
2000-5

Digital Library

The Development of Digital Library for The Text Materials

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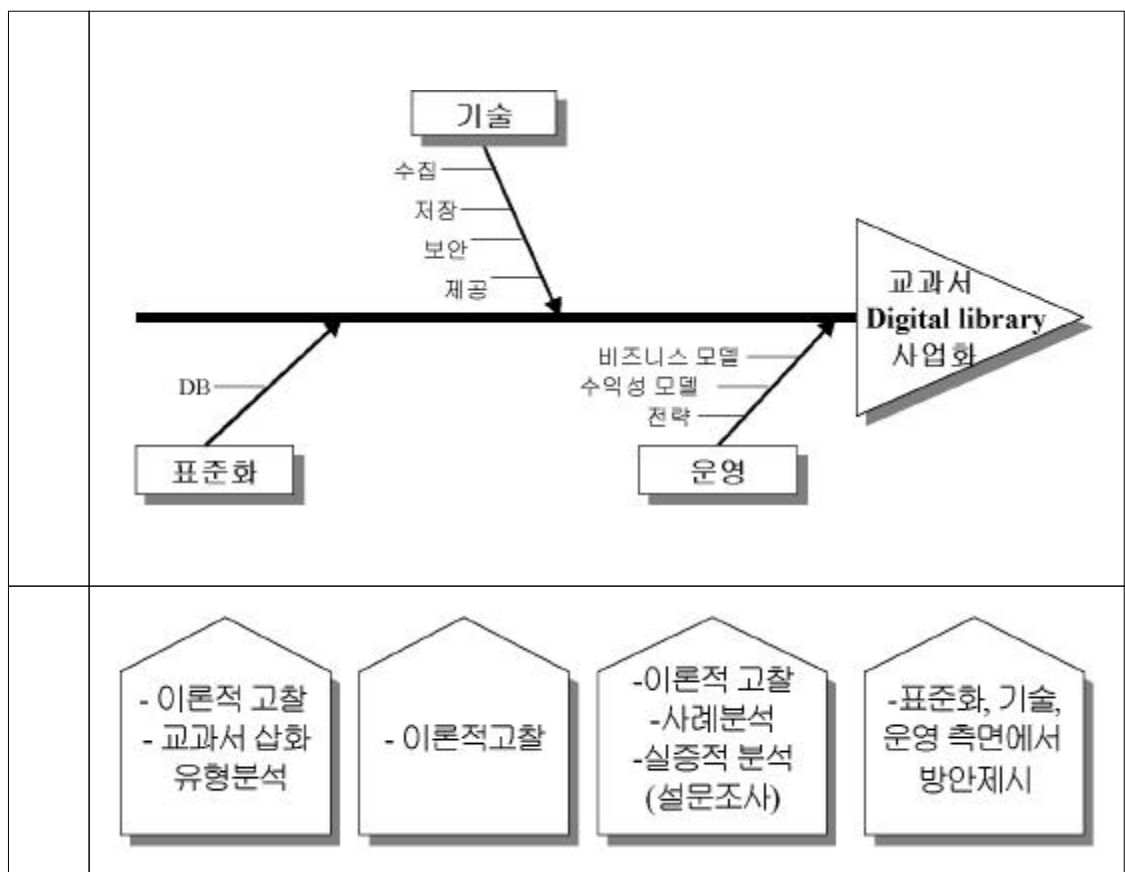
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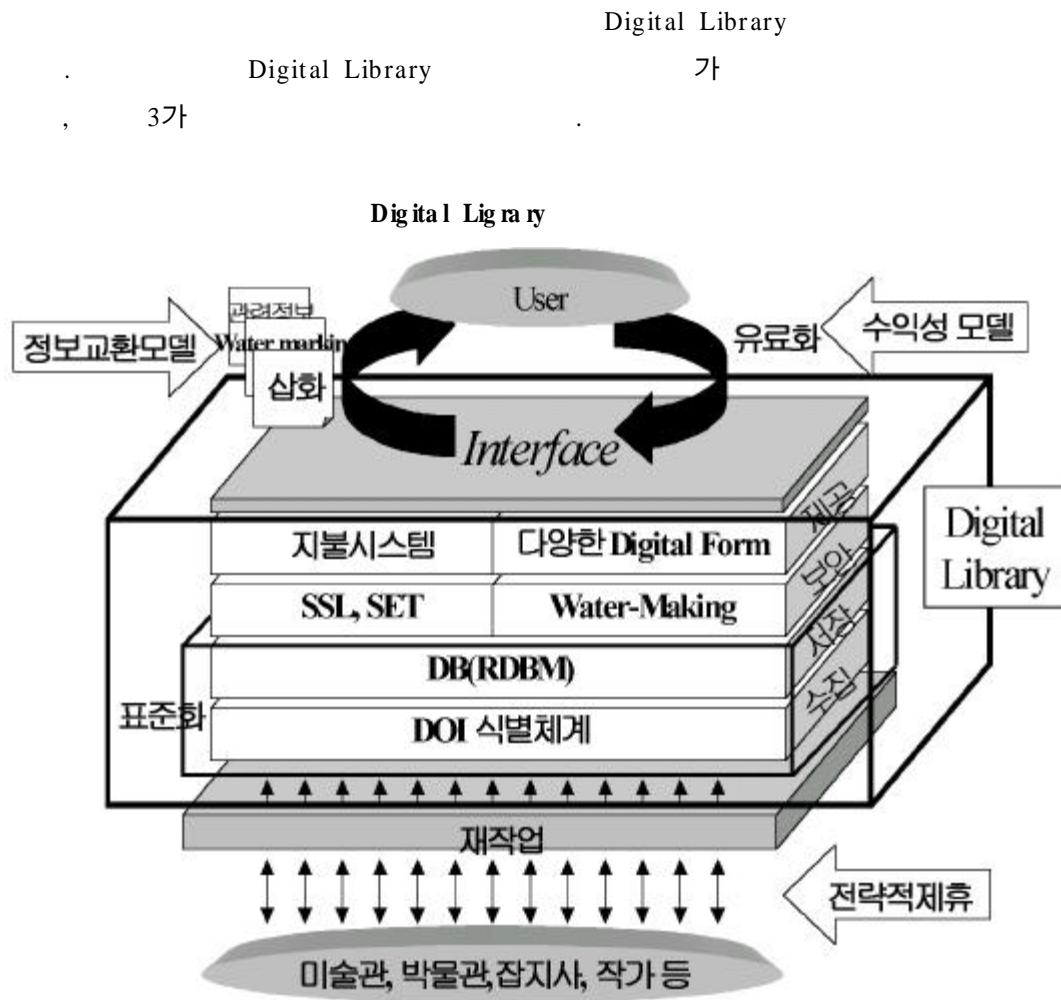
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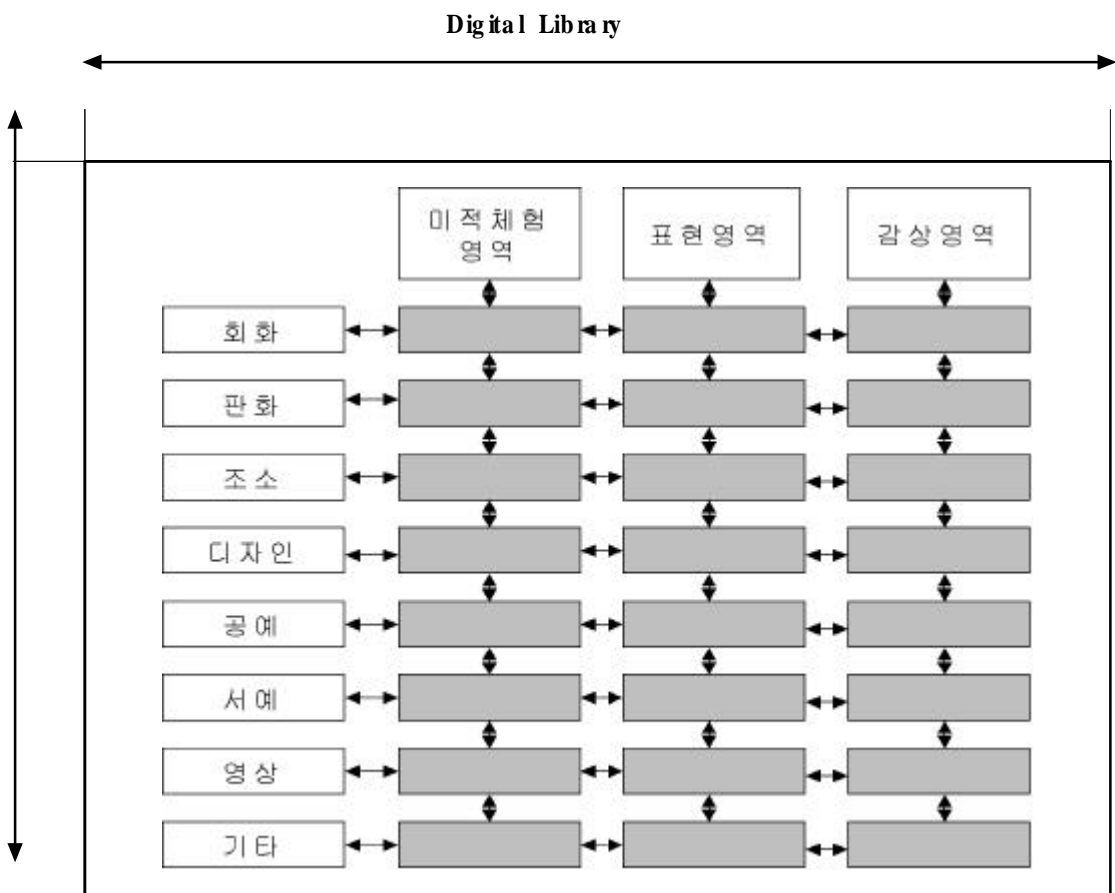
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1. Digital Library

Digital Library

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· **Digital Library**

Digital Library

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Digital Library

		DOI
		IBM S/390, RS/6000, NUMA-Q (Sequent), AS/400, Netfinity DBMS, DBMS
		water marking
	Digital Format	SSL/TLS, SET, Kodak Photo CD, JPEG, TIFF, PNG, PDF, GIF 60 300dpi

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2)	5
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4.	6
가. 가	6
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5.	7
6.	9
가.	9
.	Dig ita l Lib ra ry	9
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.	Dig ita l Lib ra ry	11

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1) 7		13
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2) 7		16
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가)	(I)	22
)	(II)	23
)		24
)		25
4)		26
.		26
1)		26
가)		26
)		27
)		27
)		27
)		28
.		28
3.	Digital Library	35
.	Digital Library	37

1.	Dig ita l Libra ry	-----37
가.	(DOI)	-----37
1)		..... 37
2) DOI		..... 38
가)		..... 38
)		..... 38
)		..... 39
3)		..... 39
가)		..... 39
)		..... 39
2.	Dig ita l Libra ry	-----40
가.	(DBMS)	-----40
.	(DBMS)	-----4 1
3.	Dig ita l Libra ry	-----42
가.		-----43
1)		..... 43
2)		..... 43
3)		..... 44
4)		..... 44
가)		..... 44
)		..... 45
)	-	..... 45
4.	Dig ita l Libra ry	-----46
가.		-----46
1) Secure Socket Layer(SSL) / Transport Layer Security(TLS)		..... 47
2) Secure Electronic Transactions(SET)		..... 47
. Dig ita l Format		-----49
.	Dig ita l Libra ry	- 5 1
1.	Dig ita l Libra ry	-----52
가. Dig ita l Libra ry		-----52
1) Bambury		..... 52
2) Rappa		..... 53

.	Dig ita l Lib ra ry	---58
2.	Dig ita l Lib ra ry	-----59
가.	Dig ita l Lib ra ry	-----59
1)		..... 59
가)		..... 59
)		..... 60
)		..... 60
2)		..... 62
.	Dig ita l Lib ra ry	-----63
1)		..... 63
2)		..... 64
.	Dig ita l Lib ra ry	----64
3.	Dig ita l Lib ra ry	-----65
.	Dig ita l Lib ra ry	-----69
1.		-----69
2.	Dig ita l Lib ra ry	-----74
가.	Dig ita l Lib ra ry	-----74
1)	DAJ	..... 74
2)	JST	..... 77
3)	NAC SIS	..... 78
4)	America Memory Library of congress	..... 80
5)	FPG	..... 81
6)	Photodisc	..... 84
7)	Corbis Image	..... 86
8)	Berkeley Digital Library Photo Collections	..... 88
9)	Advanced Digital Imaging.inc	..... 89
.	Dig ita l Lib ra ry	-----91
1)	Topicphoto	..... 92
2)	e- image	..... 94
3)		..... 96
4)		..... 98
5)	cyber- cinema	..... 100
6)		..... 101

. Digital Library	103
1) Digital Library	103
2) Digital Library	105
. Digital Library	107
1.	107
2. Digital Library	110
가.	110
1)	110
2) ‘가’	112
3) Digital Library	114
4)	115
5) (Usage)	116
. Digital Library	118
1)	118
2) Digital Library (Usage)	119
.	122
1. Digital Library	122
가. Digital Library	122
. Digital Library	123
. Digital Library	125
1)	125
2)	126
3)	126
2.	127
가.	127
.	127
.	128
3.	128
가. DB	128
. DB	128
.	128
.	129

4. 129

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< 4> **Digital Library**

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< - 1>	15
< - 2> 7	17
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< - 4> (I)	22
< - 5> (II)	23
< - 6>	24
< - 7>	25
< - 8> ()	30
< - 9- 1> () -	31
< - 9- 2> () -	32
< - 10> ()	33
< - 11>	34
< - 1> Bumbury	53
< - 2> Rappa	53
< - 3> Rappa	55
< - 4> Rappa	56
< - 5> Rappa	.....	57
< - 6>	.....	61
< - 7>	.....	62
< - 8>	.....	63
< - 9>	.....	67
< - 1> DAI 가	.....	76
< - 2> DB	.....	91
< - 3>	.....	102
< - 4>	.....	102
< - 5> Digital Library	.....	104
< - 6> Digital Library	.....	106
< - 1> (Attitude)	.....	108
< - 2>	.....	109
< - 3>	.....	110
< - 4>	.....	111
< - 5>	.....	111
< - 6> 가	.....	112
< - 7> 가	.....	113
< - 8>	.....	114

< - 9> Digital Library	.....	115
< - 10>	.....	116
< - 11>	.....	117
< - 12> Digital Library	.....	118
< - 13> ‘ ’(attitude)	.....	119
< - 15> ‘ ’(attitude)	.....	120
< - 16> ‘ (usage) ’(attitude)	.....	120
< - 1> Digital Library	.....	124

<	- 1>	.....	7
<	- 2> Digital Ligrary	.....	8
<	- 1> Digital Library	.....	36
<	- 2> DOI	.....	39
<	- 2> DBMS	.....	41
<	- 3> Credit Card Payments with SSL	.....	47
<	- 4> Credit Card Payments with SET	.....	48
<	- 1>	.....	60
<	- 2>	.....	65
<	- 1>	.....	70
<	- 2>	.....	71
<	- 3>	.....	71
<	- 4>	.....	72
<	- 5>	.....	72
<	- 6>	.....	73
<	- 7> DAJ	.....	75
<	- 8> DAJ	.....	76
<	- 9> JST	.....	78
<	- 10> NACISIS	.....	79
<	- 11> America Memory Library of congress	.....	80
<	- 12> America Memory Library of congress	.....	81
<	- 13> FPG	.....	82
<	- 14> FPG	(1)	83
<	- 14> FPG	(2)	83
<	- 15> Photodisc	.....	85
<	- 16> Photodisc	.....	85
<	- 17> Corbisimage	.....	87
<	- 18> Corbisimage	.....	87
<	- 19> Berkeley Digital Library Photo Collections	..	88
<	- 20> Berkeley Digital Library Photo Collections	.....	89
<	- 21> Advanced Digital Imaging	.....	90
<	- 22> topicphoto	.....	93
<	- 23> topicphoto	94

<	- 23> e- image	95
<	- 24>	97
<	- 25>	98
<	- 26>	99
<	- 27> cyber- cinema	101
<	- 28>	103
<	- 1>	111
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<	- 4> 가	112
<	- 5> 가	113
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<	- 1> Digital Library	122
<	- 2> Digital Library	123
<	- 3> Digital Library	125

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3) , 「 」 (: , 1989), p. 33; , 「 」 (: , 2000), pp. 233-34, 238.

4) “ ”
 .(, , 1; pp. 48-49; . , 「 」 (: , 1997), pp. 232-33).

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5) “ ” (34).

6) , 「 7 2 」 ()(: , 1999), p. 48.

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7) , 「 」 (: , 1994), p. 401; , 「Encyclopedia of Prints」 (: , 1991), p. 384;

Albertine Gaur, "Book", in Jane Turner(ed.), *The Dictionary of Arts*, Vol. 4, (New York: Macmillan, 1996), pp. 344-45.

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8) 1997- 15 (1997. 12. 30. 13795), 1.

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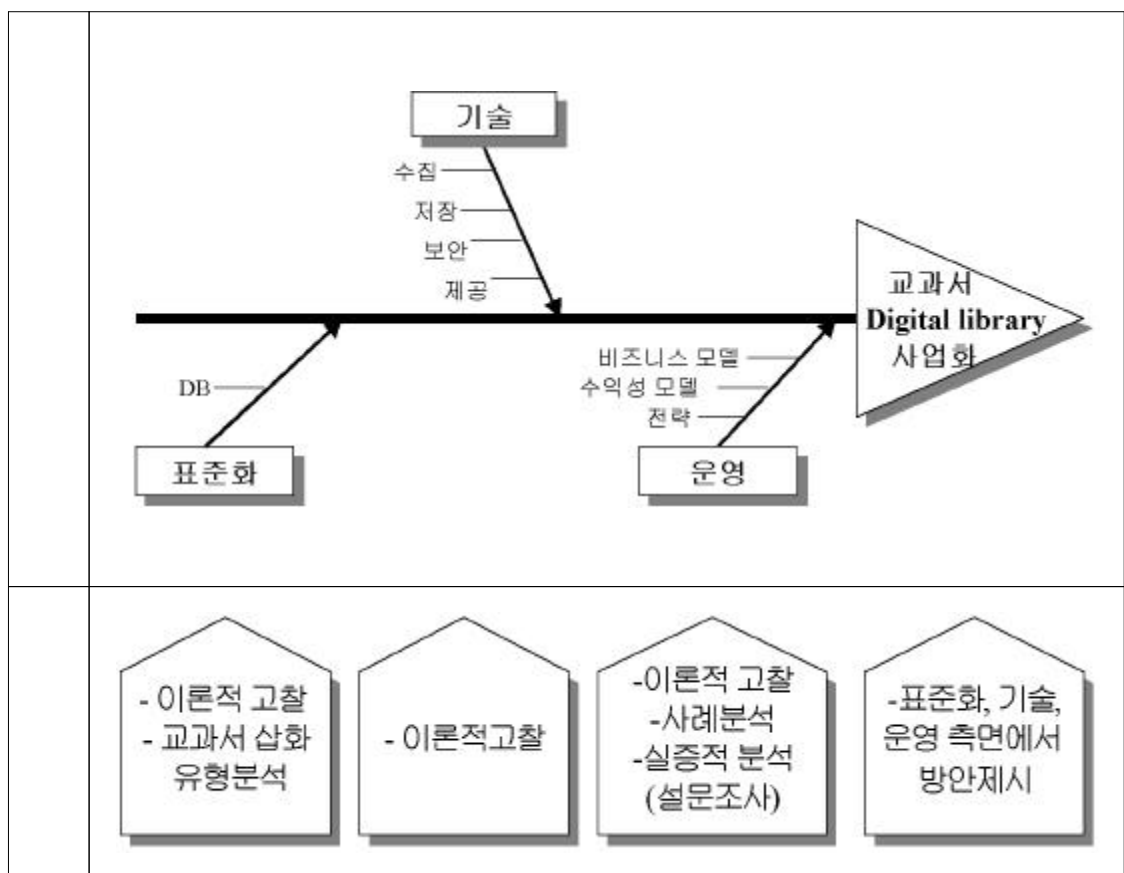
9) , , 4, p. 11.

10) , p. 11.

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.¹⁴⁾ **Digital Library**

11) , 「 」 (: , 1994), p. 401; , 「Encyclopedia of Prints」 (: , 1991), p. 384;

Albertine Gaur, "Book", in Jane Turner(ed.), *The Dictionary of Arts*, Vol. 4, (New York: Macmillan, 1996), pp. 344-45.

12) db.copyright.co.kr 가

13) Information Market Observatory, 「The Role of the content Sector in Emerging Information Society」, 1995

14) “ ” 「 」 1997

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Digital Library Database
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15) “ ” , 「 」 (: , 1999), p. 106; . , 「 」 (: , 1998), pp. 50-51 .

“ ” “ ” (23 1), “ 1 , , .” .(23 2)¹⁶⁾ “ 7 ” 1997 12 30 1997- 15 2000 3 1 .¹⁷⁾ “ 7 ” 3 1 (3 10) , 2 3 (11 12) ,¹⁸⁾ “ 7 ” . 가 “ ” 10 . 31 , “ ” 2 , “ . ” 23 , “ 1997- 15 ”(7) .

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16) , , 4, p. 5.

17) 1997- 15 (1997. 12. 10, 13795), 1.

18) , , 4, p. 11.

19) . , 「 」 (: , 2000), pp. 64-66, 74-78, 81-82.

“ ”(12), . . (題号)

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20) , pp. 236-65.

21) , pp. 272-90.

22) , pp. 316-20.

23) . , , 2, p. 189.

24) . , , 15, p. 335.

25) , , 4, p. 8.

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26) , p. 8.
 27) , p. 9.
 28) , pp. 9- 10.

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				102	102	102	102	102	102	68	68			
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		34	34			68	68	102	102	136	136			
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		60	68	68	68	68	68	136	136	136	204			
		30	34	34	68	68	68	68	68	68	68	8		
		830	850	986	986	1,088	1,088	1,156	1,156	1,156	1,224	144		

29) , p. 11.

30) , p. 11.

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31) , p. 4.

32) , pp. 18-21.

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33) , p. 48.

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34) , pp. 48-49.

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2 : 5, 6 (5, 6)
3 : 1, 2, 3, (7, 8, 9)
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35) , p. 49.

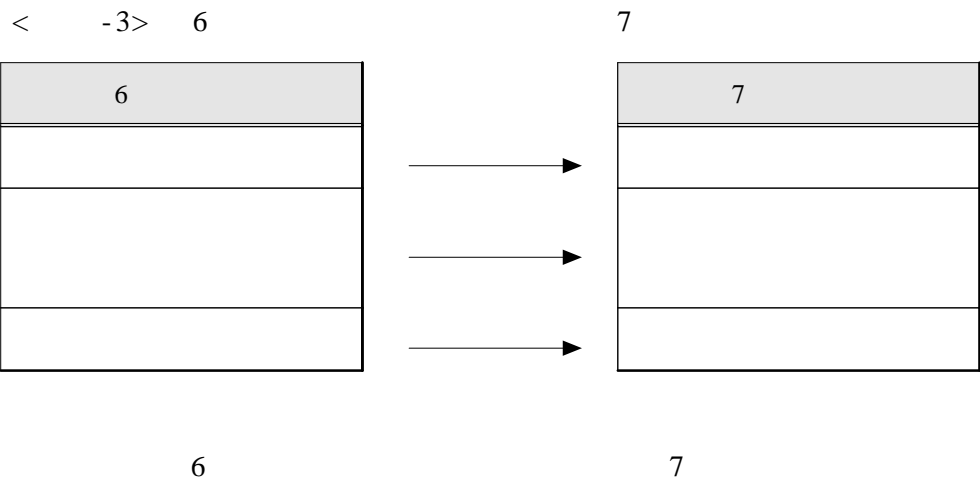
36) , 「 ()」 (: , 1997), pp. 144-45.

37) , p.160; , 「 ()」 (: , 1997), pp.98-101.

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가) “ 7 ” “ ” “ 6 ” “ ”
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38) , , 32, pp. 171-75.
 39) , pp. 171-175.

가) (I)

< -4> (I) 40)

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	<p>(가) :</p> <p>① .</p> <p>② .</p> <p>() :</p> <p>① .</p> <p>② .</p>
	<p>(가) :</p> <p>① , , .</p> <p>② , .</p> <p>③ .</p> <p>() :</p> <p>① , .</p> <p>② .</p> <p>() :</p> <p>① , , , , .</p> <p>② , .</p> <p>() :</p> <p>① 가 .</p> <p>② .</p>
	<p>(가) : 가 .</p> <p>① , .</p> <p>② .</p> <p>() : 가</p> <p>① .</p> <p>② , .</p>

40) , , 33, pp. 101-106.

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< - 5> (II) 41)

	5, 6
	<p>(7h) :</p> <p>, .</p> <p>① .</p> <p>② .</p> <p>() :</p> <p>, .</p> <p>① .</p> <p>② .</p>
	<p>(7h) :</p> <p>① , , .</p> <p>② , .</p> <p>③ .</p> <p>() :</p> <p>. ① , .</p> <p>② , .</p> <p>() :</p> <p>. ① , , , , .</p> <p>② , .</p> <p>() :</p> <p>① 가 .</p> <p>② 가 .</p>
	<p>(7h) :</p> <p>① .</p> <p>② , .</p> <p>() :</p> <p>. ① .</p> <p>② , .</p>

41) , pp. 101- 106.

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42)

	7, 8, 9
	<p>(가) :</p> <p>① .</p> <p>② .</p> <p>() :</p> <p>① .</p> <p>② .</p>
	<p>(가) :</p> <p>① , , , .</p> <p>② , , .</p> <p>③ , .</p> <p>() :</p> <p>① .</p> <p>② 가 .</p> <p>() :</p> <p>① , , , , , , .</p> <p>② , , , , .</p> <p>() :</p> <p>① .</p> <p>② 가 , .</p>
	<p>(가) :</p> <p>① .</p> <p>② , , .</p> <p>() :</p> <p>① , .</p> <p>② , .</p>

42) , , 32, pp. 171-81.

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< -7>

43)

	7, 8, 9
	<p>(가) 가 : 가</p> <p>① .</p> <p>② .</p> <p>() : 가</p> <p>① 가 .</p> <p>② .</p>
	<p>(가) :</p> <p>① , , , .</p> <p>② , .</p> <p>③ , .</p> <p>() :</p> <p>① , .</p> <p>② 가 .</p> <p>() :</p> <p>① , , , , , , , , , .</p> <p>② , , , .</p> <p>() :</p> <p>① .</p> <p>② .</p>
	<p>(가) : 가</p> <p>① .</p> <p>② .</p> <p>() :</p> <p>① .</p> <p>② .</p>

43) , 「 」 (: , 1997), p. 30.

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44) , , 33, p.98.

45) , , 32, p.162.

46) , p.166.

47) , 「 ()」 (: , 1997), p.1388.

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Digital Library
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Digital Library가

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				3, 4 (EF)		5, 6 (ES)		7, 8, 9 (MS)		10 (HS)														
				1	2	1	2	1	2	1	2													
			가					6(4.8)	29(22.1)	9(15)	13(12.8)													
								가	5(1.8)	1(1.6)	4(3.9)													
									1(0.7)	1(1.6)	3(3.9)													
			가									1(0.7)												
																가								
			가	1(12.5)												10(8.1)	17(13.8)	11(18.3)	14(13.8)					
																가	8(6.5)	4(3)	1(1.6)	11(10.8)				
			가					1(12.5)				11(9)	15(11.4)	2(3.2)	8(7.9)									
												가	1(0.8)	4(3)	1(1.6)	10(9.9)								
													1(0.7)											
			가	2(18.1) 4(50)		3(27.2)	2(40)					8(6.5)	24(18.3)	7(11.6)	18(17.8)									
						가	1(20)									4(3.9)								
																1(0.9)								
			가								1(0.7)													
															가									
			가														2(1.4)		1(1.6)					
								가																
						가	9(81.9) 2(25)		7(63.6)	2(40)	47(38.2)	24(18.3)	23(17.5)	10(9.9)										
									가	1(9)	32(26)	3(2.2)	3(5)	4(3.9)										
				11(100)	8(100)	11(100)			5(100)	123(100)	131(100)	60(100)	101(100)											

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EF(1. , 2.)

ES(1. , 2.)

MS(1. , 2.)

HS(1. 가 , 2.)

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				3, 4 (EF)				5, 6 (ES)				7, 8, 9 (MS)				10 (HS)																												
				3	4	5	6	3	4	5	6	3	4	5	6	3	4	5	6																									
			가	4				3	1			86	138	30	35	65	84	38	33																									
				46	11		11	55	3			125	115	17	55	32	73	29	28																									
			가					2				51	47	20	22	44	47	38	24																									
				2				2				4	4					2																										
				3			2	2				6	73	29	28	6	33	9	9																									
			가	8			6				12	6	4	13	1	25	32	2	10																									
							4				24	7	12	19																														
			가				1				6	4	1																															
				3								1	14	5	9		11		5																									
			가	1		1	2		3	18	22	39	22	35	15	49	25																											
																		19	7	11	17	3	7	44	17	92	45	18	9	35	14													
			가																													1		2		1	3	10	50	29	2	15	10	7
			가	1		1		1	3	27	8	224	42	48	51	110	15																											
																		15	7	14	13	20	47	8	156	38	37	47	91	10														
			가																												4	1	15	2	9	12	32	5						
																																							2	1	4		8	3
			가	3		2			1	3	8	14	37	91	6	19	5	64																										
																			6	5	11	1	9	13	5	8	29	100	2	15	5	31												
			가																														1	2	12	18	3	11	2	10				
																																									1	10	9	17
			가		13	4	1		4	14			1																															
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			가																																									
			가								2		3	1	1	6	3	2																										
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		가				1				5	6	36	1		1	4																												
																		1																										
		가																																										
				114	41	42	42	112	52	44	27	470	548	993	614	396	581	633	343																									

EF(3. 4. 5. 6.)
 ES(3. 4. 5. 6.)
 MS(3. 4. 5. 6.)
 HS(3. 4. 5. 6.)

< -9-2>

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				3, 4 (EF)				5, 6 (ES)				7, 8, 9 (MS)				10 (HS)													
				3	4	5	6	3	4	5	6	3	4	5	6	3	4	5	6										
			가	3.5	26.8	26.2	2.7	1.9		18.3	25.2	3.0	5.7	16.4	14.5	6.0	9.6												
				40.4			49.1	5.8		26.6	20.9	1.7	8.9	8.1	12.6	4.6	8.2												
			가				1.8	10.9		8.6	2.0	3.6	11.1	8.1	6.0	6.9													
				1.8			0.9	0.7				0.3																	
				2.6			1.8	1.3		13.3	2.9	4.6	1.5	5.7	1.4	2.6													
			가	7.1		5.4		2.6	1.1	0.4	2.1	0.3	4.3		2.9														
						5.4		0.9	4.4	0.7	1.9	5.5	0.3		2.3														
			가			0.2		1.1	0.4	0.2	3.3	1.5																	
						2.6		0.2	2.6	0.5	1.9	1.5																	
			가	0.9	2.4	2.4	1.8	6.8	11.1	3.8	40.7	3.9	3.6	8.8	2.6	7.7	7.3												
										16.7	16.7	26.2	15.2	25.9	9.4	3.1	9.3	7.3	4.5	1.5	5.5	4.1							
			가							0.9				1.9	0.5	2.3	1.8	8.6	1.7	5.5	4.1								
											4.8	3.7	0.6	1.8	5.0	4.7	0.5	2.6	1.6	2.0									
			가	0.9	2.4		0.9	6.8		5.7	1.5	22.6	12.2	12.1	8.8	17.4	4.4												
										13.2	17.1	33.3	11.6	45.5	10.0	1.5	15.7	6.2	9.3	8.1	14.4	2.9							
			가											0.9	0.2	1.5	0.3	2.2	2.1	5.1	1.5								
															0.1														
										1.8	2.4	9.25		18.2	0.6	2.2	15.0	3.4	11.4	1.4	21.0	0.3							
			가	2.6	4.8			2.3	11.1	1.7	2.6	3.7	14.8	1.5	3.3	7.9	18.6												
										5.3	11.9	26.2	1.9	20.5	48.1	1.1	1.5	2.9	16.3	0.5	2.6	7.9	9.0						
			가												0.2	0.4	1.2	2.9	0.8	1.9	0.3	2.9							
																	0.2		0.2										
											2.4	2.4	1.8	0.2	1.8	0.9	2.8	2.0	4.3	0.2	6.7								
			가		31.7	9.25	2.4	7.7	26.9			0.1																	
			가																										
																		30.0	2.4	9.25	55.8								
			가								0.4	0.3	0.2	0.3	1.0	4.7	0.6												
			가																										
			가				0.9				1.1	1.1	3.6	0.2		0.2	0.6												
			가																										
				100	100	100	100	100	100	100	100	100	100	100	100	100	100												

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EF(3. 4. 5. 6.)

ES(3. 4. 5. 6.)

MS(3. 4. 5. 6.)

HS(3. 4. 5. 6.)

< - 10>

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				3, 4 (HF)		5, 6 (ES)		7, 8, 9 (MS)		10 (HS)					
				7	8	7	8	7	8	7	8	7	8		
			가	3(25)		1(5.3)		12(8.8)	135(33.3)	18(24.0)	119(18.2)				
			5(27.3)		4(23.5)		52(38.2)	2(0.5)	7(9.3)						
			가	2(11.1)		2(11.8)	2(10.5)	3(2.2)	100(24.6)	8(10.7)	224(3.4)				
					1(5.6)		9(6.6)		1(1.3)						
				가					10(7)	1(0.2)	1(1.3)		2(0.3)		
	4(2.9)														
			가	1(0.7)											
			3(0.7)												
				가					5(41.67)						5(3.7)		32(7.9)	8(10.7)	60(9.2)
		5(27.8)		6(35.3)		1(5.3)	21(15.4)	1(1.3)							
			가	1(5.3)		4(2.9)	48(11.8)	3(4.0)	71(10.9)						
					2(1.5)										
				가					5(1.2)		2(2.7)	3(0.5)			
	2(1.5)														
			가	1(0.7)					9(2.2)	2(0.3)					
									7(1.1)						
				가					1(8.33)		6(31.6)		7(5.2)	31(7.6)	8(10.7)	59(9.0)
		4(22.2)		2(11.8)		2(10.5)	5(3.7)	1(0.2)	4(5.3)						
			가					2(1.5)	9(2.2)	1(1.3)	16(2.5)				
			1(5.56)						1(1.3)						
				가			2(11.8)								
			가												
				가											
			가												
				가	3(25)						1(0.2)				
			가												
			가										1(5.9)		2(10.5)		3(2.2)		8(2.0)
		가													
			가					4(21.1)		1(0.7)		23(5.7)			
		가													
				18(100)	12(100)									17(100)	19(100)	136(100)	407(100)	75(100)	653(100)

< - 11>

3	4	5	6	1								2				3				1										
3	4	5	6		1							2	2	2	3	3		3			1	1				1		1		
138	150	149	138	169	165	186	184	226	216	241	179	306	225	180	244	165	178	184	192	182	374	359	426	303	358	295	295	432		

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(1)

AE- , EP- , AP-

(2)

Pa- , Pr- , S- , D- , C- , L- , M- , O-

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pro- 가, stu-

(5)

EF- 3, 4 , ES- 5, 6 , MS- , HS-

(6)

EF 1. 2. 3. 4. 5.

6. 7. 8.

ES 1. 2. 3.

4. 5. 6. 7.

- 8.
- MS 1. 2. 3.
4. 5. 6. 7. 8.
- HS 1. 가 2. 3.
4. 5. 6. 7. 8.

3. Digital Library

Digital Library

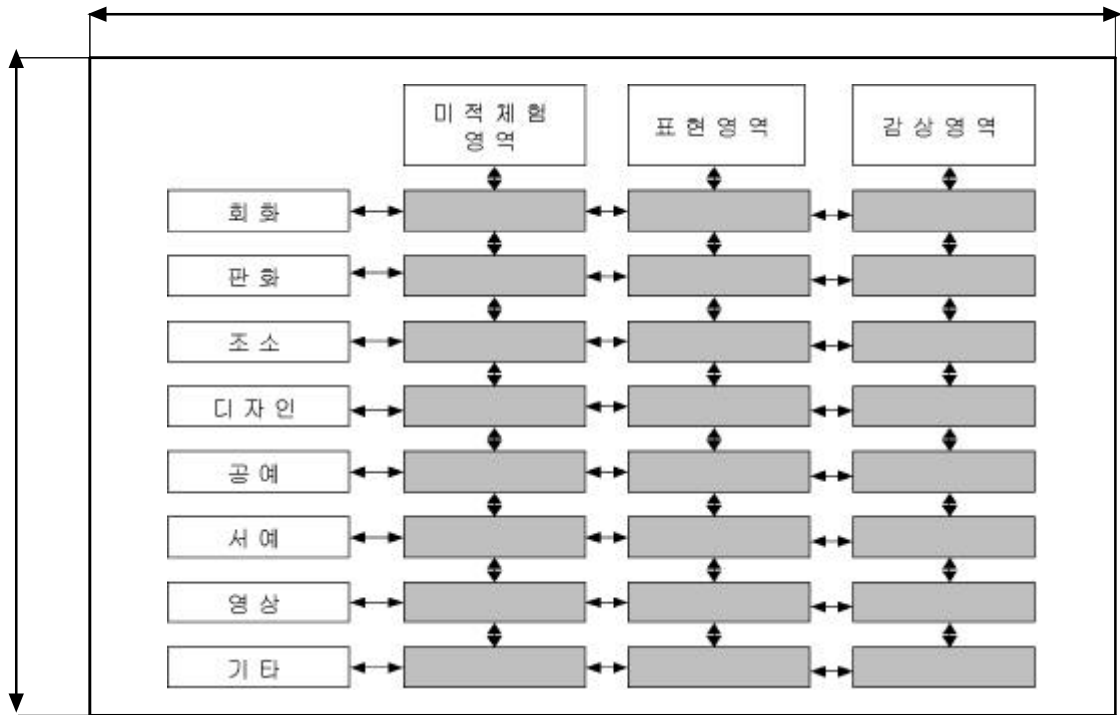
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Digital Library ,

Digital Library



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· **Digital Library**

Digital Library
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Data .

1. **Digital Library**

Digital Library

가. **(DOI)**

1)
1990 가
가 . 1994 ISBN()
(DOI : Digital Object
Identifier)
CP(Contents Provider) 가,
가 ,
가 .
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2) DOI

가)

(DOI, Digital Object Identifier)

URL

. DOI

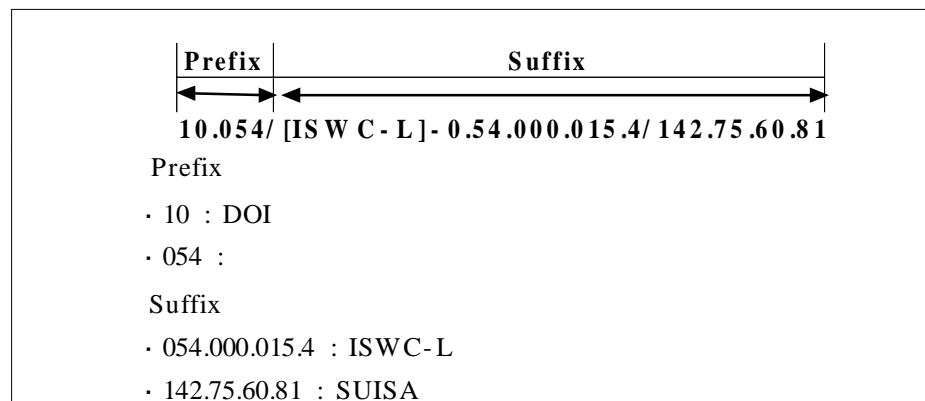
() (Prefix)

(Suffix)

, IDF (Information DOI Foundation)가

가

< - 1> DOI



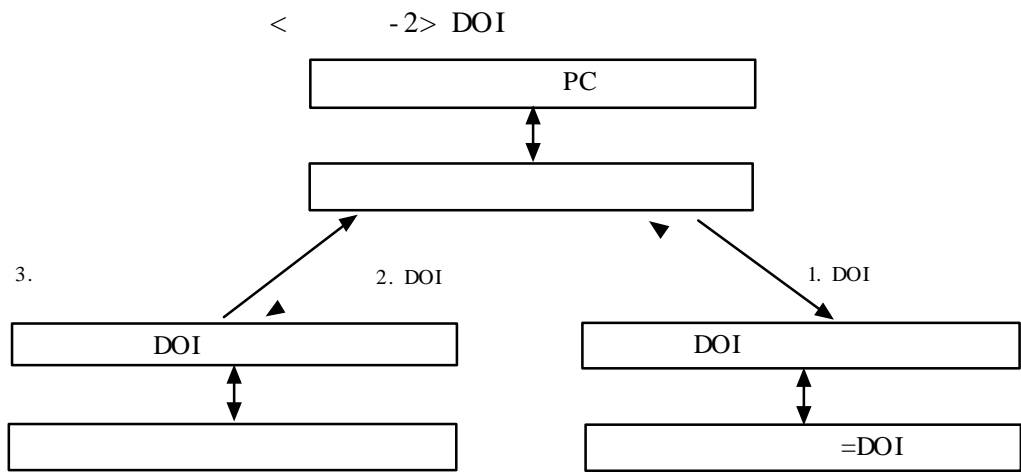
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DOI

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1998 1 IDF(International DOI Foundation)가 DOI ,

DOI 30

DOI , IDF

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IDF General Member

가 (Registration Agency) ,

(KERIS) IDF DOI Prefix DOI .

2. Digital Library

.49)

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(DBMS) 1960

DBMS

DBMS 가

DBMS DBMS

(Oracle), (Informix), (Sybase)

가 DBMS 「 」

가 「 」 DBMS

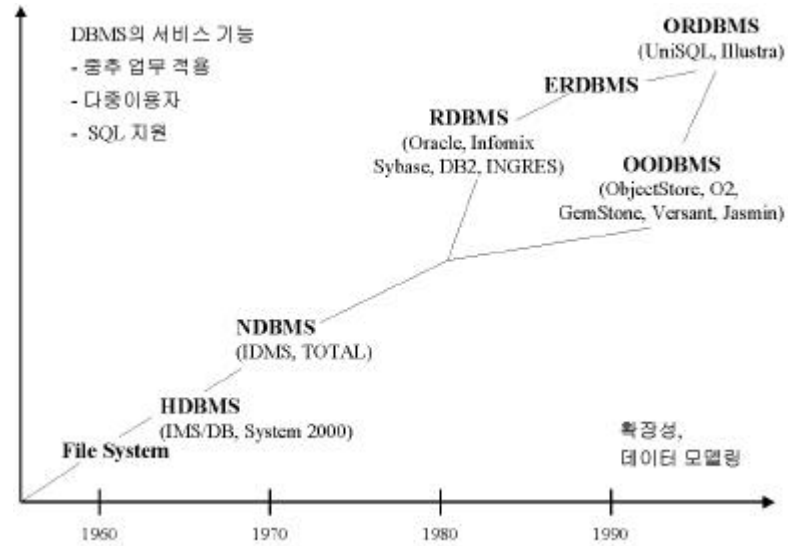
2Gbyte 가 BLOB

DBMS UniSQL, Illustra, Open ODB, Persistence, OSMOS,

VODAK DBMS DBMS

(layer)

< -2> DBMS



(DBMS)

DBMS DBMS DBMS

DBMS (capture)

(, ,)가 가

가 가

DBMS , ,

.50)

CAD

가

DBMS RDBMS (Oracle, Informix, Sybase) 가 가

51).

JPEG,

MPEG

(R)DBMS(Object Oriented (Relational) Database System)

64) “ ” 1997

51) GMD IPSI () VODAK MM DBMS

(R)DBMS가 , 가

.⁵²⁾

Digital Library , RDBMS DB .

3. Digital Library

가 (EC), , 가 , CALS · EC ⁵³⁾ .

(firewall), , 가 .

가

.⁵⁴⁾

52) “ ” 1997

53) ISO 5가 .

- (authentication) : 가
- (access control) : 가
- (confidentiality) : 가
- (integrity) : 가
- (non-repudiation) : 가

54) , 「 」 , '99

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1)

ID(Identification)

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55),
56) .

57).

2)

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가 (visible)

가 (invisible)

가 가 ,

가

가 .58)

55) . . , " , 13 3 , 1998.6, 42 .

56) . . , " , 7 4 , 1997, 60 .

57) <http://www.infoage.co.kr/internetmag/9711/sp2-01.html>

58) Minerva M. Yeung, "Digital Watermarking", Communications of ACM, Vol.41, No.7, 1998, p.32.

3)

4)

가 .

59) . . . , p.61.

60)Naqsir Memon and Ping Wah Wong, "*Protecting Digital Media Content*", Communications of ACM, Vol.41, No.7, 1998, p.36.

61) David M. Coburn and Barry M. Eisler, op. cit. p.85

62) WIPO	12	2	.
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.63)

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64)

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63) , 『

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64) IBM

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65), (shareware)

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66).

4. Digital Library

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(charge per item) .67)

Digital Library

(Item) .

65) , , 1996. 72 . Digimarc(www.digimarc.com)

, Geoffrey Rhoads ,

Adobe

Peter Wayner, op. cit., pp.175- 176.

66) <http://viplab.hanyang.ac.kr/~drkim/wm.html>.

67) Amir Herzberg. Developing MiniPay Billing Systems and Content/Service Merchants, presented at the Sixth WWW conference, Santa Clara, California, April 97.

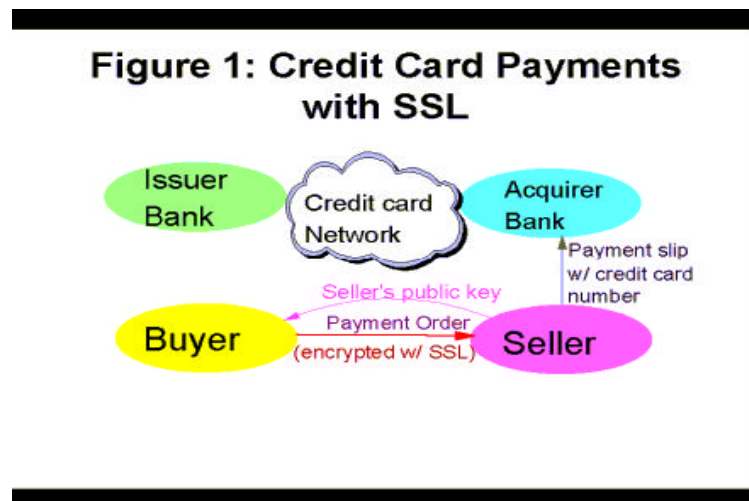
1) Secure Socket Layer(SSL) / Transport Layer Security (TLS)

SSL(Secure Socket Layer) 1994 Netscape
 web browser server (encryption) (authentication)
 .⁶⁸⁾ 40bit SSL
 128bit SSL SSL version 3.0 . SSL
 MOTO⁶⁹⁾

. SSL Protocol

IETF TLS(Transport Layer Security) SSL
 .⁷⁰⁾

< -3> Credit Card Payments with SSL



< >Amir Herzberg <Safeguarding Digital Library> D-Lib Magazine
 January 1998 ISSN 1082- 9873 p.6

2) Secure Electronic Transactions (SET)

SET

SET S/W

68) Amir Herzberg. Developing MiniPay Billing Systems and Content/Service Merchants,
 presented at the Sixth WWW conference, Santa Clara, California, April 97.

69) MOTO(Mail Order/Telephone Order) :

Amir Herzberg <Safeguarding Digital Library> D-Lib Magazine January 1998
 ISSN 1082-9873 p.5

70) <http://www.ietf.org/html.charters/tls-charter.html>

SET Chip- Card 가
 . SET S/W H/W
 MasterCard Visa International Major Microsoft,
 IBM, Technical Advisory Partner SET ,
 가 .
 SET SETCo , SET
 SET Co⁷¹⁾ Test SET
 SET .

• Cardholder account authentication

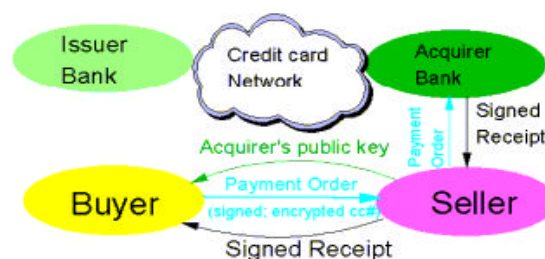
Merchant 가 가
 가 . SET

• Merchant authentication

Merchant 가 Merchant가
 가 가
 Merchant가
 가 SET

< -4> Credit Card Payments with SET

Figure 2: Credit Card Payments with SET (and iKP, STT, CyberCash)



< >Amir Herzberg <Safeguarding Digital Library> D-Lib Magazine January 1998 ISSN 1082-9873 p.6

71) <http://www.setco.org/>

(Digicash) 1994 10 (Ecash)
 ecash ecash 가
 ecash 가
 ecash ,
 가 가⁷²⁾
 (Mondex) , (NatWast)
 95 7 IC
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 73)

. Digital Format

(format)

(format)

TIFF⁷⁴⁾, JPEG⁷⁵⁾, PNG, PDF⁷⁶⁾,

72) www.digicash.com

73) www.mondex.com

74) : TIFF

가

가

()가

TIFF

75) JPEG (Joint Photographic Experts Group)

.jpg (Web)

JPEG(Joint Photographic Experts Group)

가

Photo CD 68 가 가 , Photo CD, TIFF, JPEG .

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가 70 75dpi

77)

CD 가 300dpi

CD

가

(1,600)

가 가

10 1

가

76) PDF (Portable Document Format)

PDF (Portable Document Format)

(Digital Library)가

1992 Adobe

System 가
77)

· **Digital Library**

21

가

78)

가

79)

가

Digital Library

80)

Digital Library

가

81)

Digital Library

78) , 「 」 , 495 , 2000.5
79) 가

가

가

80) , 「 」 , 1998,6, pp.33~34

81) www.mic.go.kr/webdriver?Mlval=d100-0002-1&m_code=d100-1125-

1. Digital Library

가 . Digital Library

가

가

.82)

Digital Library

. Digital Library

1) Bam bury

6가

(Library model) .

(freeware model) .

가

(Information barter model) .

(digital delivery model) .

web server

, URL, web hosting

ISP

Web Hosting

가 .83)

82) Micael Rappa, 「Business Models Ontne web」

http://ecommerce.ncsu.edu/business_model.html

83) Bam bury, pual, 「A Taxonomy of Interet Commerce」,

www.firstmoneyday.dk/issues/issue3-10/bum bury/index.html, 1998

< - 1> Bumbury

Library model	
Freeware model	,
Information barter model	가
Digital delivery model	, , , , ,
Web hosting model	web server , URL, web hosting ISP

2) Rappa 84)

Rappa 9가 . Rappa가
Timmer가 .

< - 2> Rappa

	가
	가 가
	가
	Purchase Point Click through ,
	, .
가 /	가 가

84)Micael Rappa, 「Business Models Ontne web 」
http://ecommerce.ncsu.edu/business_model.html

e-trade / (Buy/sell fulfillment)

(Market Exchange)

B2B metal site Chemconnect's world chemical Exchange가 . 가

가 가 가

(Buyer Aggregator)

가

가 가

/ (Distributor)

가 (Virtual Mall)

가 가

(metamediary)

가

가 .

(Reverse Action)

가 가

(Classifieds)

(Search Agent)

가 가

. Dealpilot, Dealttime, MySimon

(Auction Broker)

, 가 , 가 가가 .

< -3> Rappa

/	
(Buy/sell fulfillment)	
(Market Exchange)	가
(Buyer Aggregator)	가
/	
(Distribetor)	
가	
(Virtual Mall)	가 가
(metamediary)	
(Reverse Action)	가 가
(Classifieds)	
(Search Agent)	가 가
(Auction Broker)	,

(Advertising Model) .

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가 .

(Generalized Portal)

가 1000

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(Personalized Portal)

가

(Specialised Portal)

(Incentive marketing) :

가

(Free Model)

(bragain Discount) : 가 가

< -4> Rappa

(Generalized Portal)	가 1000
(Personalized Portal)	
(Specialized Portal)	
(Incentive marketing)	가
(Free Model)	
(bragain Discount)	가 가

가

(Recommender System) :

가

DB

(Registration model) :

DB

< -5> Rappa

(Recommender model)	,
(Registration model)	DB

가

가

가

가 ,

가

Purchase Point Clickthrough

가

가

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Digital Library

Digital Library

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2. Digital Library

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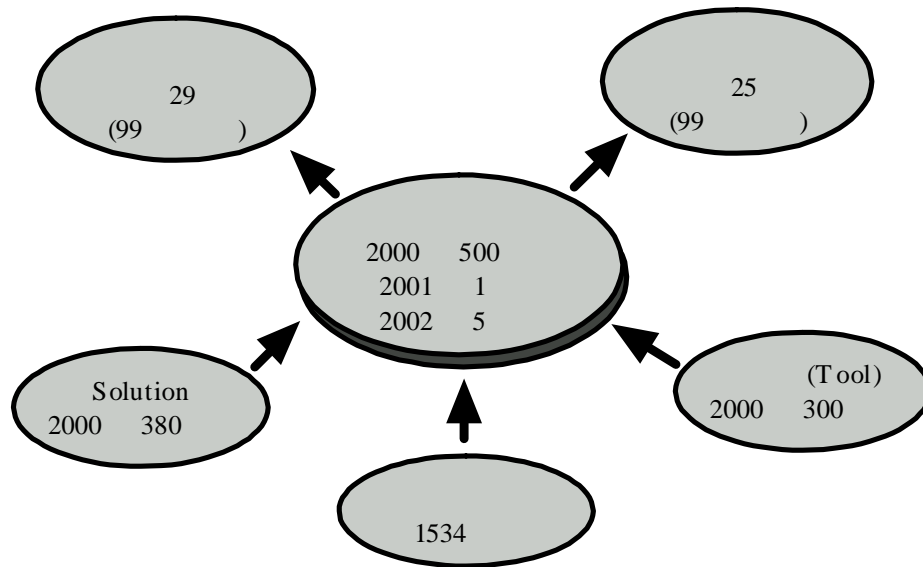
1)

가)

. , , 1999 25 가 , 29 가 . 54 . (54) 0.1% 가 500 , 2002 5 , 2005 15 .86)

86) http://www.metronetwork.co.kr/company/company_6.htm

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5,000 가

500

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8,000

30~40%

.87)

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2000

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9

2

6437

3.0%가

8503

3203

(90,635,986)

6.1%가

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87) <http://teachnet.co.kr/web1-2.htm>

88) http://www.kpa21.co.kr/chulpan/200011/200011_07.htm

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	2000.1~9	1999.1~9			2000.1~9	1999.1~9		
	339	334	1.4		592,500	604,500	- 1.4	
	446	432	3.2		738,850	4,353,860	- 45.4	
	1,133	1,242	- 9.7		3,068,172	3,098,443,	- 0.9	
	3,325	3,666	- 9.3		4,358,929	5,012,204	- 13.0	
	373	377	- 1.0		475,275	507,700	- 6.3	
	3,302	3,332	- 0.9		4,754,891	4,425,848	7.4	
	1,024	976	4.9		1,981,464	2,193,263,	- 9.6	
	1,084	1,072	1.2		3,473,079	3,751,513	- 7.4	
	3,606	3,884	- 7.1		8,785,982	9,346,310	- 5.9	
	668	676	- 1.1		1,318,000	1,356,665	- 2.8	
	1,273	2,092	- 39.1		12,947,150	21,222,497	- 38.9	
	2,941	2,263	29.1		9,936,365	9,345,350	6.2	
	6,922	6,915	- 4.0		52,430,657	28,417,833	- 15.7	
	26,437	27,261	- 0.3		85,033,203	90,635,986	- 6.1	

< >http://www.kpa21.co.kr/chulpan/200011/200011_07.htm

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Digital Library

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	URL	Concept	1	2
WOWTV	www.wowtv.co.kr	,		
CHATV	www.chatv.co.kr	,	IT ,	
Castservice	www.castservice.com			
Enterchannel	www.enterchannel.com			
C3TV	www.c3tv.co.kr			
Golf TV	www.koreagolftv.com			
Anibs	www.anibs.co.kr			
Nice4U	www.nice4u.com			
Live To	www.liveto.co.kr			
MKID	www.mkid.co.kr			

< > <http://user.collian.net/~antiys/2k0410.htm>

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Digital Contents

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89) <http://User.collian.net/~antiys/2k0410.htm>

90) <http://www.itop.co.kr/cgi-bin/NeoBoard/NeoView>

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91) . r , , 2000.5.5.

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92) “ ” ,

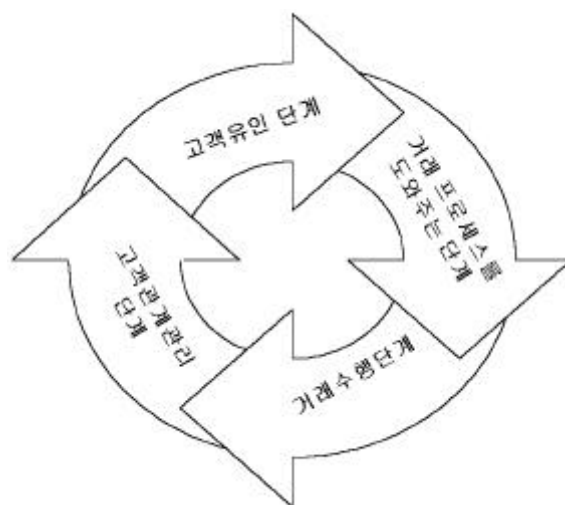
Library Digital Library Digital Library Digital Library

가 Digital Library

3. Digital Library

Digital Library 가 (Attract and Engage Customers), (Assist Transaction Process), (Fulfill Transactions), (Manage customer Relationships)

< -2>



< > , , E-business models for profit」.2000.6

< -2> (Attract and Engage Customers) 가 , , (Assist Transaction Process) (Fulfill Transactions)

(Manage customer Relationships)

, Electronic Bill ,

, (Feedback)
.93)

93) Forrester Research; Giga Information Group; Yankee Group; business2.0; :
「E-business models for profit」, 2000.6

(Attract and Engage Customers)	* (Create Awareness)	* online/offline
	*	* e-mail, chat-rooms, tool
	* 가	*
	*	*, customized
	*	* Online discount
(Assist Transaction Process)	*	* Form * ()
	*	* needs * 가 (tool)
(Fulfill Transactions)	*	* * form downlord/print (history)
	*	* 가 가 * e-mail
(Manage customer Relationships)	*	* * * FAQ
	*	* Electronic bill * *
	*	* *
	*	* *

Digital Library

Library

Digital Library

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Digital Library

Digital Library

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. **Digital Library**

1.

Digital Library Yale Digital
 Collecton (Classroom Use of Digital Images) Digital
 Digital Library Imaging America
 Digital Image
 Digital Image Library
 Digital
 Image Yale Museum,
 Arts Library & Visual Resouces, Beineche Rare Book Library
 Luna Imaging, Inc.가
 (Tool) 가
 Presentation
 (Home study)
 < - 1> < - 6> Luna Imaging, Inc
 (tool) *Insight* _{TM} Presentation
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 , data field (Search) Digital Library
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 가 Image

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가 .

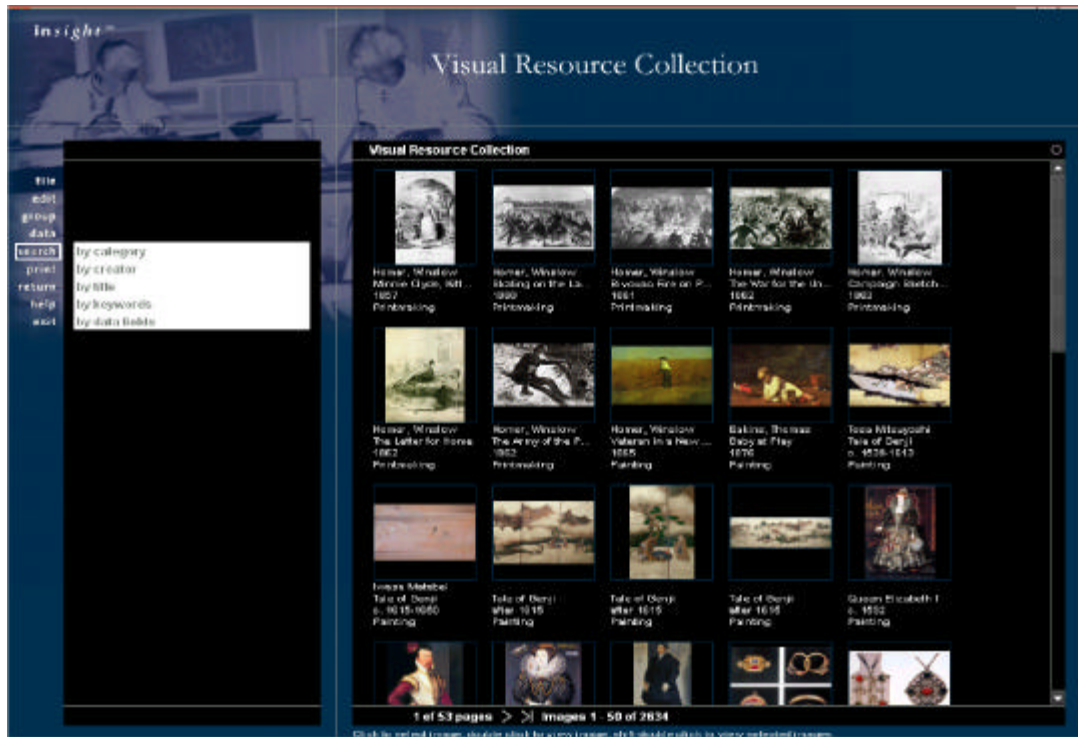
Digital Library
Digital Library

(*Insight* _{TM})

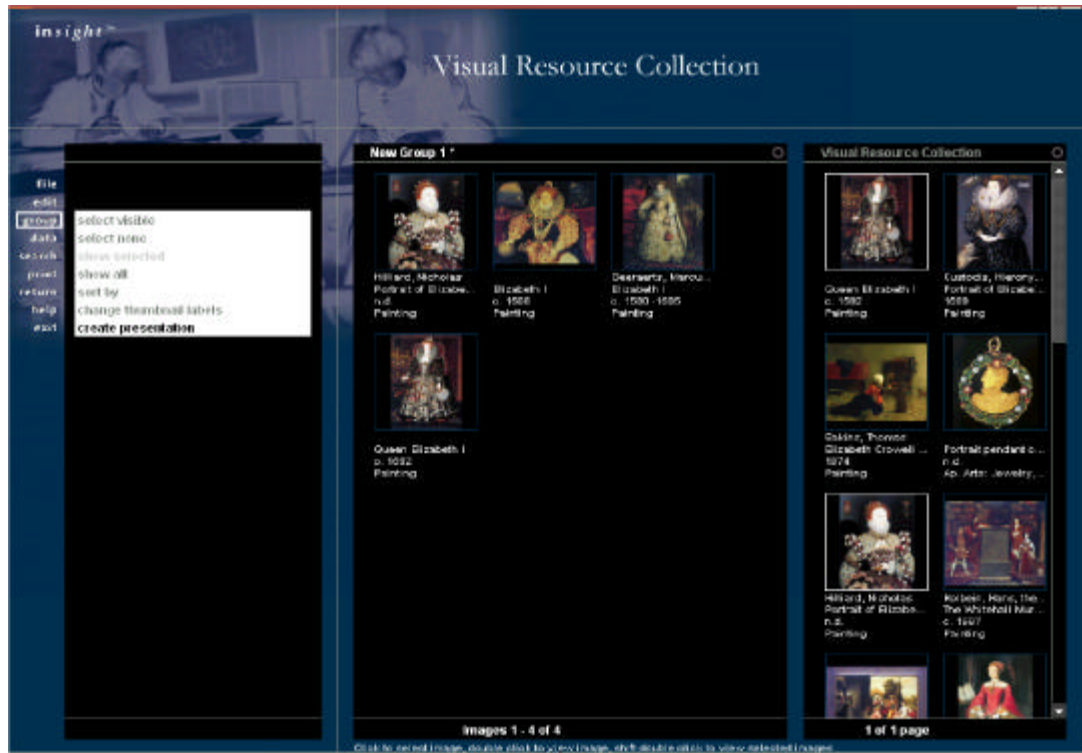
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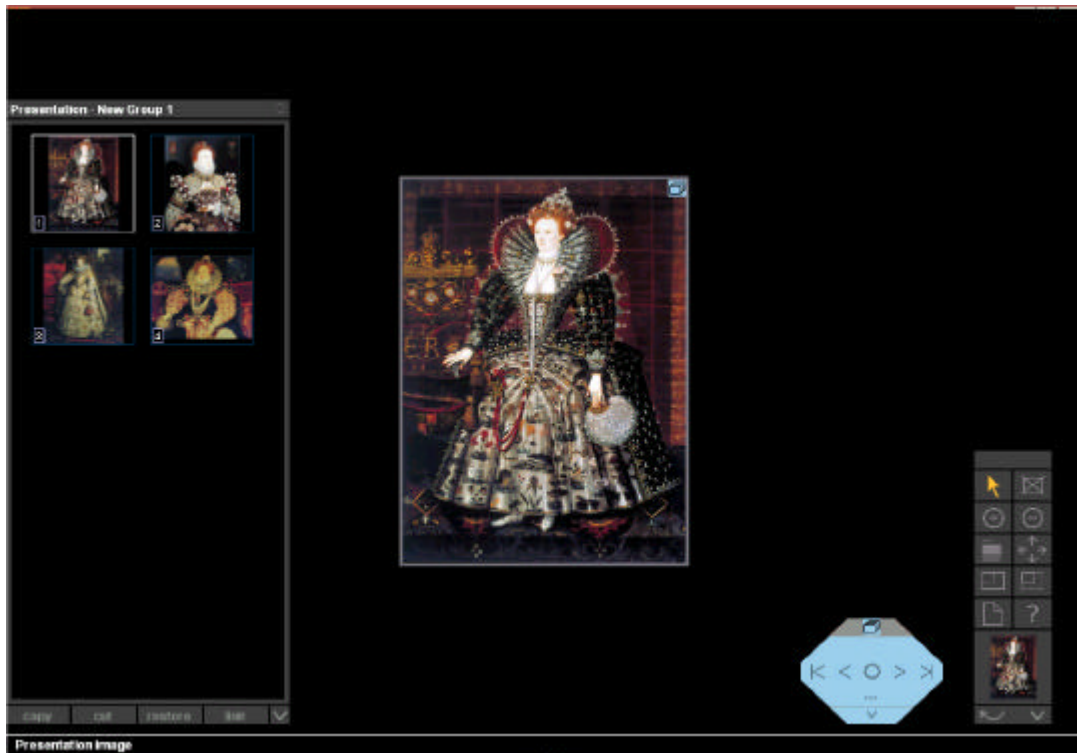




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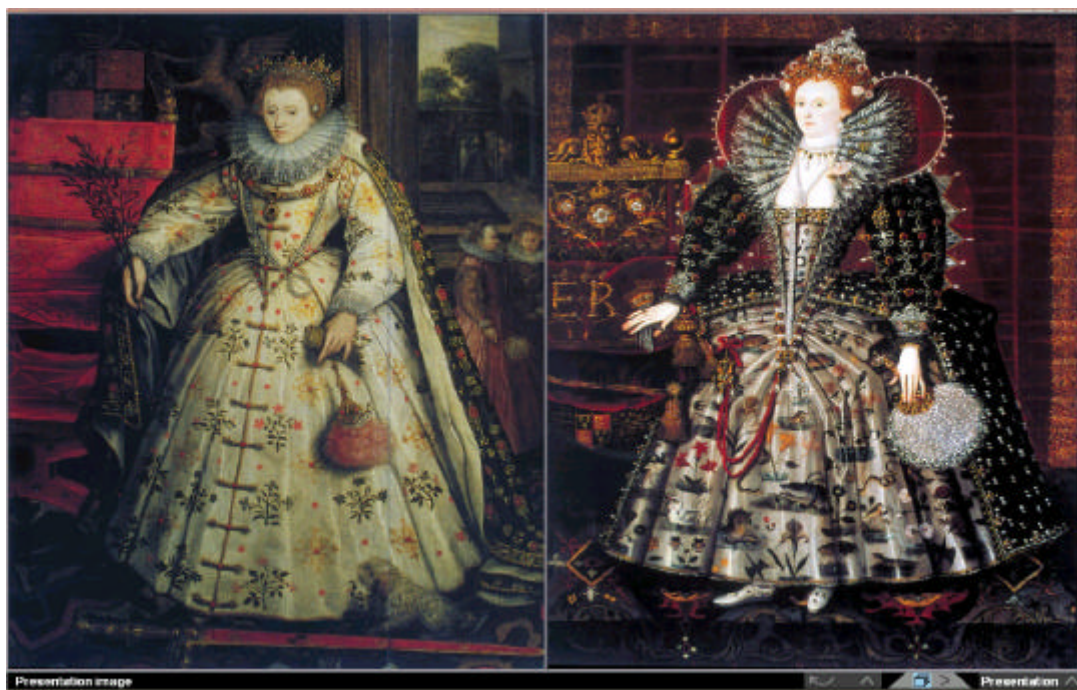


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presentation - 1



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2. Digital Library

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Digital Library 6

Digital Library

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1) DAJ⁹⁴⁾

DAJ(Digital Archive Japan) 1998

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94) www.daj.ne.jp

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< - 1> DAJ 가

File Size (Compressed)	Pixels (Approx.)	Price (jp-yen)
250KB	640 x 480	2,000
5MB	2000 x 2500	12,000
8MB	2000 x 3000	15,000
15 MB	4000 x 4000	18,000

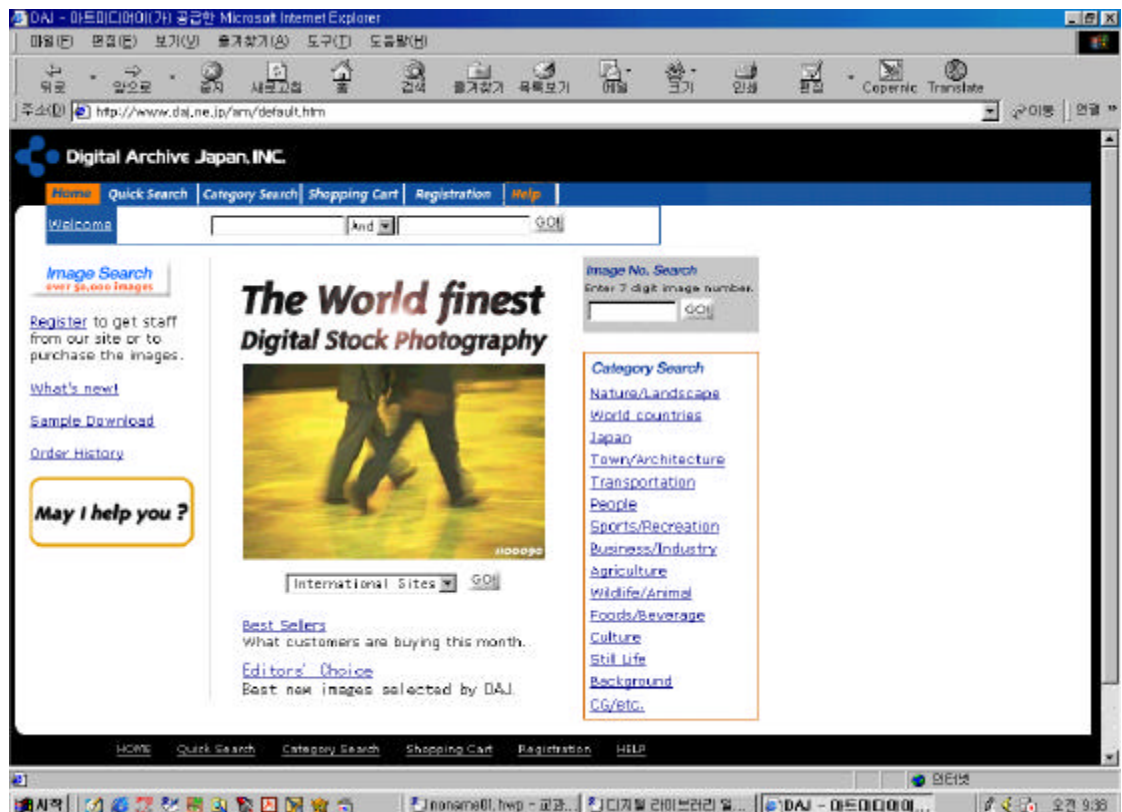
: shopping cart가

. 600 1100 가 .

FORM : jpg file .

: credit card .

< - 8> DAJ



2) JST⁹⁵⁾

JST(Japan Science and Technology Corporation :)

(JICST : Japan Information Center of Science and Technology)

(JRDC : Research Development Corporation of Japan)

1996

JICST가 . JICST

JICST , 60

5 2 , 7 ,

가 71 (1998).

JICST가

, 가 .

() : JOIS(JICST Online Information System) ,

6 8

Scientific and Technical Information Network)

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Format : 가 , ,

95) <http://www.jst.go.jp/>

< -9> JST



3) NACSIS⁹⁶⁾

NACSIS(National Center for Science Information System)

1986 4 .
2000 National Institute of Informatics .
NACSIS , , ,
NACSIS
NACSIS
NACSIS

96) <http://www.nii.ac.jp>

. NACSIS

가 NACSIS

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< - 10> NACSIS



97)http://www.dpc.or.kr

4) America Memory Library of congress⁹⁸⁾

America Memory Library of congress 가 <

- 12> Broad Topics Agriculture, Art and Architecture, Business and Economic, Education, Geography, History, Languages and Literature, Performing Arts, Philosophy and Religion 13가

. <

- 11> Digital Library

Digital format

Digital library .

Digital Format : JPEG, MPEG, MP3, Quicktime, RealMedia. SGML, MrSID, TIFF, WAN

가 : size, format Print

\$25 \$130 .

: Form

.
: Master card, visa .

< - 11> America Memory Library of congress



98) <http://Memory.loc.gov/amhome.html>

< - 12> America Memory Library of congress



5) FPG⁹⁹⁾

FPG VCG stock photography agency .
 , People & Lifestyle, Sports & Fitness, Travel, Science &
 Medicine, Business & Industry, Metaphors and Concepts 15

, < - 13> <
 - 15> .

: Gettyone, Eyewire, Adobe, Quark, Macromedia, Apple store,
 Training videos, Lynda, Flax art & design
 : Shopping Cart .

CD ,
 , CD .

:

99) <http://www.fpg.com/>

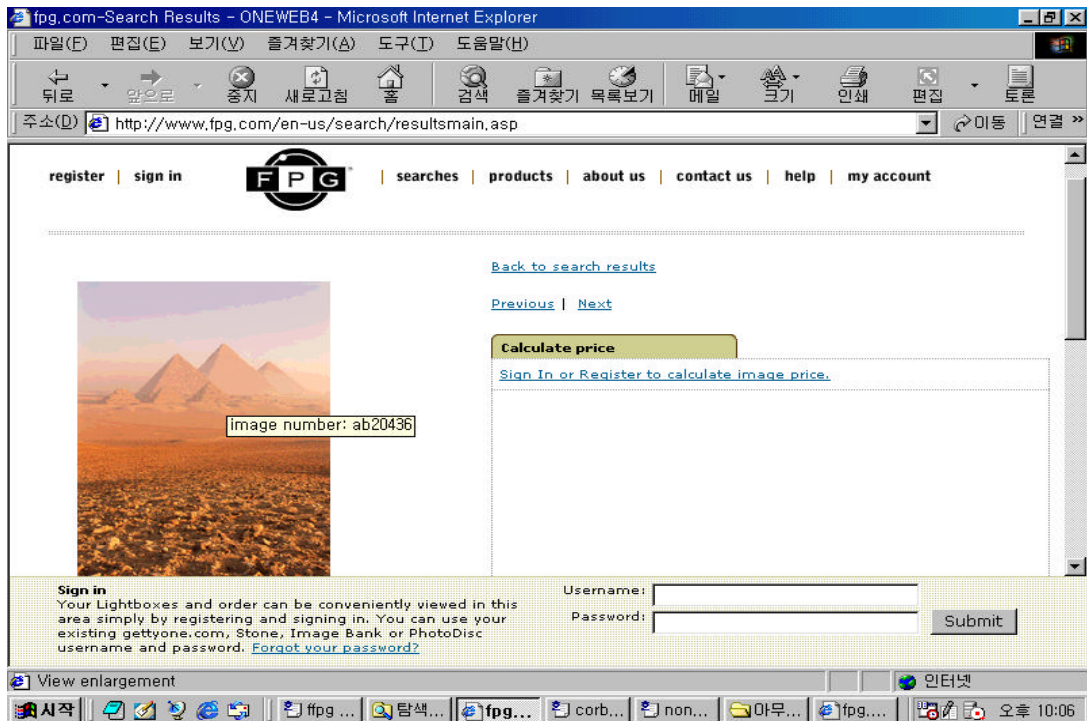
가 : , On-Screen 1MB
 \$24.95, Half Page 18MB \$99.95 Full Page 45MB
 \$149.00 .
 : FPG Rights-protected, Historical(also rights-protected),
 iSwoop Royalty-free images .
 Format : RGB, CMYK .

< - 13> FPG



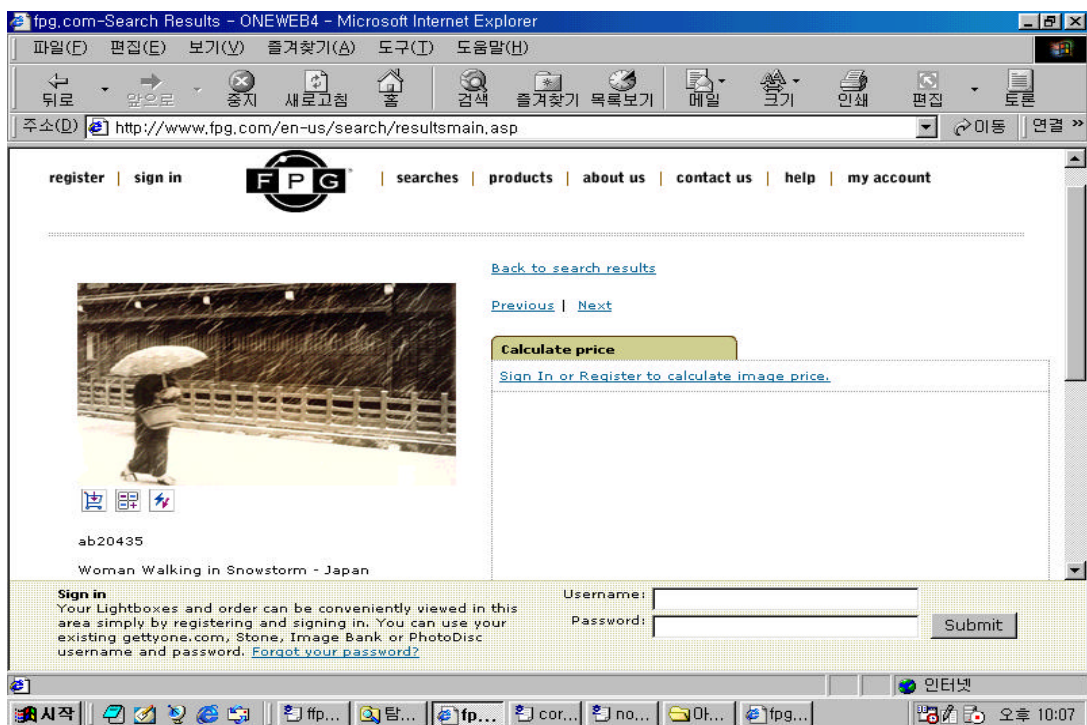
< - 14> FPG

(1)



< - 14> FPG

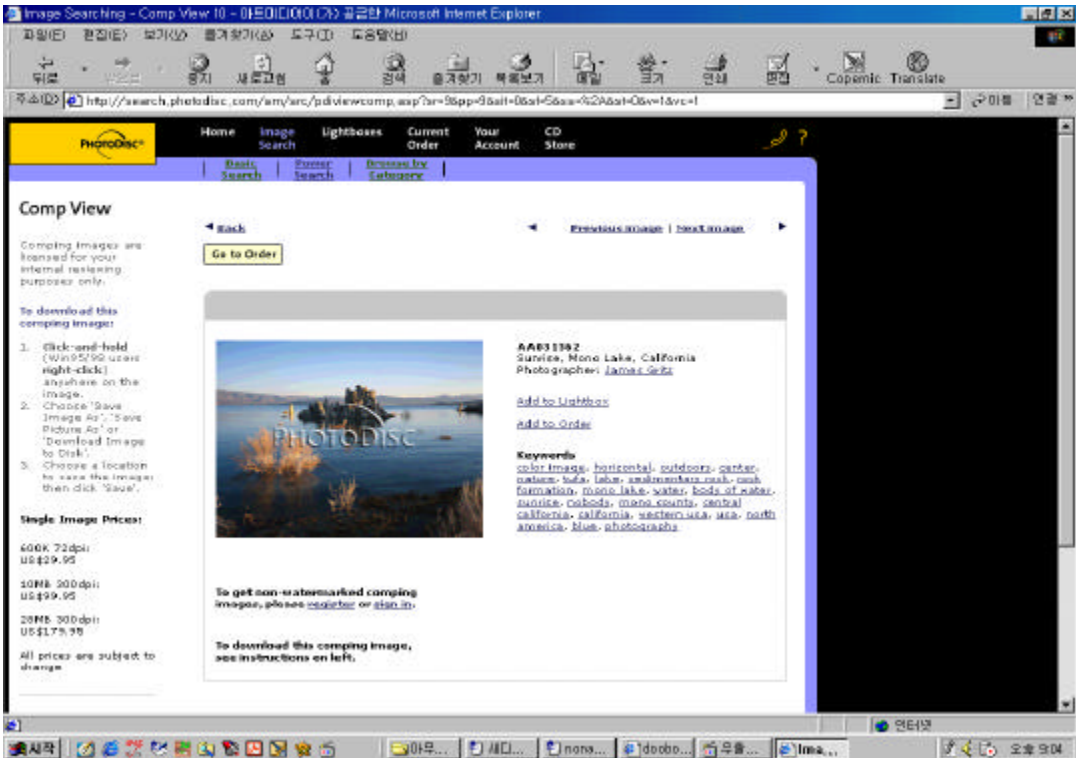
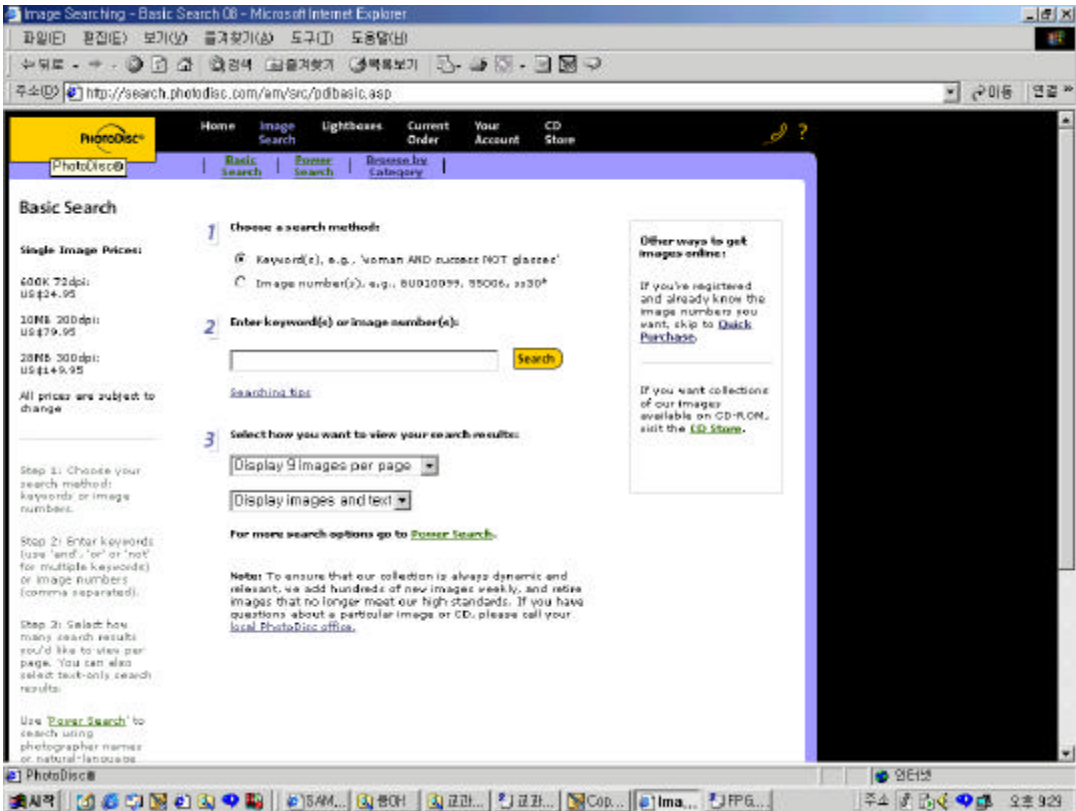
(2)



6) Photodisc¹⁰⁰⁾

16 . 85,000
 Digital library 가 . CD 14
 . < - 15> Photodisc
 . ,
 가 water - marking . < - 16>
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 가 : 가 600k
 72dpi \$24.95 10MB 300dpi \$79.95 28MB 300dpi
 \$149.95 . CD 가 28MB \$179, \$279, \$329 .
 : 가 .
 : Shopping Cart가
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100) [http:// search.photodisc.com/am](http://search.photodisc.com/am)

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7) Corbis Image¹⁰¹⁾

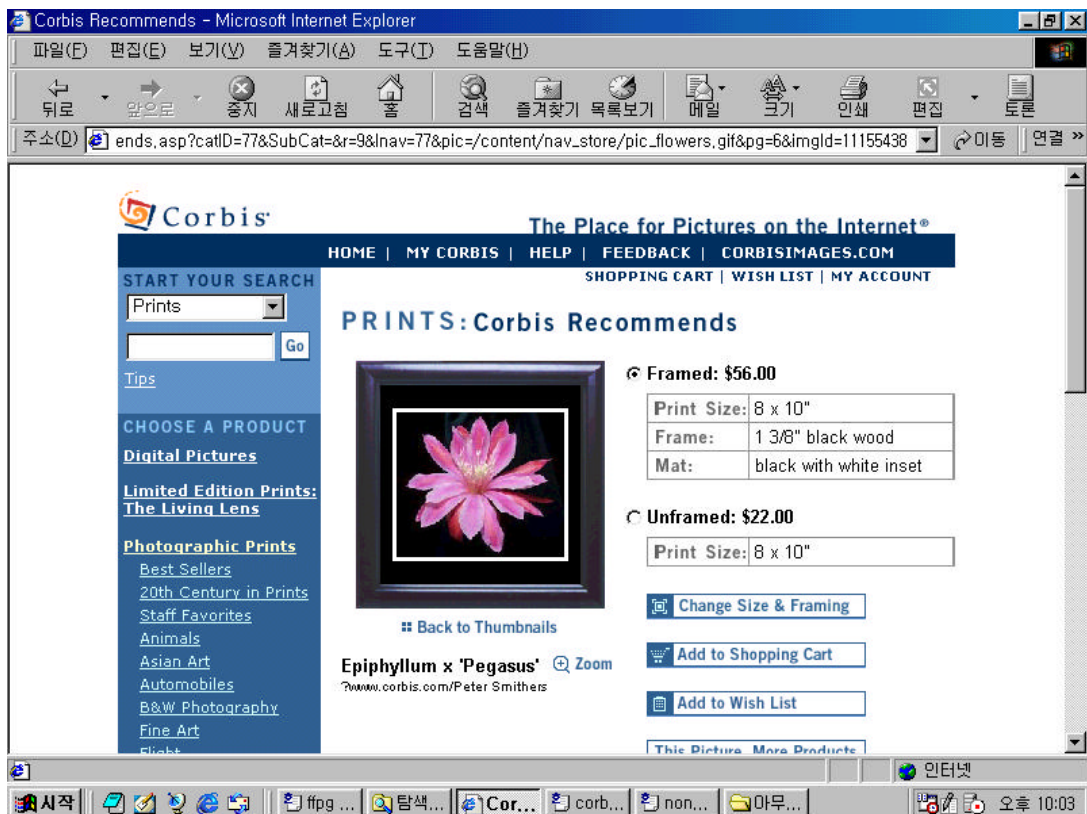
160 Digital Library .
 Power 가 38 Image
 . (Know-how)
 Image
 Digital format Digital Library 가 .
 Image update . <
 - 18> 가 .
 : 6 30 (Licence)
 . , ,
 (Licence) .
 가 : 가 (resolution) 가 .
 Low-resolution 2MB \$ 19.95 High-resolution 14MB \$ 69.95
 , Ultra high-resolution 32MB \$ 129.95 가 .
 : Shopping Cart가 Image
 , e-mail 가 . Image
 가 Image 가 CD 가
 .
 : , 1 \$ 15.50, 2 \$ 9.00, 3
 \$ 7.00, \$ 40.00 .
 : 가 , SSL .
 : Image Watermark
 watermark Image .
 Digital Format : JPEG CD-ROM .

101) <http://www.corbisimages.com>

< - 17> Corbis image



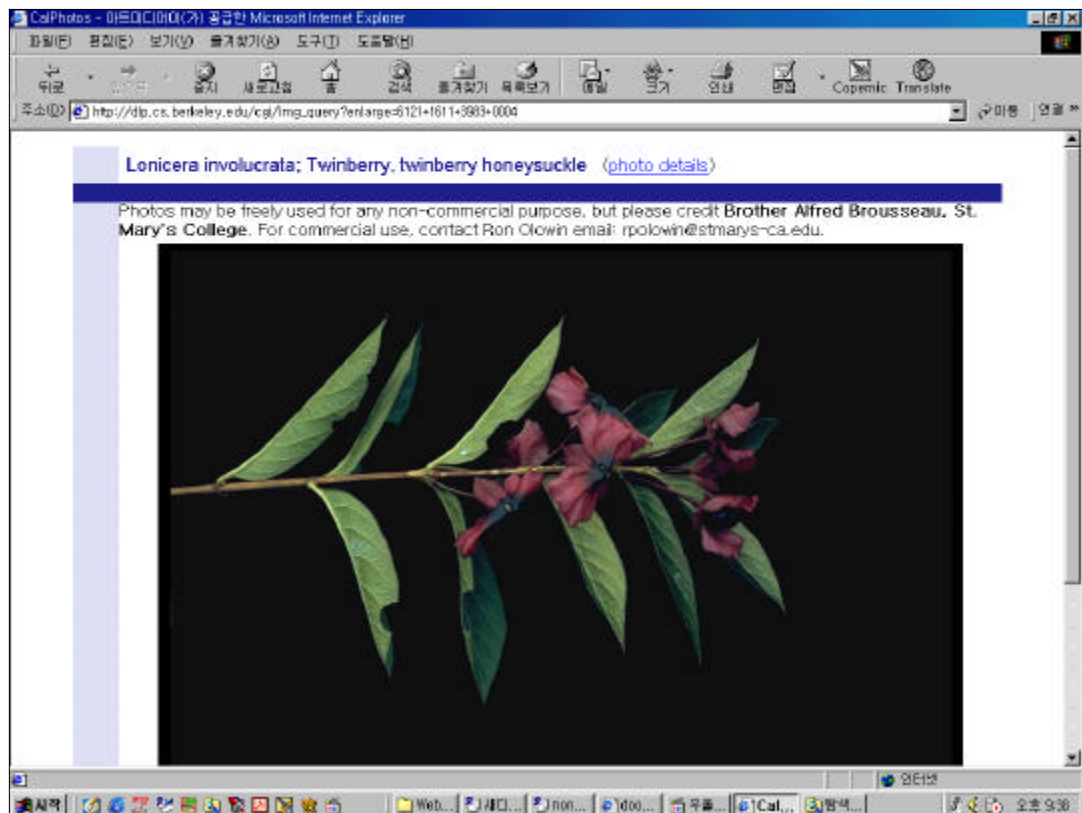
< - 18> Corbis image



8) Berkeley Digital Library Photo Collections¹⁰²⁾

U. C Berkeley On-line 가
 Digital Library . Digital Library 80,000 Image
 .
 Image
 , User가
 . < - 19> Digital Library
 .
 Image 6가 < - 20>
 . Digital Library Digital
 format PCD, PPM, JPEG Image size 6MB .

< - 19> Berkeley Digital Library Photo Collections



102) <http://elib.cs.berkeley.edu/photos>

< -20> Berkeley Digital Library Photo Collections



9) Advanced Digital Imaging inc¹⁰³⁾

ADI Master CD, Prophoto CD, Flashpix, JPEG

. ADI

가 가 1992 .

, Image CD

: 가 web ID Image

. web ID Image order form

. Image CD

. Image 1-5

103) <http://www.adiweb.com>

가 : Image CD ,
가 . print, Image, copy \$1 \$450
. CD \$425
: ID 가 가 Image가 CD
가
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< -21> Advanced Digital Imaging



Digital Library

1998 1999

DB

< -2> DB

가		98		DB	
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1999.10, p.6

7가 (가 , , , , , ,)
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Extranet
Digital Library

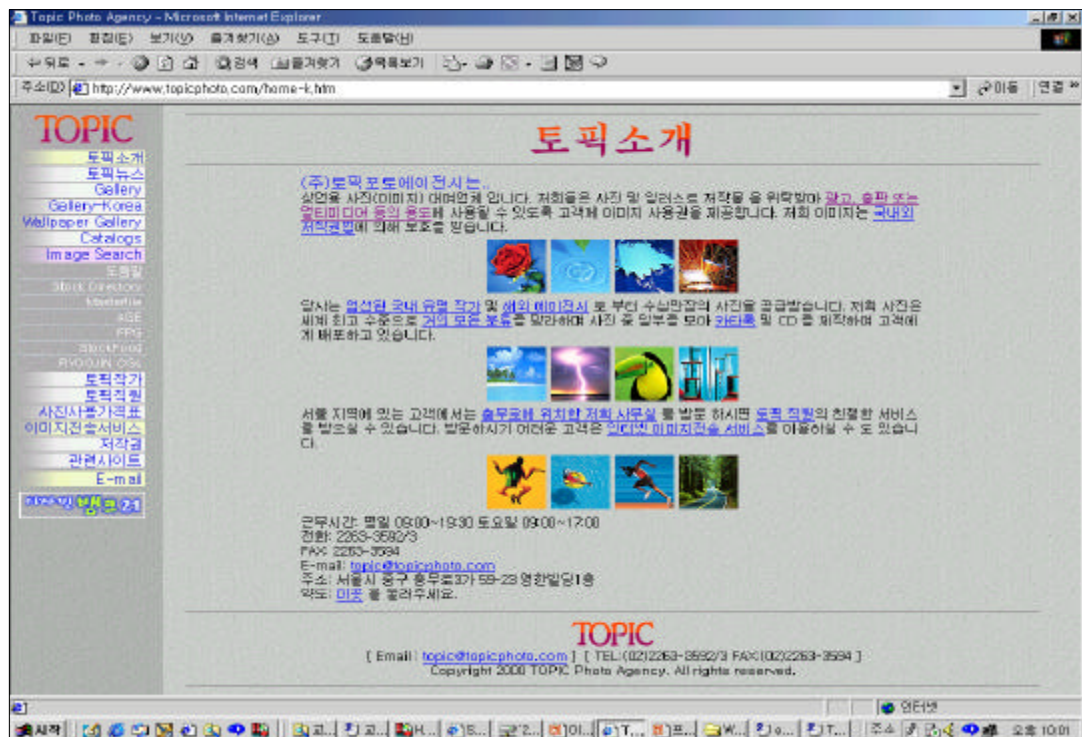
1) Topicphoto¹⁰⁴⁾

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Wallpaper Gallery
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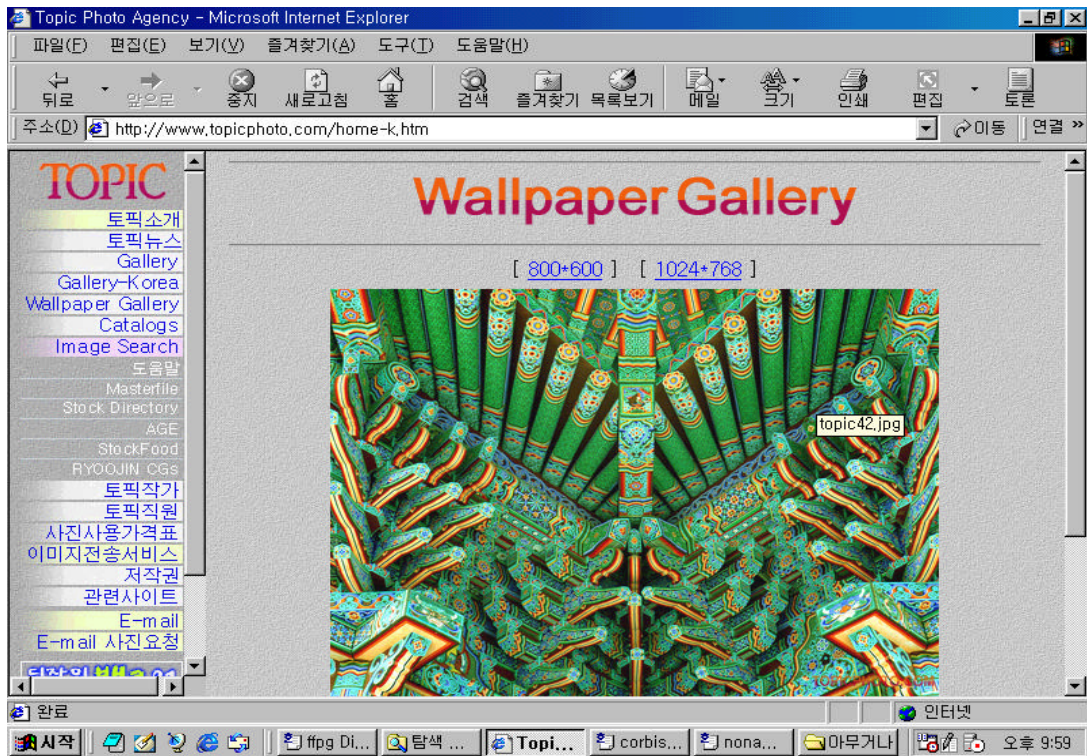
104) <http://www.topicphoto.com/home-k.htm>

Format : RGB 20 30MB JPG 1.
5 3MB .

< -22> topicphoto



< - 23> topicphoto



2) e-image¹⁰⁵⁾

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105) <http://www.e-image.co.kr>

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e- image

image가

< -23> e- image



3) 106)

1990 , , , 95
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.107) < -25> Digital Library

: Image 가 30,000 , Image 가 .
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106) www.tongro.co.kr

107) , “ ”, 1999.8.29

, 180,000 , 220,000 , POP,
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108)

1976 10 ,
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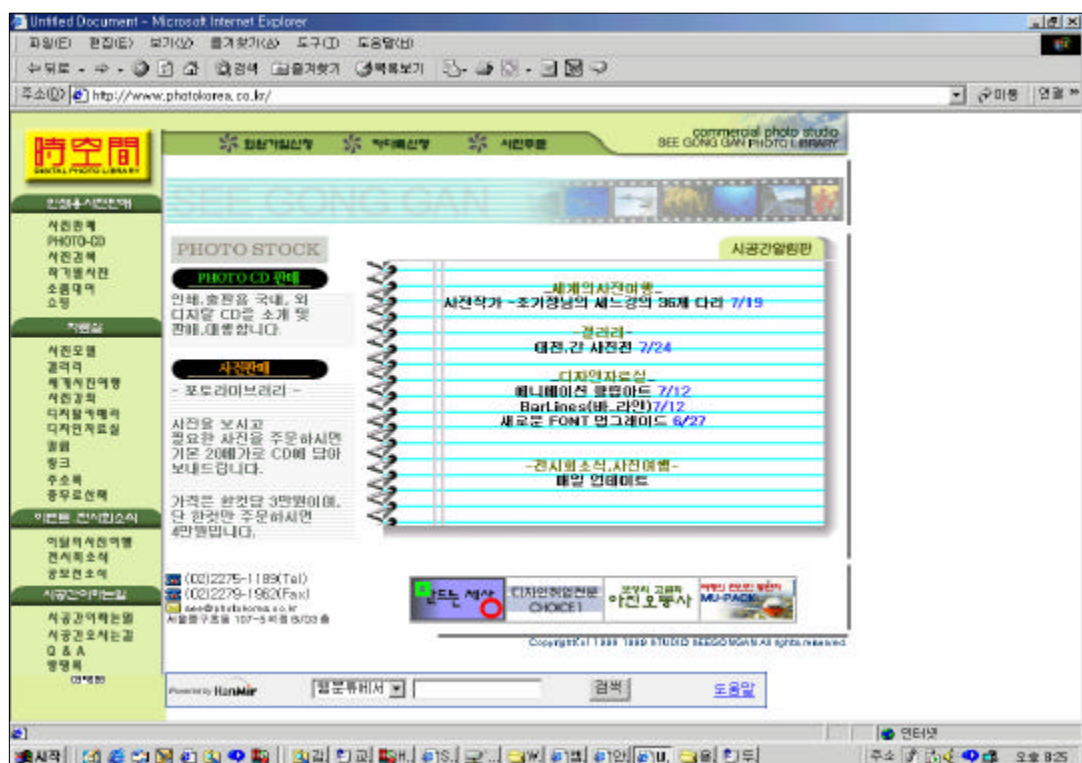
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5) cyber-cinema¹⁰⁹⁾

2000 4 가 25 ()
 43 CP(Contents Provider) 가 가
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 cyber-cinema () .
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 MS media
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 player가 56k 300k
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109) <http://enter.thrunet.com/cinema>



6) 110)

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“ 가 (national science
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(Asia Pacific Economy Cooperation)
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	: 1,000 / 10page 10page : 1,000 +(60 *page)	10page
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	1,000 +(300 *page)	

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. Digital Library

1) Digital Library

JST, NACIS, DAT, America Memory Library of Congress, FPG, Photodisc, Crobes Image Berkeley Digital Library Photo collection, Advanced Digital, Imaging 9가 Digital Library .

Digital Library ,

가 .

Water mark , ,

on-line ,

off-line .

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, Digital format 가 .

< - 5> Digital Library

Digital Library		/	/	가		form
JST	image	, ,	- JOIS -	- : 1000 -		
NACSIS	,	DB		-	ELS	-
DAJ		20	- shopping cart - -	18,000 30,000 600~1100	-	- JPG
America Memory Library	Library Model ()	-	,	\$25~\$130	-	JPEG, MPEG, MP3, SGML, MrSID, TIFF, WAN
FPG	()	gettyone eyewire Adobe Quark Training videos lynda Flax art & design/ VCG	,	\$25~\$130	-	JPEG, MPEG, MP3, SGML, MrSID, TIFF, WAN
Photodisc	,		shopping cart	600k: \$24.95 10MB: \$79.95 28MB: \$149.95 CD: \$179~329	water mark	-
Corbis Image		6 30 /	shopping cart, e-mail	1 : \$15.50 2 : \$9.00 3 : \$7.00	SSL water mark	JPEG CD-ROM
Berkeley Digital Library Photo Collections	Library Model ()	On-line	-	-	-	PCD PPM JPEG
Advanced Digital Imaging	image	image CD	e-mail	image CD : \$1-450 CD : \$425	-	Master CD Pro photo CD FLashpix JPEG

2) Digital Library

digital Library Photo topic, e-image, , ,
Cyber-Cinema, < -6> .
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Digital Library .
Digital Library .
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Watermark Digital Library

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Photo topic	() 6		,	- 15 80	-	B20 30 JPG RG
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Digital Library

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(Frequency Analysis)

(Cronbach's)

(factor analysis) . Digital Library

(multi-regression analysis) , 가 Digital Library

(regression analysis) .

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Digital Library Digital Library가

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Digital Library

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111) <http://www.woyung.com/> .htm

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(Attitude)

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(Perceived Usefulness)	. .
(Ease of use)	. .
(Contents)	. . . 가

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Charles E. Downing, "System usage behavior as a proxy for user satisfaction: an empirical investigation", *Information Management*, 1999

가

69.1% (242) , 가 30.9% (108) . 20 가

65.8% (231) 가 , 30 가 27.9% (98) , 10 가 4.0% (14)

. () 가 62.6% (219) 가 , () 12.3% (43

), () 9.1% (32) , () 8.9% (31) , 6.6% (23) ,

() 0.6% (2) . 33.1% (114) 가

, 28.8% (99) , 18.1% (64) .

200- 300 62.6% (219) 가 300

12.3% (43), 51- 100 9.1% (32), 100- 200 8.9% (31), 50
 가 0.6% (2)
 가 (33.1%) (18.1%)
 41.8% (147) 가 가 22.4% (79), 9.7% (34),
 8.0% (28), 7.4% (26), 4.3% (15),
 2.3% (8), 1.7% (6), () 1.4% (5), 1.1% (4)

(Cronbach's) , (factor analysis)

(Frequency Analysis)

, Digital Library

Digital Library

SPSS 9.0

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		242	69.1		201- 300	219	62.6
		108	30.9		301	43	12.3
		350	100			350	100
	20	14	4.0		()	2	0.6
	21- 25	95	27.1		()	32	9.1
	26- 30	136	38.7		()	31	8.9
	31- 35	87	24.8		()	219	62.6
	36- 45	11	3.1		()	43	12.3
	46	8	2.3			23	6.6
		351	100			350	100
		22	6.2			147	41.8
		99	28.8			79	22.4
		114	33.1			34	9.7
		7	2.0			28	8.0
		64	18.1			15	4.3
		8	2.3			8	2.3
		9	2.6			26	7.4
		1	3			4	1.1
		20	5.3			6	1.7
		151	100		()	5	1.4
	50	2	0.6			350	100
	51- 100	32	9.1				
	101- 200	31	8.9				

2. Digital Library

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23.6% (83) 가 , 19.0% (67), 11.4% (40)

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, Digital Library

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MP3 (7.4%)가

MP3

가 가

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water - making

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				23	6.5
	16	4.5		9	2.6
	13	3.7		3	0.9
	17	4.8		83	26
	40	11.4		9	26
	67	19.0	(,)	1	03
	2	0.6		4	11
	14	4.0		9	26
,	3	.9		5	14
	1	.3	(N3)	26	74
	7	2.0		32	10

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54(15)

Digital Library

Qatar Foundation

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35(12), 13 32(13)

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	15	54
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	12	31
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46	4	15
70	9	5
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35(15)

15(8)

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19(2) ,

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		7	3	0	10		

			15	39	4	3	0
		2	8				

[illegible]

[illegible]

< - 10>

		20	134	164	31	3	352
		5.7	38.1	46.6	8.8	0.9	100
		25	116	165	41	5	352
		7.1	33.0	46.9	11.6	1.4	100
		29	94	148	72	10	353
		8.2	26.6	41.9	20.4	2.8	100
		40	117	131	53	11	352
		11.4	33.2	37.2	15.1	3.1	100
		27	94	151	66	13	351
		7.7	26.8	43.0	18.8	3.7	100
		26	74	12	22	5	39
		74	22	44	25	14	10
		84	84	59	9	4	35
		20	56	19	54	11	10

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33(11) 71(15) -
24(10) 19(10)

24% 19%

Digital Library ,

Digital Library < -5> 1 3

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		48	96	130	69	7	350
		13.7	27.4	37.1	19.7	2.0	100
		95	131	98	25	2	351
		27.1	37.3	27.9	7.1	0.6	100

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. Digital Library

1)

(Cronbach's)

(factor analysis) . 14

VARIMAX

Digital Library

cronbach | 0.8733, 0.8078, 0.7881, 0.870

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- 13> 5

(Attitude)

cronbach

0.8452

, <

- 14>

(usage)

4

cronbach

0.7490

< - 12> Digital Library

	.795	.210	.017	.285
up- date	.780	.197	.150	.282
	.653	.485	.170	.213
	.635	.150	.482	.218
	.620	.288	.459	.032
	.591	.420	.182	.347
	.563	.489	.201	.301
	.245	.803	.226	.225
	.314	.778	.214	.245
	.261	.198	.852	.129
	.031	.208	.761	.404
	.220	.193	.255	.787
	.450	.281	.166	.655
	.388	.399	.249	.567
eigen value	7.894	1.108	0.772	0.678
Chronbach	.8733	.8078	.7881	.8170

< - 13> (attitude)

	.831
	.831
	.871
	.749
	.713
Eigen value	3.119
Chronbach	.8482

< - 14> (usage)

	.796
	.786
	.772
	.664
Eigen value	2.268
Chronbach	.7490

2) Digital Library (Usage)

Digital Library

(multi-regression analysis)

Digital Library

(regression analysis)

(Attitude)

< - 15>

R^2 36.1%

0.236,

0.191, 0.170 $P < 0.001$

0.0775 p 0.1

Digital Library

Digital Library

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Digital Library

(Attitude)

Digital Library (Usage)

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- 15>

R^2 44.3%

Digital Library

Digital Library

Digital Library

< - 15> (attitude)

	Coef.	t-value	R ²	F
	.236	4.585***	.361	12.00
	.191	3.705***		
	.0775	1.502		
	.170	3.294***		

* = p 0.1, ** = p 0.05, *** = p 0.01

< - 16> (usage) (attitude)

	R ²	F	Coef.	t-value
A usage	0.443	265.865	1.000	16.306***

* = p 0.1, ** = p 0.05, *** = p 0.01

Digital Library

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1. Digital Library

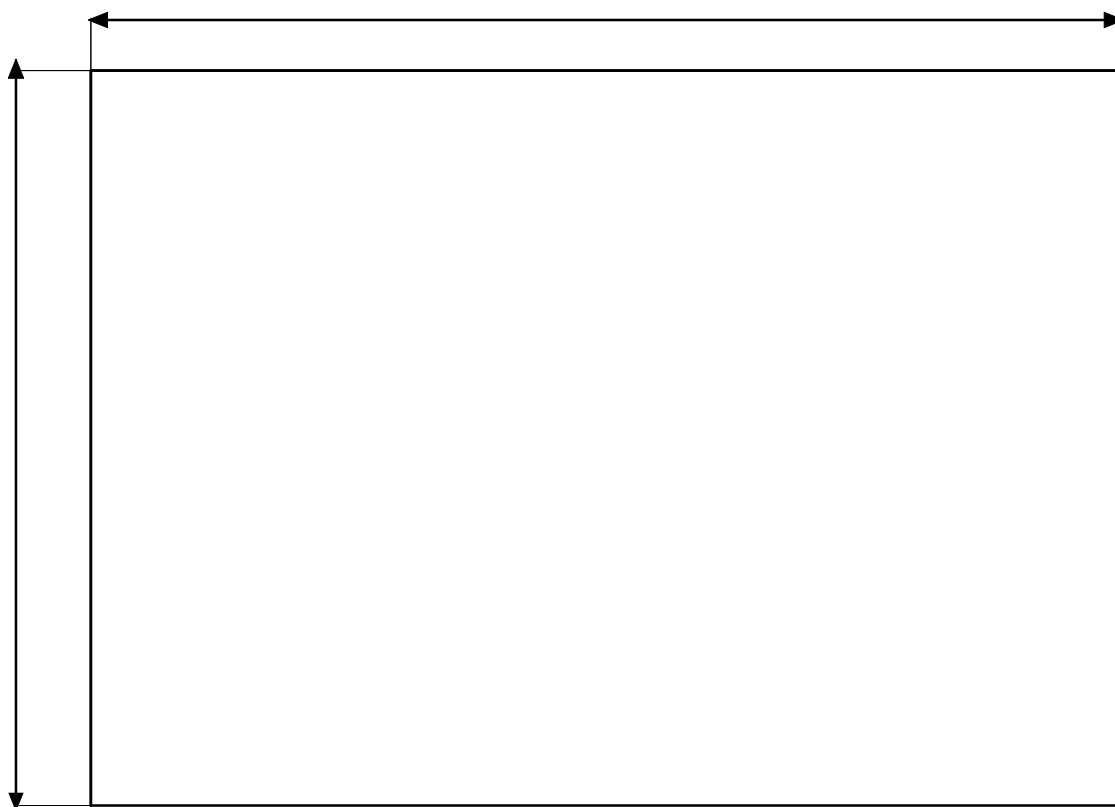
< - 1> Digital Library
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Digital Library , ,

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112) , .com, , 2000, p.311

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< - 1> Digital Library

		DOI
		IBM S/390, RS/6000, NUMA - Q (Sequent), AS/400, Netfinity
		DBMS, DBMS
		water marking
		SSL/TLS, SET ,
	Digital Format	Kodak Photo CD, JPEG, TIFF. PNG. PDF, GIF 60
		300dpi

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- 1) , (: , 1989), p. 33; , (: , 2000), pp. 233- 34, 238.
- 2) , , 1; pp. 48-49; , (: , 1997), pp. 232- 33).
- 3) , , 1999.8.29
- 4) , 7 2 () (: , 1999), p. 48.
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- 7) , , 4, p. 11.
- 8) , p. 11.
- 9) , , 37 , 1996, pp. 147- 80; , , 5 , 1969, pp. 613- 14.
- 10) , (: , 1999), p. 106; , (: , 1998), pp. 50- 51
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- 12) , (: , 2000), pp. 64- 66, 74- 78, 81- 82.
- 13) , , 2, p.189.
- 14) , () (: , 1997), pp.144- 45.
- 15) , (: , 1997), p. 30.
- 16) , () (: , 1997), p.1388.
- 17) , , 1999.6
- 18) , , 1997
- 19) , 1998
- 20) , , 99
- 21) , " , "

- , 13 3 , 1998.6, 42 .
- 22) , " ,
- , 7 4 , 1997, 60 .
- 23) WIPO 12 2 .
- 24) , " , ,
- 1996.
- 25) , , 495 ,
- 2000.5
- 26) , , 1998. 6, p.26
- 27) , , 97. 5, P.27
- 28) , , 2000 p.11
- 29) . , , 2000.5.5.
- 30) ,
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Vol. 7(New York: Macmillan, 1996), pp. 680-81; F. Popper, Art of Electronic
Age(London:Clarendon, 1993), p. 1.

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- 1) <http://db.copyright.co.kr>
- 2) <http://www.infoage.co.kr/internetmag/9711/sp2-01.html>
- 3) <http://viplab.hanyang.ac.kr/~drkim/wm.html>.
- 4) <http://www.ietf.org/html.charters/tls-charter.html>
- 5) <http://www.setco.org/>
- 6) <http://www.digicash.com>
- 7) <http://www.mondex.com>
- 8) <http://dlp.cs.berkeley.edu/info/systems.html> The UC Berkeley Digital Library
- 9) http://www.mic.go.kr/rmic/webdriver?Mlval=d100-0002-1&m_code=d100-1125-1
- 10) <http://www.iei.pi.cnr.it/DELOS/NSF/interop.htm>
- 11) [http://www.mic.go.kr/webdriver?Mlval=d100-0002-1&m_code=d100-1125-](http://www.mic.go.kr/webdriver?Mlval=d100-0002-1&m_code=d100-1125-1)
- 12) <http://user.collian.net/~antiys/2k0410.htm>
- 13) [http://www.mic.go.kr/webdriver?Mlval=d100-0002-1&m_code=d100-1125-](http://www.mic.go.kr/webdriver?Mlval=d100-0002-1&m_code=d100-1125-1)
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- 15) http://ecommerce.ncsu.edu/business_model.html
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- 18) <http://Memory.loc.gov/amhome.html>
- 19) <http://www.fpg.com/>
- 20) <http://search.photodisc.com/am>
- 21) <http://www.corbisimages.com>
- 22) <http://elib.cs.berkeley.edu/photos>

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- 23) <http://www.adiweb.com>
 - 24) <http://www.topicphoto.com/home-k.htm>
 - 25) <http://www.e-image.co.kr>
 - 26) <http://www.tongro.co.kr>
 - 27) <http://www.photokorea.co.kr>
 - 28) <http://enter.thrune.com/cinema>
 - 29) <http://www.kordic.re.kr>
 - 30) <http://www.woyung.com/> .htm

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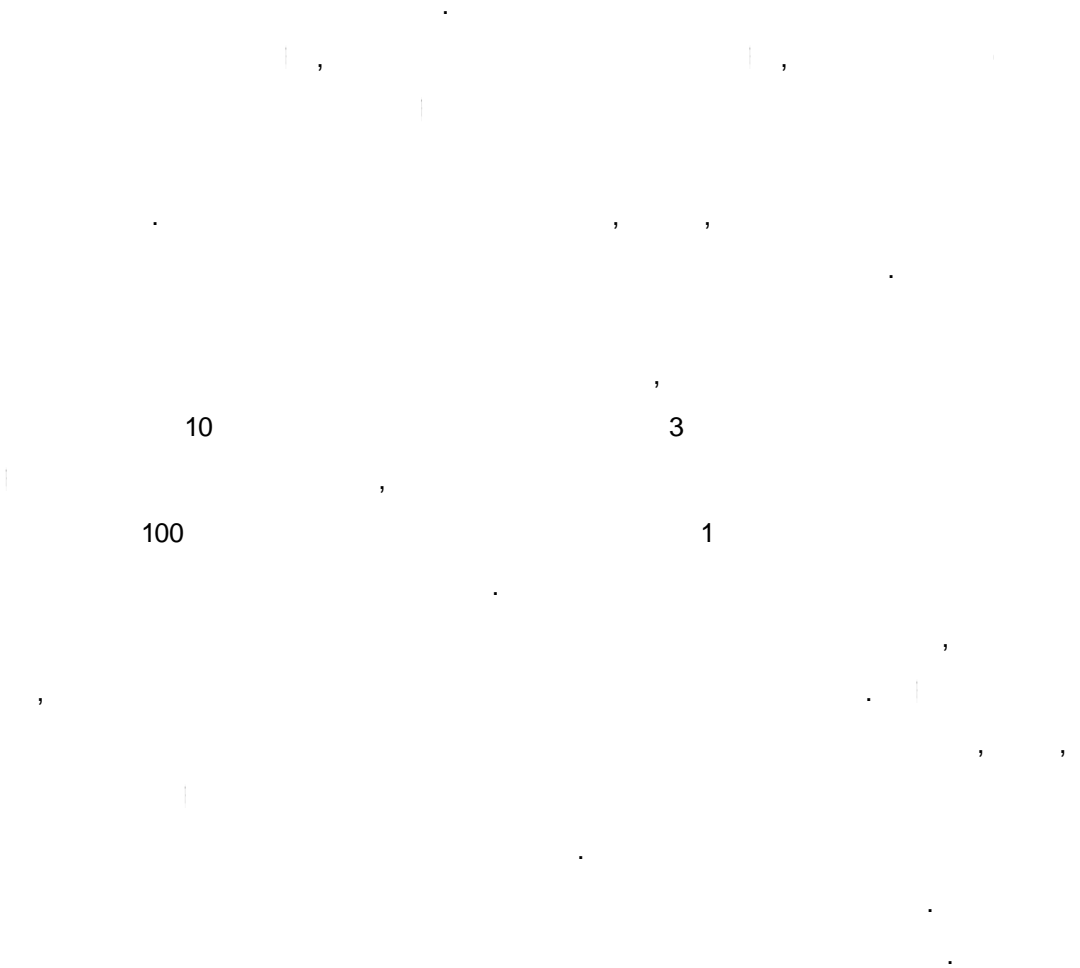
(2)

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3 .

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(1)

1) SGML (Standard Generalized Markup Language)

SGML
(meta language) . , , /
(International Standard Organization : ISO) 1896 ISO 8879
. SGML DTD(Data Type
Definition) . SGML
SGML SGML (editor),
(compiler), (browser) .

2) XML (eXtensible Markup Language)

XML 1996 W3C(World Wide Web Consortium) ,
HTML SGML
, HTML SGML . XML
, URL , XML
URL HTML
. XML
SGML . Explorer 5.0
Netscape 4.5 XML .

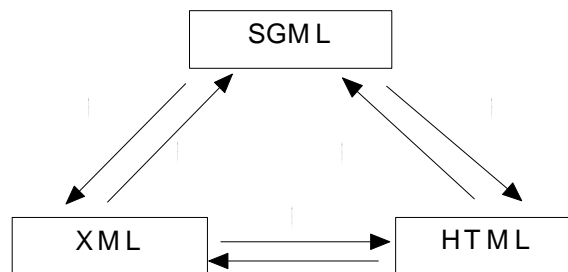
3) HTML (Hyper Text Markup Language)

1990 HTML .
HTML , SGML

)
 SGML (instance) HTML SGML
 ASCII
 HTML
 HTML DTD

4) SGML/XML/HTML

SGML, XML, HTML
 XML SGML SGML
 HTML SGML XML HTML
 SGML XML



(2)

1)

TIFF(The Tagged Image File Format), GIF(Graphic Interchange Format), JPEG(Joint Photographic Experts Group), PDF(Portable Document Format), DXF(Drawing eXchange Format), BMP, PSD
 TIFF, GIF, JPEG, BMP
 , PDF, DXF, PSD

2)

Format) MP3(MPEG Audio Layer-3) WAVE(Waveform Audio File Format) . WAVE

3) 3 : VRML(Virtual Reality Modeling Language)

VRML 3
, VRML , , 3
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4. Digital Library

< 4 > Digital Library

< 4- 1> DB

Game		22,200
	(, ,)	11,320
		4,000
Title		2,400
	(, ,)	
		1,600
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DB

	CI	
	/	
	/	
	/	
	/	
	CF	
	GUI &VR	
	CD ROM Title	
	New Media	

103,000

< 4-3- 1> DB ()

		325,655
	,	
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/		911,823
()		2,098,269
	,	
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< 4-3-2> D () ()

		17,300 , 2,595,000
1950		
		6635 , 1621,190

< 4-3-3> DB () ()

		17,300 , 2,595,000
1950		
		6635 , 1621,190

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	,	2	4	- () - - -

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	,	1	1	- ()
	.	1	3	- () - ()
	.	2	17	- (,) - (,) - (,) - (,) - (,) - (,) - (,) (3) (7)
	.	2	14	- () - () (2) - () - (8)
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	<p> , , . . </p>	1	10	<p> - - (,) - (6) - (,) </p>
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	,	1	1	- ()
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		2	7	<ul style="list-style-type: none"> - (,) - (,) - (,) - (,) - (,) - (,)
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		1	7	<p>(4)</p> <ul style="list-style-type: none"> - (,) - (,) - (,)

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		1	5	20 - (3)
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		1	9	- (,) (, , , , , , , 8)
		1	12	- (2) (4) (2) - (4)
		1	12	- (2) (4) (2) - 가 (4)

	· , .	1	10	· -63 · - (가 ,) · - (,) · - (,) · - (, 2) · - () · - · - · -
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	· .	2	9	· - () · - · - · - () · - () · - · - · -
	· , .	1	4	· - () · - 가 () · - () · -

	<ul style="list-style-type: none"> . 	1	4	<ul style="list-style-type: none"> - () - () - () - ()
	<ul style="list-style-type: none"> 가 . 	1	6	<ul style="list-style-type: none"> - (+ , , 2) - 가 () . (2)
	<ul style="list-style-type: none"> , , . 	1	6	<ul style="list-style-type: none"> - - - () - () - () - ()
가	<ul style="list-style-type: none"> 가 . 	2	8	<ul style="list-style-type: none"> - (,) - () - () - () - (2 , 가) - () - (가)

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	가	1	5	<ul style="list-style-type: none"> - -가 - - -
	가	1	5	<ul style="list-style-type: none"> - - -가 () - 11 () - ()
		1	5	<ul style="list-style-type: none"> - (가) - () - () - () - ()
		1	5	<ul style="list-style-type: none"> - () - () - - () - (,) - ()
		1	3	<ul style="list-style-type: none"> - - -

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	1	3	12		8	24
	8	14			9	31
		3	5		10	18
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			3	1	13	17
	4	6	11	3	4	28
			15		7	22
	7	5	6	2	2	22
	1			1		2
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	5	2		2	1	10
	3		1		1	5
	18	1	11		22	52
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	66	34	76	12	109	297

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	가	1	3	<ul style="list-style-type: none"> - () - (가) - ()
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		1	6	- - - - - (2)
		1	7	- () - () - (4)
		1	5	- (,) - (,) - (,) - ()
		2	24	- , , , (4) - (2) - () - (9) - (6) - (, 3)

	,	2	13	- () - () (6) - (3) - () -
	.	1	4	- - - -
	.	1	3	- () - () -
	,	1	8	(3) - () (4)
	.	1	7	- () - () (5)
	.	2	14	- () - () - () - () - (4) - () (4)
	.	2	11	- () - () - () - () - () - () (4)
	.	2	7	- - - - () -

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		1	3	- - -
		1	5	- () - () - () - ()
		3	16	- () - () - () - () - () - () - () - () - () - () - () - () - () - () - () - () - ()

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	1	2	7		1	11
					7	7
			5	1	6	12
	3	6	14	1	5	29
	1		4		7	12
	1		10	2	10	23
		1	4	1	8	14
	1					1
	3			1		4
	1		2		6	9
	16	1	12		17	46
	4		4			8
	4	1			8	13
					1	1
	49	22	79	7	78	235

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	7	17	4		8	36
		1	4		10	15
					9	9
		1	1		1	3
	1		3		5	9
	3	5	9	3	2	22
			12		4	16
	6		10	2	10	28
				1		1
	1	1		3		5
	1		3			4
	4		10	1	24	39
	5					5
	1		10		1	12
	9				6	15
	44	25	88	16	93	266

(: 52)

(6) () 6 1

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< 5-4> () 6 1

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			8		3	11
		2	3		3	8
		2	4			6
			1		2	3
			7			7
		1	6		5	12
	1	4	14		2	21
	1	1	11		3	16
	5		4	1	5	15
	1			1		2
	1					1
	1	1		1		3
	2					2
	10		8		11	29
			7		1	8
	4				19	23
			2			2
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			1			1
			2			2
	2	2	3		4	11
	7	3	8	4	9	31
		1	3			4
	6	1	8	5	7	27
		2		5		7
		1				1
	2	2				4
	4	1				5
	3	1				4
	3		2		2	7
	10		11	1	8	30
	6				3	9
	60	21	59	18	52	210

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	3	1	7			11
	8	18	2			28
	2	1	4			7
					4	4
			3			3
	2	1	2		5	10
	6	10	14	6	9	45
			10			10
	1		4	7	3	15
		2		3		5
	2			2		4
	1	1	3	6	6	17
	1					1
	5					5
	4	1	4		3	12
	1		6		1	8
	5				1	6
	6	1				7
	1		2		2	5
	4	1				5
	57	39	62	29	35	222

(: : 52)