

(19)  
(12)

(KR)  
(B1)

(51) 。 Int. Cl. 7  
H04L 12/66

(45)  
(11)  
(24)

2002 03 18  
10 - 0329244  
2002 03 07

(21) 10 - 1999 - 0048762  
(22) 1999 11 05

(65) 2000 - 0047593  
(43) 2000 07 25

(30) 09/213,318 1998 12 16 (US)

(73)

10504

(72)

78746 5104

(74)

:

(54)

가

URL

E -

E -

, URL

E -

1  
 2  
 3  
 4  
 5 (reader)  
 6 (parser)  
 7  
 8 1  
 9 2  
 \*  
 10: 12:  
 15: 16:  
 17: 18:  
 19: 20:  
 21: 25: -

(retrieval) , ,

(HTTP)

, HTTP (HTML)  
 ( , , , , )  
 . HTML , 가

HTML - URL (syntax) URL (Uniform Resource Locator)

가 (naming) IP 가 IP 가 (URL) (an HTML , 'pathname(

가 , 가

( URL)

가

(reader)

가

(text - to - speech processor)

URL

가

E - URL E -

. DTMF L ( / ) , (a) UR (b) URL , (c) / 가 가

가

1 (12) (14) (10) (14) 가 (10) (12) 가 (10) (tool) (16) URL (

(12) IBM Netfinity 가 RISC - (18), AIXO (20), Netscape Enterprise Server( ) (22) (12) , (GUI)(24) (AP I)(23) , API (CGI) - (plug - ins), (servlets), , SSI(server side include) (extensions)

R x86 - , PowerPCR - , RISC - , IBM OS/2  
Microsoft Windows '95 (helper)  
JVM(Java Virtual Machine) (support) Netscape Navigator 4.0( )

(12) 2 , (10) (16)  
15) ( , (12) (15) (17) ( )  
(12) (17) (19)  
(19) , ' ' , , -  
, 900 , 1+ , , (17) , 800  
( , , (17)  
( 가 , ) .

(17) , (18), (20) (16) ,  
DTMF , 가 (21)  
IBM ViaVioce 가 (25)

(17) , 3 ,  
billing) (17)가 (27) (validation), ( )  
(back office) ' .

4 가 . (30) , (32)  
, 가 ( ) .  
, , 가 가 (21)  
가 가

(34) , URL URL ( )  
, - , 가  
(36) , URL URL  
가 , URL 2 , '9' w  
xy , '9' wxy 3 , '91'  
(hit) 3 , '1' , '9'

, (URL 가 (44) 'did you say/enter \_\_\_\_\_ ?' (\_\_\_\_ 가/ 가?) (36) , (38) URL (38) URL 가 URL (40) (42) 가 , 가 .

, 가 (account) - , (reading) ( , ), E - , 가 ( , (re ( , 'New York' ) ( , www.nytimes.com) 가 ,

- (preferences) ( , CGI - ) 가 , 가 ,

가 , (46) , 가 (48) , ( , ) E - 가 (46-48)가 , (50) (parsing) , 5 6 (52) 가 - (25) , (54) , 가 ( , - ) (58) , (52,54) (56) , (60) (56,58) E - 가 E - 가 (62) , E -

가 E - ( URL E - 가 )

5 가 (66)

(68) (70) 'This is link 1' ( 1 )

9 0 가 가 10

'1' (72) 가 가 (74)

가 URL (72) 가 가 (46) 가 ,

3

가

( 가 )

가

URL ( , (17))

E - E - 가 가

가

가 1

(reader)

1

키패드	음성 명령	동작
21	A	A
22	B	B
23	C	C
24	COMMA	,
25	ASTERISK	*
26	COLON	:
27	SEMICOLON	;
28	REVERSESLAS H	\
29	AMPERSAND	&

31	D	D
32	E	E
33	F	F
34	EQUAL	=
36	DOT	.
37	PERCENT	%
38	DOLLAR	\$
39	EXCLAMATION	!
41	G	G
42	H	H
43	I	I
44	GREATERTHAN	>
45	HAT	^
46	HASH	#
47	ATSIGN	@
48	ACCENT	`
51	J	J
52	K	K
53	L	L
54	LESSTHAN	<
59	LEFTPAREN	(
61	M	M
62	N	N



63	0	0
64	MINUS	-
71	P	P
72	R	R
73	S	S
74	Q	Q
75	SLASH	/
76	QUOTE	"
77	PRIME	□
78	PLUS	+
79	RIGHTPAREN	)
81	T	T
82	U	U
83	V	V
84	TILDE	~
85	UNDERSCORE	_
91	W	W
92	X	X
93	Y	Y
94	Z	Z
99	BLANK	블랭크
0	ZERO	알파벳 입력 모드 0
1	ONE	알파벳 입력 모드 1

2	TWO	알파벳 입력 모드 2
3	THREE	알파벳 입력 모드 3
4	FOUR	알파벳 입력 모드 4
5	FIVE	알파벳 입력 모드 5
6	SIX	알파벳 입력 모드 6
7	SEVEN	알파벳 입력 모드 7
8	EIGHT	알파벳 입력 모드 8
9	NINE	알파벳 입력 모드 9
*0	MODE	수치와 알파벳 입력 모드 사이에서 토글링
*1	SKIP	다음 센텐스로 스킵
*2	REPEAT	마지막 2 센텐스 반복(백 업 명령을 받은 경우)
*3	NEXT PARAGRAPH	다음 패러그래프 또는 텍스트 브레이크로 스킵
*4	NEXT HEADING	다음 헤드 태크로 스킵
*5	NEXT LINK	다음 링크 읽기로 점프
*7	PRIOR LINK	이전의 링크 읽기로 점프
*8	UNDO	최종 네비게이션 동작을 수행함
*9	MENU	가능한 동작 메뉴 프록시트 제공
**nnn	CODE nnn	특수 문자에 대한 십진법 ASCII 코드
#0	STOP	새로운 URL 수신

#1	URL	새로운 URL 수신
#2	READ	페이지 낭독
#3	FAX	페이지 팩스 전송
#4	E MAIL	페이지 E-메일 전송
#5	BACK	방문한 이전의 웹 페이지로 후진
#9	BACKSPACE	1문자 후진
###	FOLLOW LINK	방금 낭독된 링크 또는 낭독되고 있는 링크를 따라감
##n	FOLLOW n	링크 번호 n을 따라감

가 가

가

가

가 . , , .

( , HTML, XML ) , 가

( , gif ) (parser) , , 가 ,

( , ) .

6 . (80) ,

, (82) , ( )

, 가 'ALT' . 가

(alternate) , 가

( 가 ) .

( , ) .

가 , (84) .

( ) (85) , (paragraphs)

, ( < p ) , 가

(pause) , (86) ,

, '&' , 'and' .

가 , , 가

, (88) ,

7 [www.ibm.com/News/1998/12/08.phtml](http://www.ibm.com/News/1998/12/08.phtml)

```

<HTML>
<HEAD><TITLE>IBM News</TITLE>

<STYLE TYPE="text/css"><!--
input#textfield {background: #ffffcc; color: #000000; font-size:
10; font-weight: normal;}
/-->
</STYLE>
<SCRIPT LANGUAGE="JavaScript">

<!--
window.name="HOMEPAGE";var
ua="UA";ua=navigator.userAgent;function      whichBrowser(){var
br="BR";
if(ua.indexOf("NAV")!=-1){br="Navio"}
if(ua.indexOf("Opera")!=-1){br="Opera"}
if(ua.indexOf("MSIE")!=-1){br="IE"}
if((ua.indexOf('Mozilla')!=
-1)&&(ua.indexOf('Sporfer')===-1)&&(ua.indexOf('compatible')===-1)
)){br="NS"}

return      br}function      whichVersion(br){var
bv=0;bv=navigator.appVersion.substring(0,1);
if(br=="IE"){(parseInt(bv));}if(br=="NS"){(parseInt(bv));}return
bv;}function whichPlatform()
{var  os="OS";if((ua.indexOf("Win98")!=-1)||ua.indexOf("Windows
98")!=-1)){os='win32_98'}
if((ua.indexOf("Win95")!=-1)||ua.indexOf("Windows
95")!=-1)){os='win32_95'}
else      if((ua.indexOf("WinNT")!=-1)||ua.indexOf("Windows
NT")!=-1)){os='win32_NT'}
else      if((ua.indexOf("Win16")!=-1)||ua.indexOf("Windows
3.1")!=-1)){os='win16'}
else
if((ua.indexOf("Macintosh")!=-1)||ua.indexOf("Mac")!=-1){os='Ma
c'};else if(ua.indexOf("SunOS")!=-1){os='unix sun'}
else      if(ua.indexOf("IRIX")!=-1){os='unix      sgi'}else
if(ua.indexOf("HP-UX")!=-1){os='unix hp'}
else      if(ua.indexOf("AIX")!=-1){os='unix      ibm'}else
if(ua.indexOf("OS/2")!=-1){os='os/2'}else
if(ua.indexOf("Linux")!=-1){ os='linux'};
return os;}b=whichBrowser();v=whichVersion(b);o=whichPlatform();
function miniwinpopup(w, h, myurl, targetstring, l, t)

```

```

{var                                     popup=new
Object();popup.w=w;popup.h=h;popup.l=l;popup.t=t;popup.url=myurl;
popup.trgt=targetstring;
if{(b=="IE")|| (v==2)}{window.open(popup.url,popup.trgt,
"width="+popup.w+",height="+popup.h+",resizable=1,status=0,left="
+popup.l+",top="+popup.t+",menubar=0,scrollbars=1,toolbar=0,locat
ion=0,directories=0")}
else {window1=window.open(popup.url, popup.trgt,
"width="+popup.w+",height="+popup.h+",resizable=1,status=0,left="
+popup.l+",top="+popup.t+",menubar=0,scrollbars=1,toolbar=0,locat
ion=0,directories=0");
window1.focus();}}function searchField(){empty="";
s1='<TABLE WIDTH=132 BORDER=0 CELLPADDING=0 CELLSPACING=0
ALIGN="TOP"><TR><TD WIDTH=132 COLSPAN=4><IMG
SRC="/i/v8.2/search.gif" WIDTH=132 HEIGHT=41 ALIGN="left"
HSPACE=0 VSPACE=0 BORDER=0 ALT=" Search "></TD></TR><TR><TD
WIDTH=7 VALIGN="TOP" BGCOLOR="666666">';
s2='<IMG SRC="/i/v8.2/search_1.gif" WIDTH=7 HEIGHT=28 HSPACE=0
VSPACE=0 BORDER=0></TD><TD WIDTH=88 VALIGN="TOP"
BGCOLOR="666666"><FORM METHOD=GET
ACTION="http://www.ibm.com/cgi-bin/findit/nph-V8.2"
onSubmit="subsearch(this.q.value); return false;"><FONT
FACE="Arial, Helvetica" SIZE=-1 POINT-SIZE="9">';

```

```

sie2='<IMG SRC="/i/v8.2/search_1.gif" WIDTH=7 HEIGHT=29 HSPACE=0
VSPACE=0 BORDER=0 ALT=""></TD><TD WIDTH=88 VALIGN="TOP"
BGCOLOR="666666"><FORM METHOD=GET
ACTION="http://www.ibm.com/cgi-bin/findit/nph-V8.2"
onSubmit="subsearch(this.q.value); return false;"><FONT
FACE="Arial, Helvetica" SIZE=-1 POINT-SIZE="9">'
sunix2='<IMG SRC="/i/v8.2/search_1.gif" WIDTH=7 HEIGHT=39
HSPACE=0 VSPACE=0 BORDER=0 ALT=""></TD><TD WIDTH=88 VALIGN="TOP"
BGCOLOR="666666"><FORM METHOD=GET
ACTION="http://www.ibm.com/cgi-bin/findit/nph-V8.2"
onSubmit="subsearch(this.q.value); return false;"><FONT
FACE="Arial, Helvetica" SIZE=-1 POINT-SIZE="9">'
s3='</FONT><BR><IMG SRC="/i/v8.2/c.gif" WIDTH=88 HEIGHT=2
HSPACE=0 VSPACE=0 BORDER=0 ALT=""></TD><TD WIDTH=21 VALIGN="TOP"
BGCOLOR="666666"><A
HREF="javascript:subsearch(document.forms[0].q.value);"
onClick="subsearch(document.forms[0].q.value); return false;"
onMouseOver="document.images[&#34;go_button&#34;].src=
arrow_img.src;self.status=&#34;Go&#34;;return true;"
onMouseOut="document.images[&#34;go_button&#34;].src
=
go_img.src;"><IMG NAME="go_button" SRC="/i/v8.2/go_text.gif"
BORDER="0" WIDTH="21" HEIGHT="18" HSPACE="0" VSPACE="0"
ALIGN="LEFT" ALT=" Go "></A></TD></FORM>';

```

```

s4='<TD WIDTH=16 VALIGN="TOP"><IMG SRC="/i/v8.2/search_2.gif"
WIDTH=16 HEIGHT=28 HSPACE=0 VSPACE=0 BORDER=0
ALT=""></TD></TR></TABLE>';
sie4='<TD WIDTH=16 VALIGN="TOP"><IMG SRC="/i/v8.2/search_2.gif"
WIDTH=16 HEIGHT=29 HSPACE=0 VSPACE=0 BORDER=0
ALT=""></TD></TR></TABLE>';
sunix4='<TD WIDTH=16 VALIGN="TOP"><IMG SRC="/i/v8.2/search_2.gif"
WIDTH=16 HEIGHT=39 HSPACE=0 VSPACE=0 BORDER=0
ALT=""></TD></TR></TABLE>';
i1='<input NAME="q" ID="textfield" type="text" size=""';
i2='<onFocus=document.forms[0].elements[0].value=empty">';p1=s1+
s2+i1;p2=i2+s3+s4;if(b=="Opera"){return(s1+sunix2+i1+7+i2+s3+suni
x4);}if(b=="Navio"){return(p1+10+p2);}
if(((o=="win32_98")||(o=="win32_95"))&&(b=="NS")&&(v>=4))
{return(p1+7+p2);}if(((o=="win32_98")||(o=="win32_95"))&&(b=="IE"
)&&(v>=4)) {return(p1+14+p2);}
if
(((o=="win32_98")||(o=="win32_95"))&&(b=="NS")){return(p1+10+p2);
}if((o=="win32_98")||(o=="win32_95")){return(p1+12+p2);}if((o=="M
ac")&&(b=="NS")){return(p1+11+p2);}
if((o=="Mac")&&(b=="IE")&&(v>=4)){return(p1+13+p2);}if((o=="Mac")
&&(b=="IE")){return(s1+sie2+i1+13+i2+s3+sie4);}

```

```

if(o=="os/2"){return(p1+15+p2);}if((o=="unix      ibm")||(o=="unix
sun")||(o=="unix
sgi")){return(s1+sunix2+i1+11+i2+s3+sunix4);}if(o=="unix
hp"){return(s1+sunix2+i1+6+i2+s3+sunix4);}if(o=="linux"){return(s
1+sunix2+i1+7+i2+s3+sunix4);}if((o=="win32_NT")&&(b=="IE")){retur
n(p1+14+p2);}if((o=="win32_NT")&&(b=="NS")){return(p1+6+p2);}
if(o=="win16"){return(p1+11+p2);}return(p1+6+p2);}
if((document.images)&&((b=="NS")||(v==4)))
{var      arrow_img=      new      Image();arrow_img.src      =
"/i/v8.2/go_arrow.gif";var      go_img      =      new
Image();go_img.src="/i/v8.2/go_text.gif"}function
subsearch(s){var formstr="";for (count=0 ; count <= s.length ;
count++){if(s.substring(count,count+1)==" "){formstr+="+";} else
if(s.substring(count,count+1)=="\"){formstr+="\%22"}
else if(s.substring(count,count+1)=="\"){formstr+="PLUS"}
else{formstr+=s.substring(count,count+1)};searchurl=("http://ww
w.ibm.com/cgi-bin/findit/nph-v8.2?q=");
remote      =
miniwinpopup(322,360,searchurl+formstr,"SEARCH",140,160);}var
site = null;var gt=unescape('%3e');
function      launch(){site=
miniwinpopup(175,115,'http://www.ibm.com/IBM/Stock/Ticklet/Frame'
,'ibmstock',140,160);

```



```

if (site != null){if(site.opener==null){site.opener=self;}}
//-->

</SCRIPT>
</HEAD>
<BODY BGCOLOR="#ffffff" LINK="00006b" VLINK="56089f"
ALINK="00006b">
<!--*****START GLOBAL NAVIGATION
TABLE*****--><!--MASTHEAD--><IMG
SRC="/News/images/masthead.gif" WIDTH=600 HEIGHT=49 HSPACE=0
VSPACE=0 BORDER=0 ALIGN="top" ALT="IBM News"><BR CLEAR="all">

<TABLE WIDTH=600 HEIGHT=17 BORDER=0 CELLPADDING=0 CELLSPACING=0
VALIGN=top><TR HEIGHT=17><TD
COLSPAN=2><A
HREF="/"><IMG SRC="/i/v8.4/h_b.gif" BORDER=0 ALT="[ Home ]"
ALIGN=LEFT WIDTH=78 HEIGHT=17 HSPACE=0 VSPACE=0 HSPACE=0
VSPACE=0></A><A
HREF="/News/"><IMG SRC="/i/v8.4/n_h.gif" BORDER=0 ALT="[ News ]"
ALIGN=LEFT WIDTH=77 HEIGHT=17 HSPACE=0 VSPACE=0></A><A
HREF="/Products/"><IMG SRC="/i/v8.4/p_b.gif" BORDER=0 ALT="[
Products & services]" ALIGN=LEFT WIDTH=129 HEIGHT=17 HSPACE=0
VSPACE=0></A><A

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HREF="/Support/"><IMG SRC="/i/v8.4/su_b.gif" BORDER=0 ALT="[
Support ]" ALIGN=LEFT WIDTH=79 HEIGHT=17 HSPACE=0 VSPACE=0></A><A

```

```

HREF="/Solutions/"><IMG SRC="/i/v8.4/so_b.gif" BORDER=0 ALT="[
Solutions ]" ALIGN=LEFT WIDTH=79 HEIGHT=17 HSPACE=0
VSPACE=0></A><A

```

```

HREF="/Partners/"><IMG SRC="/i/v8.4/pa_b.gif" BORDER=0 ALT="[
Partners ]" ALIGN=LEFT WIDTH=79 HEIGHT=17 HSPACE=0
VSPACE=0></A><A

```

```

HREF="/IBM/" onMouseOver="self.status='About IBM' ;return
true"><IMG SRC="/i/v8.4/ai_b.gif" BORDER=0 ALT="[ About IBM ]"
ALIGN=LEFT WIDTH=79 HEIGHT=17 HSPACE=0
VSPACE=0></A></TD></TR></TABLE>

```

```

<!--*****END GLOBAL NAVIGATION
TABLE*****-->
<TABLE WIDTH=600 BORDER=0 CELLPADDING=0 CELLSPACING=0
VALIGN="left">
<TR><!--*****SEARCH CONSOLE*****-->
<TD WIDTH=132 VALIGN="TOP"><SCRIPT LANGUAGE="JAVASCRIPT">

```

```

<!--
if((b=="IE")||(o=="os/2")||(v>2)){document.write(searchField());}
if(((o=="Mac")&&((b=="IE")||(b=="NS"))&&(v==3))|((v==2)&&(b!="IE
"))|(((o=="win32_NT")|(o=="win32_95"))&&(b=="IE"))){}
else{document.forms[0].elements[0].focus()}
//-->

</SCRIPT><NOSCRIPT><A HREF="/Search/"><IMG
SRC="/i/v8.2/searchns2.gif" WIDTH=132 HEIGHT=41 ALIGN="left"
HSPACE=0 VSPACE=0 BORDER=0 ALT=" Search "></A><BR
CLEAR="all"></NOSCRIPT>

<IMG SRC="/i/v8.2/search_strip.gif" WIDTH=132 HEIGHT=4 HSPACE=0
VSPACE=0 BORDER=0 ALT=""><A HREF="/Shop/"
onMouseover="self.status='Shop';return true"><IMG
SRC="/i/v8.2/search_shop_b.gif" WIDTH=132 HEIGHT=20 HSPACE=0
VSPACE=0 BORDER=0 ALT=" Shop "></A><A HREF="/Contact/"
onMouseover="self.status='Contact IBM';return true"><IMG
SRC="/i/v8.2/search_contact_b.gif" WIDTH=132 HEIGHT=19 HSPACE=0
VSPACE=0 BORDER=0 ALT=" Contact IBM "></A><A HREF="/Download/"
onMouseover="self.status='Download';return true"><IMG
SRC="/i/v8.2/search_download_b.gif" WIDTH=132 HEIGHT=21 HSPACE=0
VSPACE=0 BORDER=0 ALT=" Download "></A><IMG

```

```

SRC="/i/v8.2/search_non.gif" WIDTH=132 HEIGHT=4 HSPACE=0 VSPACE=0
BORDER=0 ALT=""><A
HREF="/Planetwide/Popups/other/"TARGET="PROJECTS"
onMouseOver="self.status='Select a country'; return true"
onClick='miniwinpopup(298,348, "/Planetwide/Popups/other/",
"PROJECTS",140,160); return false;'><IMG
SRC="/i/v8.2/search_select.gif" WIDTH=132 HEIGHT=27 HSPACE=0
VSPACE=0 BORDER=0 ALT=" Select a country "></A><A
HREF="javascript:launch()" onMouseOver="window.status='Stock
quote'; return true"><IMG
SRC="/i/v8.2/search_stock.gif" WIDTH=132 HEIGHT=33 HSPACE=0
VSPACE=0 BORDER=0 ALIGN="top" ALT=" Stock quote
"></A><!--***TICKER TABLE NEST***-->
<TABLE WIDTH=132 BORDER=0 CELLPADDING=0 CELLSPACING=0
VALIGN="left">
<TR>
<TD WIDTH=5 VALIGN="TOP" BGCOLOR="000000"><IMG
SRC="/i/v8.2/clear.gif" WIDTH=5 HEIGHT=10 ALIGN="left" HSPACE=0
VSPACE=0 BORDER=0 alt=""></TD>
<TD WIDTH=117 VALIGN="TOP" BGCOLOR="000000"><FONT SIZE=-2
FACE="arial, helvetica, geneva" COLOR=CC33CC>$165 &nbsp; Down
$4.437</FONT><BR>
<FONT SIZE=-2 FACE="arial, helvetica, geneva"
COLOR=FFFFFF><I>December 10, 1998<BR>
16:00</I></FONT></TD>
<TD WIDTH=10 VALIGN="TOP" BGCOLOR="666666"><IMG
SRC="/i/v8.2/right_ticker.gif" WIDTH=10 HEIGHT=59 HSPACE=0
VSPACE=0 BORDER=0 ALIGN="top" alt=""></TD>
</TR>
</TABLE>
<!--***END TICKER TABLE NEST***--><IMG
SRC="/i/v8.2/under_ticker1.gif" WIDTH=132 HEIGHT=7 HSPACE=0
VSPACE=0 BORDER=0 ALIGN="top" alt=""><IMG
SRC="/News/images/shadow.gif" WIDTH=132 HEIGHT=4 HSPACE=0
VSPACE=0 BORDER=0 ALIGN="top" alt=""><!--*** STRETCH BLUE SPACE
HERE!! ****--><IMG SRC="/News/images/stretch.gif" WIDTH=132
HEIGHT=46 HSPACE=0 VSPACE=0 BORDER=0 ALIGN="top" alt=""><!--***
end STRETCH BLUE SPACE HERE!! ****--><A HREF="/Privacy/"
onMouseover="self.status='Privacy';return true"><IMG
SRC="/i/v8.2/privacy.gif" WIDTH=91 HEIGHT=17 ALT=" Privacy "
HSPACE=0 VSPACE=0 BORDER=0 ALIGN="top"></A><A HREF="/Legal/"
onMouseover="self.status='Legal';return true"><IMG
SRC="/i/v8.2/legal.gif" WIDTH=41 HEIGHT=17 ALT=" Legal " HSPACE=0

```

```

VSPACE=0    BORDER=0    ALIGN="top"></A><!--*****END    SEARCH
CONSOLE*****--></TD>
<!--*****      MAIN    CONTENT    *****--><TD    WIDTH=468
VALIGN="TOP">
<TABLE BORDER=0 CELLPADDING=0 CELLSPACING=0 WIDTH=468>
<TR>
<TD    WIDTH=468    COLSPAN=2    VALIGN=TOP><IMG
SRC="/News/images/curved_top_strip.gif"    WIDTH=468    HEIGHT=17
align=top VSPACE=0 HSPACE=0 border=0 alt="">
</TD></TR>
<TR>
<TD    WIDTH=15    VALIGN="TOP"><IMG    SRC="/News/images/clear.gif"
WIDTH=15 HEIGHT=10 BORDER=0 HSPACE=0 VSPACE=0 alt=""></TD>
<TD WIDTH=453 VALIGN="TOP">
<FONT FACE="arial,HELVETICA,GENEVA" size="+1">
AT&T to acquire IBM's Global Network business for $5 billion
<p>
<FONT FACE="arial,HELVETICA,GENEVA" size="-1">

On December 8, AT&T and IBM announced a series of strategic
agreements under which AT&T will acquire IBM's Global Network

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business for \$5 billion in cash, and the two companies will enter into outsourcing contracts with each other. IBM will outsource a significant portion of its global networking needs to AT&T. AT&T will outsource certain applications processing and data center management operations to IBM.

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The transactions could represent \$2.5 billion in additional revenue to AT&T in the first full year of operation.

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The IBM Global Network business AT&T will acquire serves the networking needs of several

hundred large global companies, tens of thousands of mid-sized businesses and more than 1 million individual Internet users in 59 countries.

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The acquisition boosts AT&T's strategy to rapidly increase the company's revenue, especially at its fast-growing networking services unit, AT&T Solutions. About 5,000 IBM employees will join AT&T as part of the acquisition.

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"These strategic agreements are all about growth," said AT&T Chairman and CEO C. Michael Armstrong. "Growth in revenue, growth in technology, and - most important - growth in what AT&T can do for customers.

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"For AT&T, today's announcement supports four areas we've targeted for growth: global services, data networking, Internet Protocol technology and network outsourcing through our AT&T Solutions business," said Armstrong. "The acquisition of IBM's global data network will accelerate our ability to deliver IP-based services to global customers. It will give us a sophisticated new platform for revenue growth."

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By providing customers with more attractive global services, Armstrong said the acquisition will enable AT&T to compete more effectively with strong rivals for the provisioning of global managed data network services, including IP.

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"We are delighted that AT&T will be the new home for our Global Network operation," said IBM Chairman and CEO Louis V. Gerstner, Jr. "With this agreement, the network will receive the management focus and resources necessary to maintain its standing as a world-class provider of connectivity to IBM and millions of customers.

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"AT&T will use its expertise to enhance and expand the Global Network to the benefit of its customers, including IBM," he said. "We can now focus fully on helping our customers take advantage of the emerging networked world through e-business applications and solutions."

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IBM's Global Network has more than 1,300 dial-up points of presence and dedicated access from more than 850 cities in 59 countries. The Global Network offers business customers innovative services and worldwide operations and support, including in-country, native-language support personnel.

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AT&T said its acquisition of IBM's high capacity global network would be supportive of the 100-city, IP-based network that would be created as part of the global joint venture announced by AT&T and BT in July.

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IBM said that this transaction, in its entirety, is not expected to have a significant impact on the company's 1999 operational results. AT&T said earnings dilution from the transaction is expected to be insignificant in the first full year of operation and accretive thereafter.

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AT&T and IBM said they expect the acquisition to conclude by mid-1999, following clearance by U.S. regulators and certain regulatory authorities outside the U.S.

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Armstrong said today's announcement is about more than acquiring IBM's global network. "We have also reached several significant outsourcing agreements that match each company's strengths with the other company's business needs," he said.

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IBM has awarded AT&T Solutions an outsourcing contract valued at \$5 billion over five years for a significant portion of IBM's own global networking needs, making it the single largest networking outsourcing contract ever awarded. The contract is expected to double the network outsourcing revenue of AT&T Solutions and will enable it to grow more rapidly by serving a wider set of customer needs with a broadened scope of services.

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In addition, AT&T and IBM's Global Services unit have reached agreement for outsourcing services valued at about \$4 billion over the next 10 years. As part of the agreement, IBM will manage AT&T's legacy applications processing, including billing, service-order-processing, installation and maintenance, for customers of AT&T business long-distance services. In addition, IBM will assume management of AT&T's data processing centers, which operate corporate information systems such as accounts payable and receivable and employee payroll and benefits. Under the agreement, more than 2,000 AT&T management employees will be offered positions with IBM.

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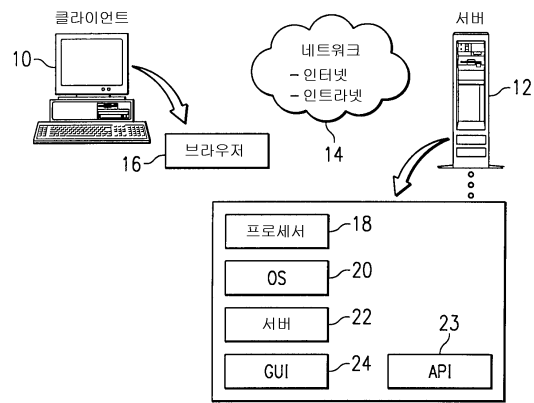
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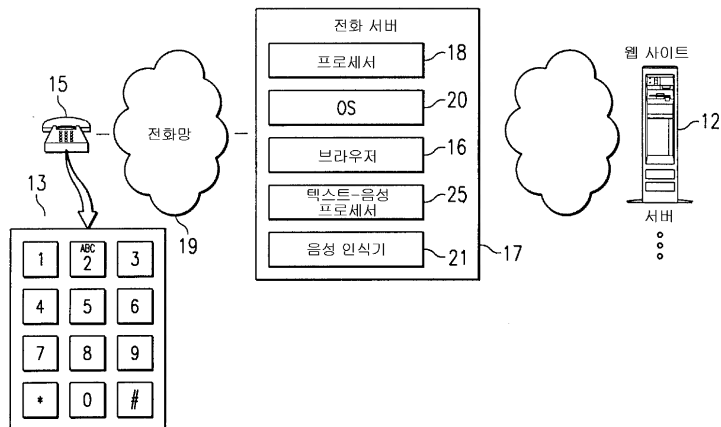
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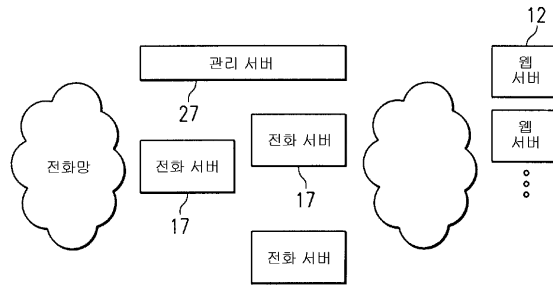
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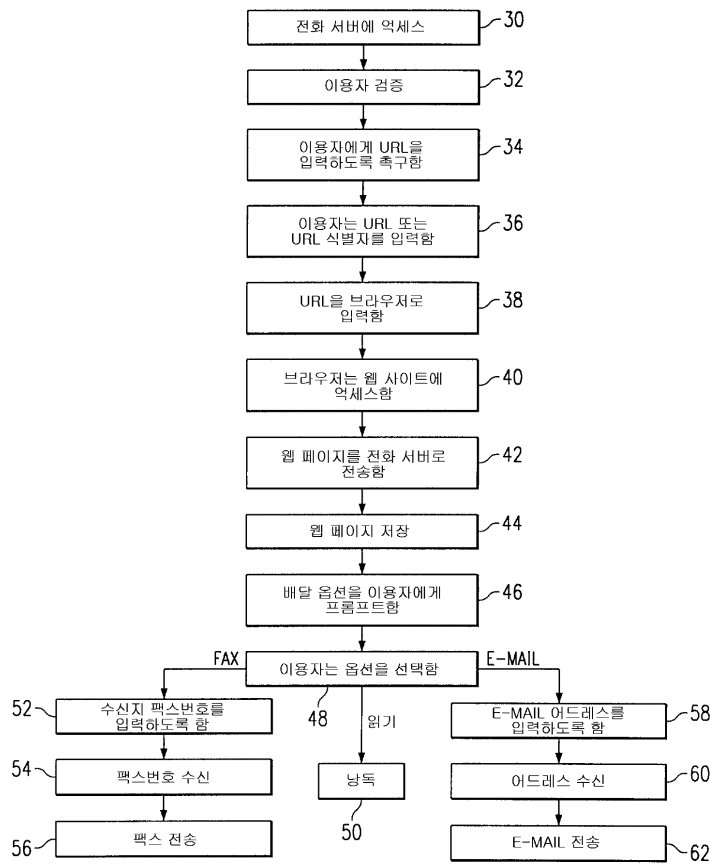
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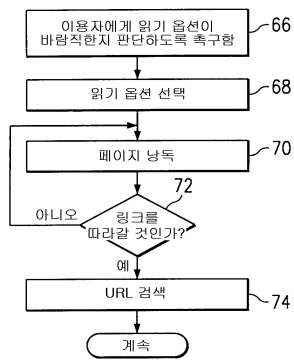


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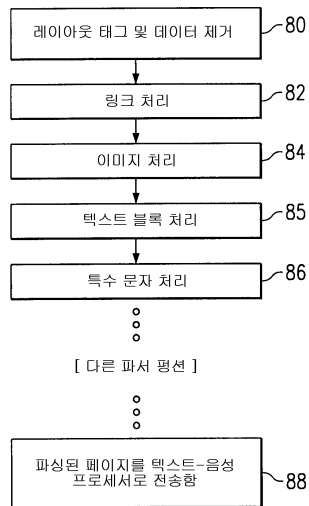






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<input checked="" type="checkbox"/> Stock quote (20-min delay) \$165 Down \$4.437		 <p>IBM chairman and CEO Lou Gerstner answered questions at AT&amp;T's world headquarters in New York City.</p>	
<input type="button" value="Privacy"/> <input type="button" value="Legal"/>	<p>The transactions could represent \$2.5 billion in additional revenue to AT&amp;T in the first full year of operation.</p> <p>The IBM Global Network business AT&amp;T will acquire serves the networking needs of several hundred large global companies, tens of thousands of mid-sized businesses and more than 1 million individual Internet users in 59 countries.</p> <p>The acquisition boosts AT&amp;T's strategy to rapidly increase the company's revenue, especially at its fast-growing networking services unit, AT&amp;T Solutions. About 5,000 IBM employees will join AT&amp;T as part of the acquisition.</p> <p>"These strategic agreements are all about growth," said AT&amp;T Chairman and CEO C. Michael Armstrong. "Growth in revenue, growth in technology, and - most important - growth in what AT&amp;T can do for customers."</p> <p>"For AT&amp;T, today's announcement supports four areas we've targeted for growth: global services, data networking, Internet Protocol technology and network outsourcing through our AT&amp;T Solutions business," said Armstrong. "The acquisition of IBM's global data network will accelerate our ability to deliver IP-based services to global customers. It will give us a sophisticated new platform for revenue growth."</p> <p>By providing customers with more attractive global services, Armstrong said the acquisition will enable AT&amp;T to compete more effectively with strong rivals for the provisioning of global managed data network services, including IP.</p> <p>"We are delighted that AT&amp;T will be the new home for our</p>		

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AT&T to acquire IBM's Global
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AT and T to acquire IBM's Global Network business for \$5 billion

Lou Gerstner photo

On December 8, AT and T and IBM announced a series of strategic agreements under which AT and T will acquire IBM's Global Network business for \$5 billion in cash, and the two companies will enter into outsourcing contracts with each other. IBM will outsource a significant portion of its global networking needs to AT and T. AT and T will outsource certain applications processing and data center management operations to IBM.

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