```

// wifit.js          -> <tr>

```

```

tr();

```

```

//           , ' '

```

```

if(request.U10=="1")

```

```

{

```

```

    //           -> wifis.js

```

```

    display_table_head();

```

```

    //           select

```

```

    //           6 ,

```

```

        3

```

```

    if(request.PATH=="24") col_ini=6; else col_ini=3;

```

```

    //           makeArray(?) -> wifis.js

```

```

    A=new makeArray(col_ini);

```

```

    //

```

```

    // cursor.next() :      가

```

```

    for(i=1;i>0;i++)

```

```

{
    //
    //   가   null   'null'   ""
    .
    for(j=1;j<=col_ini;j++)
    {
        if(cur[j-1]!=null) A[j]=cur[j-1];
        else A[j]="";
    }
    //
    //
    //   가
    .
    //

    if(request.PATH=="24") write('<tr>\n<td align=center
bgcolor="dedede"><font face="   "
color=blue>'+A[1]+'</font></a></td>\n<td bgcolor="dedede"><font
face="   "
color=blue>'+A[2]+'&nbsp;/&nbsp;&nbsp;'+A[3]+'&nbsp;/&nbsp;&nbsp;'+A[4]+'&nbsp;/&nbsp;&nbsp;
p;'+A[5]+'</font></td>\n<td align=center bgcolor="dedede"><font face="   "
color=blue>'+A[6]+'</font></td>\n');
    else write('<tr>\n<td align=center bgcolor="dedede"><a
href="display_content.html?mslink='+A[1]+'&U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face="   " color=blue>'+A[1]+'</font></a></td><td
align=center bgcolor="dedede"><a
href="display_content.html?mslink='+A[1]+'&U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face="   " color=blue>'+A[2]+'</font></a></td><td

```



```
align=center bgcolor="dedede"><a
href="display_content.html?mslink='+A[1]+'&U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face="      " color=blue>'+A[3]+'</font></a></td>\n');
```

```

//
.
count++;

//
if(!cur.next()) break;
}
//
cur.close();
}
//      , ' 7'
else if(request.U10=="2")
{
//      mslink
write("<td align=center bgcolor=black><font face='
color='9cff9c'>MS LINK</font></td>\n");

for(i=1;i>0;i++)
{
// mslink      fcode, fname
.
//      mslink
.
if((request.PATH!="24" && cur[1]==null && cur[2]==null) ||
```

```

(request.PATH=="24" && cur[1]==null && cur[2]==null && cur[3]==null &&
cur[4]==null && cur[5]==null))
    {
        //          가
        write('<tr>\n<td align=center bgcolor="dedede"><a
href="update_content.html?mslink='+cur[0]+' &U10=3&PATH='+request.PATH+'
&dum=back"><font face="          " color=blue>'+cur[0]+'</font></a></td>\n');
        count++;
    }
    if(!cur.next()) break;
}
cur.close();

//          fcode, fname
.

//          'mslink          가', '          ', '          /          '
가          . -> exception.html
if(count==0)
{
    database.disconnect();
    project.unlock();
    redirect("exception.html?id=2&PATH="+request.PATH);
}
//          mslink
          가

write('<tr>\n<td>&nbsp;<br></td></table>\n<a
href="update_content.html?U10=2&PATH='+request.PATH+' &dum=back"><font
face="          ">MSLINK          ROW          가 ?</font></a><br>');

```

```

}
//          , ' / '
else
{
    display_table_head();

    if(request.PATH=="24") col_ini=6; else col_ini=3;
        A=new makeArray(col_ini);
    for(i=1;i>0;i++)
    {
        //          fcode   fname
/

        if(request.PATH!="24" && (cur[1]!=null || cur[2]!=null))
        {
            for(j=1;j<=col_ini;j++)
            {
                if(cur[j-1]!=null) A[j]=cur[j-1];
                else A[j]="";
            }
            //          /
            write('<tr>\n<td align=center bgcolor="dedede"><a
href="update_content.html?mslink='+A[1]+' &U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face="      " color=blue> '+A[1]+' </font></a></td><td
align=center bgcolor="dedede"><a
href="update_content.html?mslink='+A[1]+' &U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face="      " color=blue> '+A[2]+' </font></a></td><td
align=center bgcolor="dedede"><a
href="update_content.html?mslink='+A[1]+' &U10='+request.U10+'&PATH='+req

```

```

uest.PATH+' "><font face=" " color=blue> '+A[3]+' </font></a></td>\n');
        count++;
    }
    //
    if(request.PATH=="24" && (cur[1]!=null || cur[2]!=null ||
cur[3]!=null || cur[4]!=null || cur[5]!=null))
    {
        for(j=1;j<=col_ini;j++)
        {
            if(cur[j-1]!=null) A[j]=cur[j-1];
            else A[j]="";
        }
        //
        write('<tr>\n<td align=center bgcolor="dedede"><a
href="update_content.html?mslink='+A[1]+' &U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face=" " color=blue> '+A[1]+' </font></a></td><td
bgcolor="dedede"><a
href="update_content.html?mslink='+A[1]+' &U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face=" " color=blue> '+A[2]+' '+A[3]+' '+A[4]+'
'+A[5]+' </font></a></td><td align=center bgcolor="dedede"><a
href="update_content.html?mslink='+A[1]+' &U10='+request.U10+'&PATH='+req
uest.PATH+' "><font face=" " color=blue> '+A[6]+' </font></a></td>\n');
        count++;
    }
    if(!cur.next()) break;
}
cur.close();

```

```

//      /      가      . ->
exception.html
    if(count==0)
    {
        database.disconnect();
        project.unlock();
        redirect("exception.html?id=1&PATH="+request.PATH);
    }
}
//      count      .
write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count+'</font>      가      . -<p>');
// wifis.js      -> </table>
table_end();
}
//      /      /
else
{
    /////      /      /      , ' '
    if(request.U10=="1")
    {
        // javascript
        -> wifis.js
        js_win_open();

        //      ,      ,

        //      ,      temp가 3      11 ->

```



```

//          select          ->
wifis.js
//      SQLStr  select      .
SQLStr_multi_list();

cur = database.cursor(SQLStr);

// select      가      .
if(cur.next())
{
    write("
        .<p>");
    table_feature_start("border=0");
    tr();
//          -> wifis.js
    display_multi_table_head();

//

    count1=0;

//
    for(i=1;i>0;i++)
    {
        write('<tr>\n<td align=center bgcolor="dedede"><font
face="      " color=blue>'+cur[0]+'</font></td><td align=center
bgcolor="dedede">');

```

```

//      가      (null      )
if(cur[1]!=null)
{
    //
    ,
    .
    if(file_exist(cur[1])=="true")
        write('<a href="javascript:void(0)"
on&nbsp;CLICK="open_win(\''+cur[1]+\');"><font face="
"
color=blue>'+cur[1]+</font></a>');
        else write('<font face="
"
color=blue>'+cur[1]+</font>');
    }
    //      ,      ,      attribute가
    .
    if(request.PATH!=5 && request.PATH!=16 &&
request.PATH!=17)
    {
        write('</td><td align=center bgcolor="dedede">');
        if(cur[2]!=null)
        {
            if(file_exist(cur[2])=="true")
                write('<a href="javascript:void(0)"
on&nbsp;CLICK="open_win(\''+cur[2]+\');"><font face="
"
color=blue>'+cur[2]+</font></a>');
            else write('<font face="
"
color=blue>'+cur[2]+</font>');
        }
    }
}

```



```

//          attribute가
if(request.PATH==9)
{
    write('</td><td align=center bgcolor="dedede">');
    if(cur[3]!=null)
    {
        if(file_exist(cur[3])=="true")
            write('<a href="javascript:void(0)"
on&nbsp;CLICK="open_win(\''+cur[3]+\');"><font face="
color=blue>'+cur[3]+'</font></a>');
        else write('<font face="
color=blue>'+cur[3]+'</font>');
    }
}
write('</td>\n');
count1++;
if(!cur.next()) break;
}
//
write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count1+'</font>      가      . -<p>');
table_end();
}
else
{
    // select      가      temp
.
write('
');
```



```

// select
-> wifis.js
// SQLStr select
SQLStr_cont_list();
cur=database.cursor(SQLStr);

// select 가
if(cur.next())
{
    table_feature_start("border=0");
    tr();
    write('<td align=center bgcolor=black><font face="
color="9cff9c">');
    write_facility();
    write(' MSLINK</font></td>\n<td align=center
bgcolor=black><font face=" " color="9cff9c">');
    write_facility();
    write(' </font></td>\n<td align=center
bgcolor=black><font face=" " color="9cff9c">');
    write_facility();
    write(' </font></td>\n<td align=center
bgcolor=black><font face=" " color="9cff9c"> </font></td>\n<td
align=center bgcolor=black><font face=" "
color="9cff9c"> 가 </font></td>\n');
    A=new makeArray(5);

//

```

```

// graph_temp : y
// prev_mslink : mslink

mslink

// xscale_ini : x
// xscale_inc : x

graph_temp="";
if(cur[0]!=null) prev_mslink=cur[0];
    else prev_mslink="";
xscale_ini=cur[1];
xscale_inc=xscale_ini;

// mslinkヲ
count2=0;
for(i=1;i>0;i++)
{
    for(j=1;j<=cur.columns();j++)
    {
        if(cur[j-1]!=null) A[j]=cur[j-1];
        else A[j]="";
    }

// mslink

// y
graph_temp
';'

if(prev_mslink!=A[1])
{

```

```

        table_end();
        write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count2+'</font>      가      . -<p>');
        count2=0;      //      mslink      가

        write('<br>\n');

        // client- side javascript

        // source      graph.js
        write('<SCRIPT LANGUAGE="JavaScript1.2">\n');
        write('var g = new Graph(500,300);\n');

        //

        write('g.addRow('+graph_temp+');\n');

        // y

        write('g.scale = 25;\n');

        // y

        write('g.setXScale('+xscale_ini+',5,1);\n');      //
x      ,      ,      가
        write('g.title = "      ";\n');      //

        write('g.xLabel = "      ";\n');

        // x

        write('g.yLabel = "      ";\n');

        // y

        write('g.build();\n');

        //

        write('</SCRIPT>\n<br>\n');

```

```

//      mslink
graph_temp="";
prev_mslink=0;
xscale_ini=A[2];
xscale_inc=xscale_ini;

//      mslink
table_feature_start("border=0");
tr();
write('<td align=center bgcolor=black><font
face="      " color="9cff9c">');
write_facility();
write(' MSLINK</font></td>\n<td align=center
bgcolor=black><font face="      " color="9cff9c">');
write_facility();
write('      </font></td>\n<td align=center
bgcolor=black><font face="      " color="9cff9c">');
write_facility();
write('      </font></td>\n<td align=center
bgcolor=black><font face="      " color="9cff9c">      </font></td>\n<td
align=center bgcolor=black><font face="      "
color="9cff9c"> 가      </font></td>\n');
}
else if(i!=1)
    graph_temp=graph_temp+",";

//

```

```

        write('<tr>\n<td align=center bgcolor="dedede"><font
face="    " color=blue>'+A[1]+'</font></td><td align=center
bgcolor="dedede"><font face="    " color=blue>'+A[2]+'</font></td><td
align=center bgcolor="dedede"><font face="    "
color=blue>'+A[3]+'</font></td><td align=center bgcolor="dedede"><font
face="    " color=blue>'+A[4]+'</font></td><td align=center
bgcolor="dedede"><font face="    " color=blue>'+A[5]+'</font></td>\n');

```

```

// x          x          , y  0

```

```

        if(A[2]!=xscale_inc)
            for(xscale_inc;xscale_inc<=eval(A[2]- 1);xscale_inc++)
                graph_temp=graph_temp+"0,";
// 1          0
.xxx        0
        if(A[3]<1 && A[3]!="0")
graph_temp=graph_temp+"0"+A[3];
            else graph_temp=graph_temp+A[3];

        count2++;
        if(!cur.next()) break;
//          x
        xscale_inc++;
//          mslink
        prev_mslink=A[1];
    }
table_end();

```

```

        write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count2+'</font>          가          . -<p>');
        write('<br>\n');

//

        write('<SCRIPT LANGUAGE="JavaScript1.2">\n');
        write(' var g = new Graph(500,300);\n');
        write(' g.addRow('+graph_temp+');\n');
        write(' g.scale = 25;\n');
        write(' g.setXScale('+xscale_ini+',5,1);\n');
        write(' g.title = "          "\n');
        write(' g.xLabel = "          "\n');
        write(' g.yLabel = "          "\n');
        write(' g.build();\n');
        write('</SCRIPT>\n<p>\n');
    }
    else
    {
        //          가
        write_facility();
        write('          가          ');
        temp++;
    }
    cur.close();

//

write('<p></center>\n<a name="level"></a>\n<table

```







```

for(j=1;j<=cur.columns();j++)
{
    if(cur[j- 1]!=null) A[j]=cur[j- 1];
    else A[j]="";
}
if(prev_mslink!=A[1])
{
    table_end();
    write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count3+'</font>      가      . - <p>');
    count3=0;
    write('<br>\n');
    write('<SCRIPT LANGUAGE="JavaScript1.2">\n');
    write('var g = new Graph(500,300);\n');
    write('g.addRow('+graph_temp+');\n');
    write('g.scale = 25;\n');

write('g.setDate('+xscale_ini_yr+',+xscale_ini_mon+',+xscale_ini_day+',5,1);\n')
;

    write('g.title = "      ";\n');
    write('g.xLabel = "      ";\n');
    write('g.yLabel = "      ";\n');
    write('g.build();\n');
    write('</SCRIPT>\n<br>\n');

    graph_temp="";
    prev_mslink=0;
    xscale_ini_yr=A[2];

```



```
align=center bgcolor="dedede"><font color=blue>'+A[4]+'</font></td><td
align=center bgcolor="dedede"><font color=blue>'+A[5]+'</font></td>\n');
```

```

// x          x          , y      0
.
    if(A[2]!=xscale_inc_yr || A[3]!=xscale_inc_mon ||
A[4]!=xscale_inc_day)
    {
        while(xscale_inc_yr!=A[2] || xscale_inc_mon!=A[3] ||
xscale_inc_day!=eval(A[4]- 1))
        {
            graph_temp=graph_temp+"0,";
            xscale_inc_level();
        }
    }
// 1          0
.xxx      0      .
    if(A[5]<1 && A[5]!="0")
graph_temp=graph_temp+"0"+A[5];
        else graph_temp=graph_temp+A[5];

count2++;
if(!cur.next()) break;
//      ,      ,      가      - > wifis1.js
xscale_inc_level();
prev_mslink=A[1];
}
table_end();
```

```

        write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count3+'</font>      가      . -<p>');
        write('<br>\n');

        write('<SCRIPT LANGUAGE="JavaScript1.2">\n');
        write(' var g = new Graph(500,300);\n');
        write('g.addRow('+graph_temp+');\n');
        write('g.scale = 25;\n');

write('g.setDate('+xscale_ini_yr+',+xscale_ini_mon+',+xscale_ini_day+',5,1);\n')
;

        write('g.title = "      "\n');
        write('g.xLabel = "      "\n');
        write('g.yLabel = "      "\n');
        write('g.build();\n');
        write('</SCRIPT>\n<br>\n');
    }
else
{
    //      가
    write_facility();
    write('      가      ');
    temp++;
}
cur.close();

if(temp==3)
{

```

```

        //      ,      ,      가
-> exception.html
        database.disconnect();
        project.unlock();
        redirect("exception.html?id=11&PATH="+request.PATH);
    }
}
else if(temp==1)
    {
        //      ,      가      가
-> exception.html
        database.disconnect();
        project.unlock();
        redirect("exception.html?id=12&PATH="+request.PATH);
    }

}
else if(request.U10=="2") //      /      /      , ' 가'
/////
{
    //      가      sql
    .
    //      SQLStr      select      .
    SQLStr_list();
    cur = database.cursor(SQLStr);
    if(cur.next())
    {
        table_feature_start("border=0");

```

```

tr();
display_table_head();

A=new makeArray(3);
count=0;
for(i=1;i>0;i++)
{
    for(j=1;j<=3;j++)
    {
        if(cur[j-1]!=null) A[j]=cur[j-1];
        else A[j]="";
    }
    //          가
    write('<tr>\n<td align=center bgcolor="dedede"><a
href="multi_update_content.html?mslink='+A[1]+'&U10='+request.U10+'&PATH
='+request.PATH+'&MULTI='+request.MULTI+' "><font face="
color=blue>'+A[1]+'</font></a></td><td align=center bgcolor="dedede"><a
href="multi_update_content.html?mslink='+A[1]+'&U10='+request.U10+'&PATH
='+request.PATH+'&MULTI='+request.MULTI+' "><font face="
color=blue>'+A[2]+'</font></a></td><td align=center bgcolor="dedede"><a
href="multi_update_content.html?mslink='+A[1]+'&U10='+request.U10+'&PATH
='+request.PATH+'&MULTI='+request.MULTI+' "><font face="
color=blue>'+A[3]+'</font></a></td>\n');
    count++;
    if(!cur.next()) break;
}
write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count+'</font>          가          .-<p>');

```







```

tr();
display_multi_table_head();

//
- > wifis.js
// multi_col_num      가      .
multi_col_num();

A=makeArray(multi_col_num);
count=0;
for(i=1;i>0;i++)
{
    //                      A
- > wifis.js
    array_multi();
    //                      /
가 가
    //                      - > wifis.js
    array_multi_trans();
    //                      가                      /
- > wifis.js
    write_multi_trans();
    count++;
    if(!cur.next()) break;
}
write('<font size=1>&nbsp;<br></font>- <font
color=red>'+count+'</font>      가      . -<p>');
table_end();

```



```

table_feature_start("border=0");
tr();
write('<td align=center bgcolor=black><font face="
color="9cff9c"> ');
write_facility();
write(' MSLINK</font></td>\n<td align=center
bgcolor=black><font face="
color="9cff9c"> ');
write_facility();
write(' </font></td>\n<td align=center
bgcolor=black><font face="
color="9cff9c"> ');
write_facility();
write(' </font></td>\n<td align=center
bgcolor=black><font face="
color="9cff9c"> </font></td>\n<td
align=center bgcolor=black><font face="
color="9cff9c"> 가 </font></td>\n');

```

```

A=new makeArray(5);
count=0;
for(i=1;i>0;i++)
{
//
가 가
ZZ=escape(scramble(cur[1]));
YY=escape(scramble(cur[2]));
XX=escape(scramble(cur[3]));
WW=escape(scramble(cur[4]));

// cursor가 가

```

```

cursor.columns()

for(j=1;j<=cur.columns();j++)
{
    if(cur[j-1]!=null) A[j]=cur[j-1];
    else A[j]="";
}
// 4 가

null
    write('<tr>\n<td align=center bgcolor="dedede"><a
href="multi_update_content.html?mslink='; if(A[1]!="")
write(A[1]); else write('null');
write('&ZZ='+ZZ+'&YY='+YY+'&XX='+XX+'&WW='+WW+'&MULTI='+reque
st.MULTI+'&U10='+request.U10+'&PATH='+request.PATH+' "><font
face=" " color=blue>'+A[1]+'</font></a></td><td align=center
bgcolor="dedede"><a href="multi_update_content.html?mslink=';
    if(A[1]!="") write(A[1]); else write('null');

write('&ZZ='+ZZ+'&YY='+YY+'&XX='+XX+'&WW='+WW+'&MULTI='+reque
st.MULTI+'&U10='+request.U10+'&PATH='+request.PATH+' "><font
face=" " color=blue>'+A[2]+'</font></a></td><td align=center
bgcolor="dedede"><a href="multi_update_content.html?mslink=';
    if(A[1]!="") write(A[1]); else write('null');

write('&ZZ='+ZZ+'&YY='+YY+'&XX='+XX+'&WW='+WW+'&MULTI='+reque
st.MULTI+'&U10='+request.U10+'&PATH='+request.PATH+' "><font
face=" " color=blue>'+A[3]+'</font></a></td><td align=center
bgcolor="dedede"><a href="multi_update_content.html?mslink=';
    if(A[1]!="") write(A[1]); else write('null');

```

```

write(' &ZZ=' +ZZ+ ' &YY=' +YY+ ' &XX=' +XX+ ' &WW=' +WW+ ' &MULTI=' +reque
st.MULTI+ ' &U10=' +request.U10+ ' &PATH=' +request.PATH+ ' "><font
face=" " color=blue>' +A[4]+' </font></a></td><td align=center
bgcolor="dedede"><a href="multi_update_content.html?mslink=');
    if(A[1]!="") write(A[1]);                                else write('null');

write(' &ZZ=' +ZZ+ ' &YY=' +YY+ ' &XX=' +XX+ ' &WW=' +WW+ ' &MULTI=' +reque
st.MULTI+ ' &U10=' +request.U10+ ' &PATH=' +request.PATH+ ' "><font
face=" " color=blue>' +A[5]+' </font></a></td>\n');
        count++;
        if(!cur.next()) break;
    }
    write(' <font size=1>&nbsp;<br></font>- <font
color=red>' +count+' </font>      가      . - <p>');
    table_end();
}
else
{
    //      가      .
    write_facility();
    write('      가      ');
    temp++;
}
cur.close();

//
write(' <p></center>\n<a name="level"></a>\n<table

```





가 가

```
ZZZ=escape(scramble(cur[1]));
YYY=escape(scramble(cur[2]));
XXX=escape(scramble(cur[3]));
WWW=escape(scramble(cur[4]));
for(j=1;j<=cur.columns();j++)
{
    if(cur[j-1]!=null) A[j]=cur[j-1];
    else A[j]="";
}
// 4
```

가

null

```
write('<tr>\n<td align=center bgcolor="dedede"><a
href="multi_update_content.html?mslink=';
write(A[1]);
write('&ZZZ='+ZZZ+'&YYY='+YYY+'&XXX='+XXX+'&WWW='+WWW+'&MULTI='+request.MULTI+'&U10='+request.U10+'&PATH='+request.PATH+' "><
font face=" " color=blue>'+A[1]+'</font></a></td><td align=center
bgcolor="dedede"><a href="multi_update_content.html?mslink=';
if(A[1]!="") write(A[1]);
else write('null');

write('&ZZZ='+ZZZ+'&YYY='+YYY+'&XXX='+XXX+'&WWW='+WWW+'&MULTI='+request.MULTI+'&U10='+request.U10+'&PATH='+request.PATH+' "><
font face=" " color=blue>'+A[2]+'</font></a></td><td align=center
bgcolor="dedede"><font color=blue> &nbsp;p;&nbsp;p;</font></td><td
align=center bgcolor="dedede"><a href="multi_update_content.html?mslink=';
if(A[1]!="") write(A[1]);
else
write('null');
```



```

        temp++;
    }
    cur.close();
    //      ,      ,      가
-> exception.html
    if(temp==3)
    {
        database.disconnect();
        project.unlock();
        redirect("exception.html?id=11");
    }
}
else if(temp==1)
{
    //      ,      가      가
-> exception.html
        database.disconnect();
        project.unlock();
        redirect("exception.html?id=12&PATH="+request.PATH);
    }

}
}
//      ,      .
database.disconnect();
project.unlock();
</SERVER>

```

## II- 7. act / display\_content.html

```
...
<server>
//                                     -> wifis1.js
general_display();
...
//                                     가      .
if(request.PATH!=18)
{
    //                                     -> wifis1.js

    multi_display();
}
...
//                                     .
if(request.PATH==1 || request.PATH==6)
{
    //                                     -> wifis1.js

    cont_display();

    //                                     -> wifis1.js
    level_display();
}
...
//                                     ,      ,      가      .
if(request.PATH!=16 && request.PATH!=17 && request.PATH!=18)
{
```

```

//                                     -> wifis1.js
    link_display();
}
</server>
...

```

## II- 8. act / update\_content.html

```

<SERVER>
...
//          attribute          col_num
col_num();

//          가          makeArray(?) ->
wifis.js
A = new makeArray(col_num);

//          , ' / '          mslink          ' 가'
if(request.U10=="3")
{
    //          가
    .
    project.lock();

    //          SQL Net
database.connect(?)
    database.connect( client.type,
                    client.server,

```

```

        client.dbid,
        client.dbpwd,
        client.database );

//

if( !database.connected() )
{
    project.unlock();
    redirect("http://210.117.156.62:88/entrance/GetPwd.html");
}

//      mslink      가      select
// SQLStr      select
SQLStr_display_content();

//      select
      database.cursor(?)
cur=database.cursor(SQLStr);

//
//
- > exception.html
if( !cur.next() )
{
    cur.close();
    database.disconnect();
    project.unlock();
}

```

```

redirect("exception.html?id=7&spec=6&PATH="+request.PATH+"&SQLStr="+SQLStr);
}

//
//   가   null   'null'   ""
.
for( i=1; i<=col_num; i++ )
{
    if( cur[i- 1] != null )   A[i] = cur[i- 1];
    else A[i] = "";
}
//
,
.

cur.close();
database.disconnect();
project.unlock();

// ' / '   mslink   ' 가   form
-> wifis.js
//   가   dum   가   .

form_start("append_check.html?mslink="+request.mslink+"&U10="+request.U10+"&PATH="+request.PATH+"&dum="+request.dum);
}
else // mslink
{

```

```

// 가
for( i=1; i<=col_num; i++ )
{
    A[i] = "";
}

// ' 가' form -> wifis.js

form_start("append_check.html?U10="+request.U10+"&PATH="+request.PATH);
}

// 가 / attribute

table_feature_start("border=0 cellspacing=0 cellpadding=0 width=700");

// -> wifis2.js
tr_guide();

tr();

// ' / ' mslink ' 가' mslink
if(request.U10=="3")
    td_feature_str("colspan=4 align=center",&nbsp;MS&nbsp;LINK &nbsp;
<font color=red><b>"+A[1]+</b></font>");
else // ' 가' mslink
    td_feature_font_str_input("colspan=4
align=right","color=red","MS&nbsp;LINK ","ms link","10",A[1]);

```



```

//          fcode, fname          .
if(request.PATH!="24")
{
    td_feature_font_str_input("colspan=5
align=right","color=red","    ","fcode","17",A[2]);
    td_feature_font_str_input("colspan=5
align=right","color=red","    ","fname","17",A[3]);
}
tr();
td_str("<font size=1> &nbsp;  </font>");

//      /          mslink          가
//      attribute          -> wifis2.js
general_update();

//          ,          ,
//      / / /          가 .
if(request.PATH==16 || request.PATH==17 || request.PATH==18)
    td_feature_start("colspan=14 align=center valign=top");
else
{
    write('<td></td>');
    td_feature_start("colspan=9 align=right valign=top");
}

// ' / '          mslink          ' 가'
if(request.U10=="3")
{

```

```

        submit_name("UPDATE","");
        nbsp_line(4);
        reset(" ");
        nbsp_line(4);
        submit_name("DELETE","");
    }
else // mslink '가'
{
    submit(" ");
    nbsp_line(4);
    reset(" ");
}

// wifis.js -> </td>
td_end();

// wifis.js -> </table>
table_end();

// wifis.js -> </form>
form_end();
</SERVER>

```

## II-9. act / append\_check.html

```

<server>
...
// , /

```

```

if(request.DELETE!="undefined")
{
    //      가
    .
    project.lock();

    //      SQL Net
database.connect(?)
    database.connect( client.type,
                        client.server,
                        client.dbid,
                        client.dbpwd,
                        client.database );

    //      , , , ,
    .
    if( !database.connected() )
    {
        project.unlock();
        redirect("http://210.117.156.62:88/main/GetPw d.html");
    }

    //      mslink      가      delete
    // SQLStr      delete      .
    SQLStr_delete();

    //      query      database.execute(?)
    //      0

```

```

//                                0
client.status = database.execute(SQLStr);

//
client.majorNumber = database.majorErrorCode();
client.majorText   = database.majorErrorMessage();
client.minorNumber = database.minorErrorCode();
client.minorText   = database.minorErrorMessage();

//
database.disconnect();
project.unlock();

// delete                                dum                                가                                /
                                //////////////
if( client.status == 0 )
{
    if(request.dum=="back")
redirect("display.html?U10=2&PATH="+request.PATH);
    else redirect("display.html?U10=3&PATH="+request.PATH);
}
else write(SQLStr); //                                delete
//                                . -> wifis.js
ErrorMessage();
}
else //                                , mslink                                ' 가'                                /                                '                                mslink
                                ' 가'

```

```

{
    //          radio
    .
    // -> wifis.js
    // accept_radio();

    //          , mslink          ' 가'
    //          insert
    //          ' / '          mslink          ' 가'
    // update          -> wifis.js
    if(request.U10=="2")
        SQLStr_insert();
    else
        SQLStr_update();

    //          가
    .
    project.lock();

    //          SQL Net
    database.connect(?)
    database.connect( client.type,
        client.server,
        client.dbid,
        client.dbpwd,
        client.database );

    //          ' ' ' ' ' '

```

```

if( !database.connected() )
{
    project.unlock();
    redirect("http://210.117.156.62:88/main/GetPwd.html");
}

```

```

client.status = database.execute(SQLStr);

```

```

client.majorNumber = database.majorErrorCode();
client.majorText   = database.majorErrorMessage();
client.minorNumber = database.minorErrorCode();
client.minorText   = database.minorErrorMessage();

```

```

//

```

```

database.disconnect();
project.unlock();

```

```

// insert      update

```

```

// mslink      가      가

```

```

// mslink      가      가

```

```

//

```

```

if( client.status == 0 )

```

```

{

```

```

    if(request.U10=="3")

```

```

    {

```

```

        if(request.dum=="back")
redirect("display_content.html?U10=2&PATH="+request.PATH+"&mslink="+request.mslink);
        else
redirect("display_content.html?U10=3&PATH="+request.PATH+"&mslink="+request.mslink);
    }
    else

redirect("update_content.html?U10=2&PATH="+request.PATH+"&dum=back");
    }
    else write(SQLStr); //          insert      update
    //          . -> wifis.js
    ErrorMessage();
}
</server>

```

## II- 10. act / multi\_display.html

```

<script language='Javascript'>
<!--
function do_close()
{
    close();
}
//-->
</script>
<center>

```

```

<br>
<a href=' javascript:void(0)' onClick=' do_close();'>          </a><p>
<server>
write("<img src='http://210.117.156.62:88/multi/'> write_sql_facility());
write("/"+request.filename+" border=0>");
</server>

```

**II- 11. act / multi\_update\_content.html**

가 .

**II- 12. act / multi\_append\_check.html**

가 .

**II- 13. act / query.html**

```

<!-- where          checkbox
                    . -->
<SCRIPT LANGUAGE="JavaScript">
<!--
function setCheck(name) {
    name.checked = true;
}

function setNotCheck(name) {
    name.checked = false;
}

function setRange(ini,fin) {
    for(i = ini- 1; i < fin; i++) {

```



```

        setCheck(document.selectinfo.elements[i]);
    }
}

function freeRange(ini,fin) {
    for(i = ini- 1; i < fin; i++) {
        setNotCheck(document.selectinfo.elements[i]);
    }
}

function selectAll(num)
{
    if (document.selectinfo.all.checked)
    {
        setRange(5,6);
        if(num==1) setRange(12,35);
        else if(num==2) { setRange(12,15); setRange(21,40); }
        else if(num==3) { setRange(12,15); setRange(21,26); setRange(42,45); }
        else if(num==4) { setRange(12,15); setRange(21,26); setRange(42,36);
setRange(41,50); }
        else if(num==5) { setRange(12,15); setRange(21,26); setRange(42,36);
setRange(41,45); setRange(50,54); }
    }
    else
    {
        freeRange(5,6);
        if(num==1) freeRange(12,35);
        else if(num==2) { freeRange(12,15); freeRange(21,40); }
    }
}

```

```

        else if(num==3) { freeRange(12,15); freeRange(21,26); freeRange(42,45);
    }
        else if(num==4) { freeRange(12,15); freeRange(21,26); freeRange(42,36);
freeRange(41,50); }
        else if(num==5) { freeRange(12,15); freeRange(21,26); freeRange(42,36);
freeRange(41,45); freeRange(50,54); }
    }
}

```

```

function selectRescs(num)
{
    if (document.selectinfo.rescs.checked)
    {
        setRange(6,6);
        if(num==1) setRange(12,17);
        if(num>=2) { setRange(12,16); setRange(22,22); }
    }
    else
    {
        freeRange(6,6);
        if(num==1) freeRange(12,17);
        if(num>=2) { freeRange(12,16); freeRange(22,22); }
    }
}

```

```

function selectFwrcs(num)
{
    if (document.selectinfo.fwrcs.checked)

```

```

{
    if(num==1) setRange(19,23);
    if(num==2) { setRange(24,28); }
    if(num>=3) { setRange(24,25); setRange(32,33); }
}
else
{
    if(num==1) freeRange(19,23);
    if(num==2) { freeRange(24,28); }
    if(num>=3) { freeRange(24,25); freeRange(32,33); }
}
}

```

function selectCanals(num)

```

{
    if (document.selectinfo.canals.checked)
    {
        if(num==1) setRange(25,29);
        if(num==2) { setRange(30,34); }
        if(num==3) { setRange(35,39); }
        if(num>=4) { setRange(35,36); setRange(42,44); }
    }
    else
    {
        if(num==1) freeRange(25,29);
        if(num==2) { freeRange(30,34); }
        if(num==3) { freeRange(35,39); }
        if(num>=4) { freeRange(35,36); freeRange(42,44); }
    }
}

```

```

    }
}
// -->
</script>
...
<server>
// where                                checkbox
                                        temp
if(temp==0) write('<td><input type="checkbox" name="all"
onClick="selectAll(1)"></td>\n');
else if(temp==1) write('<td><input type="checkbox" name="all"
onClick="selectAll(2)"></td>\n');
else if(temp==2) write('<td><input type="checkbox" name="all"
onClick="selectAll(3)"></td>\n');
else if(temp==3) write('<td><input type="checkbox" name="all"
onClick="selectAll(4)"></td>\n');
else if(temp==4) write('<td><input type="checkbox" name="all"
onClick="selectAll(5)"></td>\n');
if(temp==0) write('<td><input type="checkbox" name="rescs"
onClick="selectRescs(1)"></td>\n');
else if(temp==1) write('<td><input type="checkbox" name="rescs"
onClick="selectRescs(2)"></td>\n');
else if(temp==2) write('<td><input type="checkbox" name="rescs"
onClick="selectRescs(3)"></td>\n');
else if(temp==3) write('<td><input type="checkbox" name="rescs"
onClick="selectRescs(4)"></td>\n');
else if(temp==4) write('<td><input type="checkbox" name="rescs"
onClick="selectRescs(5)"></td>\n');

```

```

if(request.resc!="undefined") write('<td><input type="checkbox" name="resc"
checked> &nbsp; </td>');
else write('<td><input type="checkbox" name="resc"> &nbsp; </td>');
...
</server>
...
< server>
//           where           - > wifis2.js
append_where(0);
...
if(temp>=1)
    append_where(1);
...
if(temp>=2)
    append_where(2);
...
if(temp>=3)
    append_where(3);
...
if(temp>=4)
    append_where(4);
...
</server>

```

## II- 14. act / query\_display.html

```

<server>

```

```

//          where
//          whe_coll
    -> wifis3.js
convert_sql_coll(whe_coll);
if(whe_sym1=="IN")
{
    where=" where "+whe_coll+" "+whe_sym1+" ('"+sea_wor1+"";
    if(bet_and1!="") where=where+", '"+bet_and1+"");
        else where=where+"");
}
else if(whe_sym1=="NOT_IN")
{
    where=" where "+whe_coll+" NOT IN ('"+sea_wor1+"";
    if(bet_and1!="") where=where+", '"+bet_and1+"");
        else where=where+"");
}
else if(whe_sym1=="BETWEEN")
    where=" where "+whe_coll+" "+whe_sym1+" '"+sea_wor1+" AND
'"+bet_and1+"";
else if(whe_sym1=="NOT_BETWEEN")
    where=" where "+whe_coll+" NOT BETWEEN '"+sea_wor1+" AND
'"+bet_and1+"";
else if(whe_sym1=="IS_NULL")
    where=" where "+whe_coll+" IS NULL";
else if(whe_sym1=="IS_NOT_NULL")
    where=" where "+whe_coll+" IS NOT NULL";
else if(whe_sym1=="NOT_LIKE")
    where=" where "+whe_coll+" NOT LIKE '"+sea_wor1+"";

```

```

else
    where=" where "+whe_col1+" "+whe_sym1+" '+'sea_wor1+'";

...

//          SQL
//          sql
// mslink, fcode, fname
//          ,          ,          ,          attribute 가

if (request.resc!="undefined")
    SQLStr1="select mslink, fcode, fname, mapid from "+"RESC"+where;
else SQLStr1="";

if (request.dbank!="undefined")
    SQLStr2="select mslink, fcode, fname, mapid from "+"DBANK"+where;
else SQLStr2="";

if (request.spil!="undefined")
    SQLStr3="select mslink, fcode, fname, mapid from "+"SPIL"+where;
else SQLStr3="";

...

if (request.fwrc_cont!="undefined")
    SQLStr22="select es_el, es_area, esev_area, esas_area, es_link from
"+"ESVOL"+where;

```

```

else SQLStr22="";

if (request.fwrc_level!="undefined")
    SQLStr23="select eswel_yr, eswel_mon, eswel_day, es_wel, es_link from
"+"ESWEL"+where;
else SQLStr23="";

if (request.muni!="undefined")
    SQLStr24="select mslink, muni_do, muni_sigun, muni_epmyon,
muni_ridong, area_sqkm, mapid from MUNICIPAL"+where;
else SQLStr24="";

...

//          sql          .
for(j=1;j<=19;j++)
{
    if(j==1) str=SQLStr1;
    //          ,          sql
    . -> wifis3.js
    else if(j==2) { resc_cont_level(); str=SQLStr2; }
    else if(j==3) str=SQLStr3;
    else if(j==4) str=SQLStr4;
    else if(j==5) str=SQLStr5;
    else if(j==6) str=SQLStr6;
    //          ,          sql
    . -> wifis3.js
    else if(j==7) { fwrc_cont_level(); str=SQLStr7; }
}

```



```

else if(j==8) str=SQLStr8;
else if(j==9) str=SQLStr9;
else if(j==10) str=SQLStr10;
else if(j==11) str=SQLStr11;
else if(j==12) str=SQLStr12;
else if(j==13) str=SQLStr13;
else if(j==14) str=SQLStr14;
else if(j==15) str=SQLStr15;
else if(j==16) str=SQLStr16;
else if(j==17) str=SQLStr17;
//
// sql . -> wifis3.js

else if(j==18) { muni(); str=SQLStr18; }
else if(j==19) str=SQLStr19;

// sql
if(str=="") continue;
...
//
}
</server>

```

## II- 15. act / query\_diplay\_content.html

가

## II- 16. act / query\_free.html

```

<server>
//          sql
.

sel_past=new File("e:/Project/Data_IO/act/past.txt")
if(sel_past.open("r")){
    write('<form method=post action="query_free_check.html">\n<select
name="past_sql" onchange="submit()" size=5>\n');
    for(i=1;i>0;i++){
        {
            temp=sel_past.readLine();
            if(!sel_past.eof()) write('<option>' +temp+'\n');
            else { write('<option selected>      SQL      </option>\n');
break; }
        }
        sel_past.close();
        write('</selected> ');
    }
}
</server>

```

## II- 17. act / query\_free\_check.html

```

<server>
// query가 실행된 후 sql
.

if(client.status==0)
{
    write('<br><font color=blue>The query was executed successfully.<br>
If only name of attributes is visible, there\'s no tuple.</font>');
    if(request.past_sql=="undefined" && request.sql!="undefined")

```

```

    {
        pwd_check_sql("free");
        past=new File("e:/Project/Data_IO/act/past.txt")
        if(past.open("a")){
            past.writeln(request.sql);
            past.close();
        }
    }
}
</server>

```

#### II- 18. act / statics.html

가 .

#### II- 19. act / statics\_check.html

가 .

#### II- 20. act / trans.html

```

<server>
//
    action form -> wifis.js
write_multi_form();

write('<p><font color=red> </font><p>\n');
write('<INPUT TYPE=FILE NAME="filename"
SIZE=30> &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;<input type=submit value=" ">\n');
write('</FORM>\n');

```

```
</server>
```

## II- 21. act / exception.html

```
<server>
```

```
//                                id                                .
```

```
...
```

```
// id=4
```

```
//
```

```
if(request.id=="4")
```

```
{
```

```
    write('                                .<p>');
```

```
    write('<a href="javascript:history.go(- 1)">                                </a>');
```

```
}
```

```
...
```

## < D- III>

function source  
function

4

### III- 1 wifis.js

```
function nbsp()
    // '&nbsp;';
function nbsp_line(n)
    // '&nbsp;'; n
function br()
    // '<br>';
function br_line(n)
    // '<br>'; n
function p()
    // '<p>';
function enter()
    // '\n';
function form_start(action)
    // 'action form';
function form_end()
    // '</form>';
function table_start()
    // '<table border=0 cellspacing=0 cellpadding=0>';
function table_feature_start(feature)
```

```

        // feature <table>
function table_end()
        // '</table>'
function tr()
        // '<tr>'
function td_feature_start(feature)
        // feature <td>
function td_start()
        // '<td>'
function td_end()
        // '</td>'
function td_str(string)
        // string
function td_feature_str(feature,string)
        // feature string
function input_text(name,size,value)
        // form text input
function td_input_text(name,size)
        // text input
function td_feature_input(feature,name,size,value)
        // text input
function td_feature_font_start(feature,font)
        //
function td_feature_font_str(feature,font,str)
        //
function td_feature_font_str_input(feature,font,str,name,size,value)
        // , text input

```

```

function td_font_start(font)
    //
function append_input_text(str,name,size)
    //   가           text input
function td_font_end()
    // '</font></td>'
function str_input(str,name,size,value)
    //           text input
function input_radio(name,value,check)
    // radio input
function td_input_radio(name,value,check)
    //           radio input
function input_checkbox(name)
    // checkbox input
function input_pwd(name,size)
    // password input
function td_input_pwd(name,size)
    //           pssword input
function submit(value)
    // submit input
function submit_name(name,value)
    //   가   submit input
function reset(value)
    // reset input
function td_submit(value)
    //           submit input
function td_feature_submit(feature,value)
    //           submit input

```

```

function td_link_str(string,url)
    //
function link_str(string,url)
    //
function pwd_check()
    //          가
function pwd_check_sql(search)
    //          가          search

function scramble(x)
    //
function unscramble(x)
    //
function makeArray(n)
    // n          가
function statusMessage(s)
    //          msg
function ErrorMessage()
    //
function file_exist(fn)
    // fn          가
function js_win_open()
    //          window가          javascript
function write_facility()
    //          PATH

function choose_sql_facility()
    //          PATH

```



```

                                fac
function columns()
    //                                PATH
                                col
function col_num()
    //                                PATH
    attribute col_num
function multi_col_num()
    //                                PATH
    attribute multi_col_num
function display_title(PATH)
    //    PATH                                TITLE
function display_choice_str()
    //                                ,
function SQLStr_list()
    //                                mslink, fcode, fname
    select
function SQLStr_multi_list()
    //                                select
function choose_cont_link_cols()
    //                                ,
function choose_level_link_cols()
    //                                ,
function SQLStr_cont_list()
    //                                select
function SQLStr_level_list()
    //                                select
function SQLStr_multi()

```

```

//                                     select
function SQLStr1_multi_insert()
//                                     insert
function SQLStr_multi_delete()
//                                     delete

function SQLStr_multi_update()
//                                     delete

function SQLStr_cont()
//                                     select

function SQLStr2_cont_insert()
//                                     insert
function SQLStr_cont_delete()
//                                     delete

function SQLStr_cont_update()
//                                     delete

function SQLStr_level()
//                                     select
function SQLStr3_level_insert()
//                                     insert
function SQLStr_level_delete()
//                                     delete
function SQLStr_level_update()
//                                     delete

```

```

function SQLStr_display_content()
    //      attribute
function SQLStr_delete()
    //      delete
function display_table_head()
    //
function display_multi_table_head()
    //
function array_multi()
    //
function array_multi_trans()
    //
function write_multi_trans()
    //      가      /

function SQLStr_insert()
    //      PATH
    insert

function default_insert_sql_col()
    //      가 insert
function resc_insert_sql_col()
function dbank_insert_sql_col()
function spil_insert_sql_col()
function inta_insert_sql_col()
function irac_insert_sql_col()
function fwrc_insert_sql_col()

```

```
function sedi_insert_sql_col()
function slga_insert_sql_col()
function canal_insert_sql_col()
function ast1_insert_sql_col()
function ast2_insert_sql_col()
function wgate_insert_sql_col()
function tbwl_insert_sql_col()
function weir_insert_sql_col()
function pump_insert_sql_col()
function stn_insert_sql_col()
function office_insert_sql_col()
function mapb_insert_sql_col()
function muni_insert_sql_col()
```

```
function SQLStr_update()
//                                PATH
                                update
```

```
function default_update_sql_col()
//                                가 update
function resc_update_sql_col()
function dbank_update_sql_col()
function spil_update_sql_col()
function inta_update_sql_col()
function irac_update_sql_col()
function fwrc_update_sql_col()
function sedi_update_sql_col()
function slga_update_sql_col()
```

```

function canal_update_sql_col()
function ast1_update_sql_col()
function ast2_update_sql_col()
function wgate_update_sql_col()
function tbwl_update_sql_col()
function weir_update_sql_col()
function pump_update_sql_col()
function stn_update_sql_col()
function office_update_sql_col()
function mapb_update_sql_col()
function muni_update_sql_col()

```

```
function check_link(id,fname)
```

```
//
```

```
function check_link_sp(id,data,column)
```

```
//
```

```
function id_facility(id)
```

```
// id
```

```
fac
```

```
function write_multi_form()
```

```
//
```

```
form
```

### III- 2 wifis1.js

```
function general_display()
```

```
//
```

```
PATH
```

```
function resc_general_display()
```

```
function dbank_general_display()
function spil_general_display()
function inta_general_display()
function irac_general_display()
function fwrc_general_display()
function sedi_general_display()
function slga_general_display()
function canal_general_display()
function ast1_general_display()
function ast2_general_display()
function wgate_general_display()
function tbwl_general_display()
function weir_general_display()
function pump_general_display()
function stn_general_display()
function office_general_display()
function mapb_general_display()
function muni_general_display()
```

```
function multi_display()
```

```
//
```

```
function one_multi_display()
```

```
function two_multi_display()
```

```
function three_multi_display()
```

```
function cont_display()
```

```
//
```

```

function level_display()
    //
function xscale_inc_level()
    // level_display()          가

function link_display()
    //

function resc_link_display()
function dbank_link_display()
function spil_link_display()
function inta_link_display()
function fwrc_link_display()
function sedi_link_display()
function slga_link_display()
function canal_link_display()
function ast1_link_display()
function ast2_link_display()
function wgate_link_display()
function tbwl_link_display()
function weir_link_display()
function pump_link_display()

```

### III- 3 wifis2.js

```

function general_update()
    //                      PATH

```

```
function tr_guide()
    //

function tr_default()
    //

function resc_general_update()
function dbank_general_update()
function spil_general_update()
function inta_general_update()
function irac_general_update()
function fwrc_general_update()
function sedi_general_update()
function slga_general_update()
function canal_general_update()
function ast1_general_update()
function ast2_general_update()
function wgate_general_update()
function tbwl_general_update()
function weir_general_update()
function pump_general_update()
function stn_general_update()
function office_general_update()
function mapb_general_update()
function muni_general_update()

function select_start(name)
    // select
```



```

function select_onchange_start(name,jscode)
    // select          js
function option(str,sel)
    // option
function select_end()
    // '</select>'
function append_where(index)
    // select          where

function query_link_display()
    //

function resc_query_link_display()
function resc_cont_query_link_display()
function resc_level_query_link_display()
function dbank_query_link_display()
function spil_query_link_display()
function inta_query_link_display()
function irac_query_link_display()
function fwrc_query_link_display()
function fwrc_cont_query_link_display()
function fwrc_level_query_link_display()
function sedi_query_link_display()
function slga_query_link_display()
function canal_query_link_display()
function ast1_query_link_display()
function ast2_query_link_display()
function wgate_query_link_display()

```

```
function tbwl_query_link_display()
function weir_query_link_display()
function pump_query_link_display()
function multi_query_link_display()
```

```
function write_multi_facility()
    //          A[5]
```

```
function write_kor_fac()
    //      j
```

```
function write_eng_fac()
    //      j
```

```
function statics_col_trans()
    //          ,
```

```
function statics_colname_trans()
    //
```

### **III- 4 wifis3.js**

```
function convert_sql_col1(col_name)
    //          whe_col1
```

```
function convert_sql_col2(col_name)
    //          whe_col2
```

```
function convert_sql_col3(col_name)
    //          whe_col3
```

```
function convert_sql_col4(col_name)
```

```

//
// whe_col4

function convert_sql_col5(col_name)
//
// whe_col5

function resc_cont_level()
// query_display.html ,

function fwrc_cont_level()
// query_display.html ,

function muni()
// query_display.html
function multi_query_result()
// query_display.html
```