

(API) . , API . API ,

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(API),

A.

가

(LAN), (WAN)
(datagram)
(IP) . IP 1981 9 , 가 'INTERNET PROTOCOL DARPA INTERNET PR
OGRAM PROTOCOL SPECIFICATION' RFC (791) (Request For Comment 791)

IP 가 , IP 32-

(UDP) , IP (TCP)

(land-based)

MS (MS)' (public wireless radio network) 가

1 () MS (110) / (BS/MSC; 106) (Interworking fu
nction; IWF) . IWF (108) . IWF (108) BS/MSC (106)
'WIRELESS IP NETWORK STANDARD' 3 1999 12
, 3G IP IWF (108) 2 ('3GPP2') ('PDSN')

MS (110) IWF (108) , 1993 7
'MOBILE STATION-BASE STATION COMPATIBILITY STANDARD FOR DUAL-MODE WIDEBAND SPREAD SPECTRUM CELLULAR SYSTEM' (TIA) / (EIA) 가 IS-95
, 1998 2 'DATA SERVICE OPTIONS FOR WIDEBAND SPREAD SPECTRUM SYSTEM: PACKET DATA SERVICES' TIA/EIA IS-707.5 TIA/EIA IS-95 , BS/MSC (106) MS (110) IWF (108) , 1999 3
'DATA SERVICE OPTIONS FOR SPREAD SPECTRUM SYSTEMS: PACKET DATA SERVICES' TIA/EIA IS-707-A.5 'DATA SERVICE OPTIONS FOR SPREAD SPECTRUM SYSTEMS: HIGH-SPEED PACKET DATA SERVICES' TIA/EIA IS-707-A.9 TIA/EIA IS-95 MS (110) IWF (108)
, 1999 7 'INTRODUCTION TO CDMA 2000 STANDARDS FOR SPREAD SPECTRUM SYSTEMS' TIA/EIA IS-2000

IS-707.5 MS (110) BS/MSC (106) (Um) BS/MSC (106) IWF (108) (L) (PPP) 가 MS (110) IWF (108) Um . PPP 'THE POINT-TO-POINT PROTOCOL (PPP)' - - 1661 (RFC 1661)

2 () IS-707.5 MS (110) MS (110) Um BS/MSC (106) , BS/MSC (106) 가 L BS/MSC (106)

2 : MS (110) (200) cape Navigator™ , Microsoft Internet Explorer™) (URL) (200) , Nets alcomm.com/' (DNS) (resolution) , www.Quakcomm.com 32- IP (Hypertext Transfer Protocol; HTTP) URL G (200) ET , TCP가, HTTP (202)) , (80) , HTTP

(202) TCP DNS IP - HTTP GET . TCP IP IP (204) IP IP IP (208) (208)) PPP IP (208) (208) 1997 10 'INTERFACE BETWEEN DATA TERMINAL EQUIPMENT AND DATA CIRCUIT-TERMINATING EQUIPMENT EMPLOYING SERIAL BINARY DATA INTERCHANGE' TIA/EIA-232F 가 1997 7 'UNIVERSAL SERIAL BUS (USB) SPECIFICATION, Revision 1.1' (208) PPP (Radio Link Protocol (RLP)) , Um BS/MSC (106) IS-95 (212) . RLP (210) 1998 2 'DATA SERVICE OPTIONS FOR WIDEBAND SPREAD SPECTRUM SYSTEMS: RADIO LINK PROTOCOL' IS-707.2 , IS-95 IS-95

BS/MSC (106) (220) Um IS-95 (218) RLP (216) PPP (220) PPP L IW F (108) (228) . IWF (108) PPP (226) (228) PPP , MS (110) IWF (108) PPP . www.Qualcomm.com IP IWF (108) PPP (226) IP (224)

MS (110) IP IWF (108) () (225) (224) , MS (110) IP IS-707.5 BS/MSC (106) IWF (108)

MS (110) , RFC (1661)
 , PPP (LCP)
 , PPP (206) , PPP (206) 206 226)
 가 LCP , PPP (206) (NCP)
 (204 , 224) . PPP IP NCP IP (IPCP)
 . IPCP 1992 5 'THE PPP INTERNET PROTOCOL CONTROL PROTOCOL (IPCP)'
 - - 1332 , IPCP 가 .

B.

, MS (110)
 (API) . API
 (socket) , API ,
 , UNIX TM
 (Berkeley Systems Development; BSD) Window TM Win
 dow TM
 BSD WinSocket TM MS (110) (2),
 API가 가 MS (110)
 ,
 (API)
 , API

1 ()

2 () TIA/EIA IS-707.5

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8 10

, , / , ,

가

3 (260), (280), MS (110) API (270) (2
60) (function call) (280) (, 202, 204, 206, 208, 210, 212) API (270) (280)
, API (270) (260) (280)

가

(280) (send queue) (receive queue)
(280) (260)

(260)
(280)

, MS (110) IP . MS (110) (280) IP
(unencapsulate), (202) (3). IP
TCP UDP (280) , 가 , (

260)

packet) (raw packetized data) (280)) 가 IP (raw IP
IP (280) , IP
가

92 , IP (ICMP)
ICMP 'INTERNET CONTROL MESSAGE PROTOCOL' RFC 7
(260) (280) (260)

, Um (260) (280) (260) (260)
, IP , Um , IP , Um
(280) (raw) (280) IP IP IP (che
cksum) , ICMP , IP

(260) (260) (202, 204, 206, 208, 210, 212)
(260) 가 (280)
(260) (202), (204),
(206) , RLP (210) , (payload) RLP
(260) 가 IS-95 (212) IS-95 (212) , (260) ,

, (260) (280) (280) (
open_netlib () open_netlib () , , (,
- (multi-tasking)) , , (,
(260)

TCP) (가), (260)
(, ,), 가 , (, TCP)
(260) 가

, (280) , pppopen () - ,

가

net_iotl ()

socket () (socket descript
 socket () 가
 (return) (260) async_select ()
 (260)
 (, OR)
 가 (, 가), (280) API (270)
 가 (RPC) (260)
 (interrupt) (260)

(260)

getnextevent ()

(260) async_select ()
 (가) .

(260)

가
 async_deselect ()

4 5 (280) (400) 4 (260)
 가 가 (280) (402) (polling) (404)
 (280) 가 (402) 가 (406) 가
 가 (260) 가 (404) 가 (,)
 가), (280) (402)

5 (260) (280) (500) 가
 가 (500) 가 (502)
 가 (,) . 가 (280)
 가 (280) (504) 가
 가 (280) 가 (260)

가

(7) (6)

6 (280) open_netlib ()
 pppopen () 가 (B)
 connect () (D) TCP (E) (260)
) async_select () (F)
 가 가 가 가
 가 (260) 가 가
 getnextevent () (H) (J) (, 가)
 (J). (260) async_select ()

7 (A). 가 가 (260) read ()
) async_select () (B) (,
 (260) 가

(C) 가 가 가 get
 nexevent () (D) 가 (E). (F) read ()
 (260) async_select () (260) read ()
 (G).

8 10 (state machine) 8 9
 (280) (, ,)
 가)
 (,)
 (260) MS (110)

, API (270) API (270) (260) ((260) ((argument) (260)
 60) (,) (260) (argument) (2

8 , API (270) TCP 'null'
 (800) , socket ()
 socket () (call) , (805) socket ()
 (805) , close () TCP 가
 (null) (800) close () (release
) connect () TCP , ' (opening) (810)'
 (opening) (810) , (1) 가 , (2) TCP
 , (3) IP 가 , (closed)' (815) , , (cl
 가 , TCP close () (call) , , (opening)' (810)'
 osing; 820)' , TCP , (opening)' (815)
 (825)

(825) , , (1)
 가 , (280) , (1)
 가 , (2) TCP , (3) TCP , TCP , (815)
 TCP , TCP
 (closed) () , TCP
 (820)

ose () (815) , , , TCP cl
) (call) , , 가 (800)

(820) , (1) 가 , (2) TCP , TCP ,
 , (4) IP 가 , ' , TCP , (3)
 (wait for close)' . TCP ,

, API (270) TCP

(830)

(830)

close ()

TCP

(800)

(830)

(assert)

1 3 API (270)
) ,

(260)

(1 3 ,

< 1>

	TCP , 가
	TCP , 가 ;
	; 가 가 ;
	가 ; 가 ;
	PPP resync 가 TCP IP

< 2>

	I/O
	TCP
	,
	, (/)
	TCP
	TCP , 가 ;
	; 가 가 ;
	; ; ;
	TCP TCP ;

< 3>

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	,
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	-

9 API (270) UDP
 (null)' (900) (800)
 socket () socket () (o
 pen)' (905)
 (905) , 가
 가 (280)
 (closed)' (910) close ()
 UDP (900)
 ose () (910) , , , UDP cl
 가 (900)
 4 6 API (270) 가 가 (4 6
) , ' 가 가 (260)

< 4>

	-
	; 가

< 5>

	I/O
	, (/)
	; 가

< 6>

	-
	-

10 (, Um) - (, PPP (206))
 open_netlib () (10
 00) pppopen () (1005)
 PPP MS (110) (1005)

, MS (110) RLP PPP
 (1005) , (1010)
 , (1000)
 (1010) 가 , MS (110) , (1060)
 , MS (110) , (1000) , close () (10
 15)
 (1015) , (1000) , (260) , (1000)
 가
 7 API (270)
 < 7>

()	
socket ()	; ; ; ;
connect () TCP	(blocking) , ; 가 ; ; ; PPP (resync) TCP IP ; ; ; ; ;
pppopen ()	, ; ;
net_ioctl ()	; ; ;
open_netlib ()	가 -
close_netlib ()	; ;

bind()	; ;
close()	(blocking call) ;

pppclose ()	;
netstatus ()	가 ; 가 ; 가 ; ; 가 ; CDMA (,) 가 ; CDMA 가 , CDMA 가 , 가 ,
async_select ()	
getnextevent ()	;
write ()	; TCP TCP ; TCP ; PPP , TCP TCP ; IP ; PPP 가 가 ; 가 ;
read ()	; 가 ; 가 TCP ; TCP ; PPP , TCP IP ; TCP ; 가 ; (file marker)

<p>sendto ()</p>	<p>가 ; 가 ; 가 ; ; 가 ;</p>
<p>recvfrom ()</p>	<p>가 ; 가 ; 가 ; 가 ; ;</p>

, , - 가 - 가
 , , - 가 , 가 API (270) , - 가
 (260), (280),

(57)

1.

2.

1

(argument)

1 3. ,

3 4. ,

(transition)

5.

가

5 6. ,

5 7. ,

7 8. ,

9.

가 .

10.

9 ,

가 .

11.

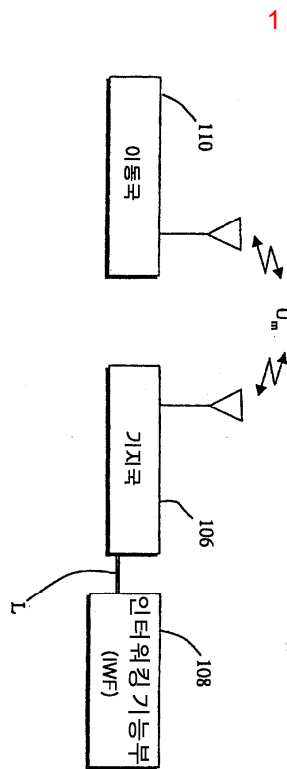
9 ,

가 .

12.

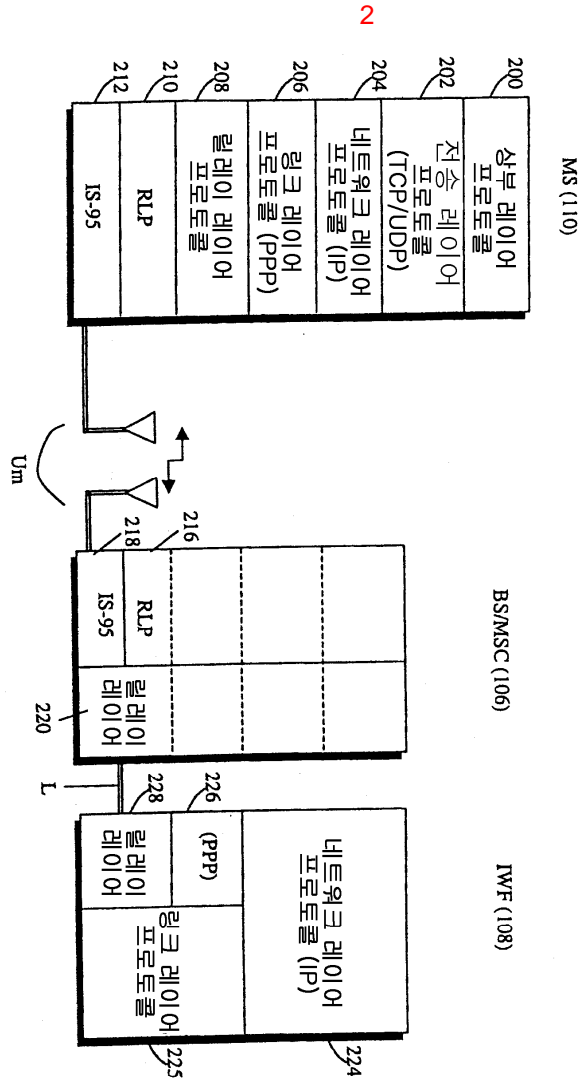
11 ,

가

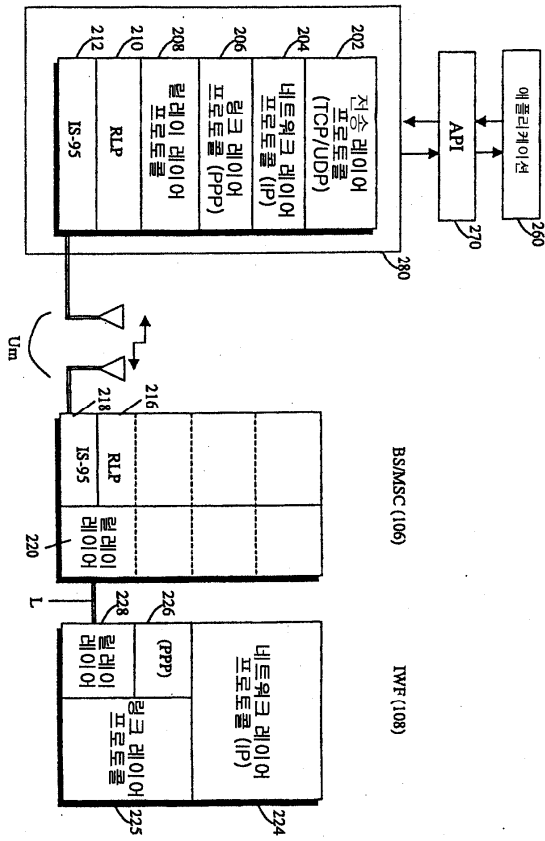


종래 기술

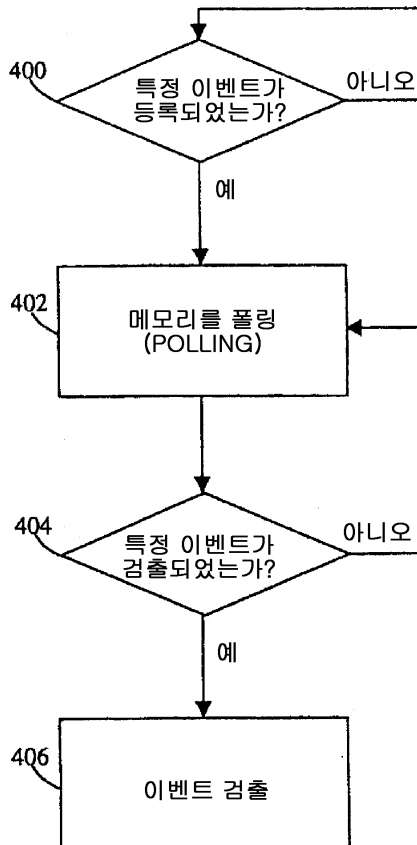
종래 기술

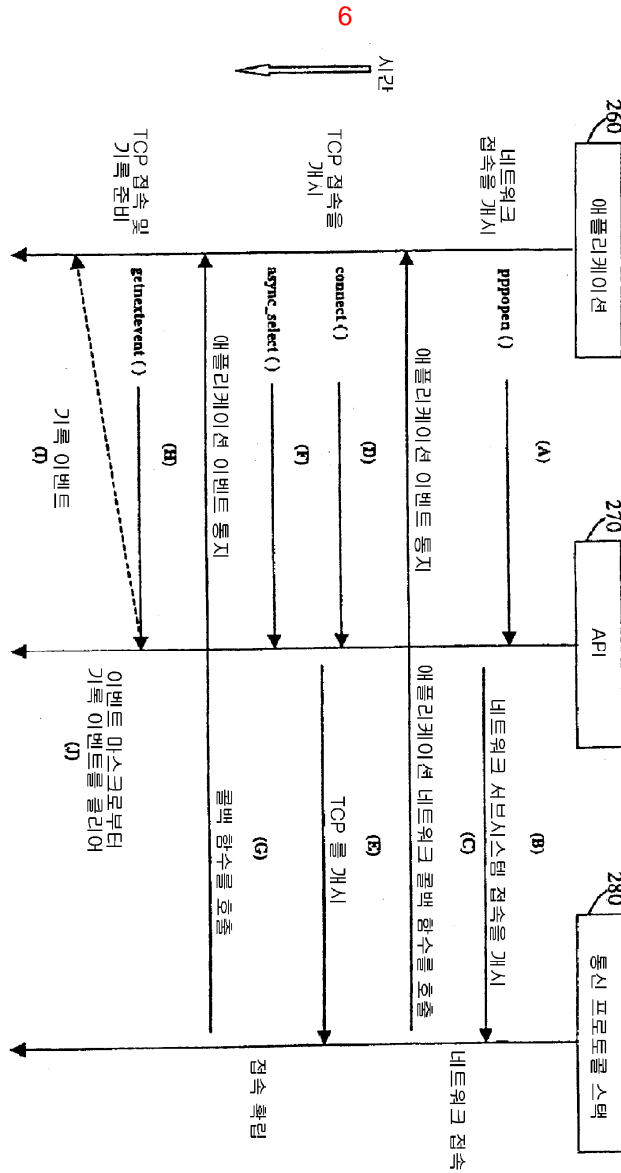
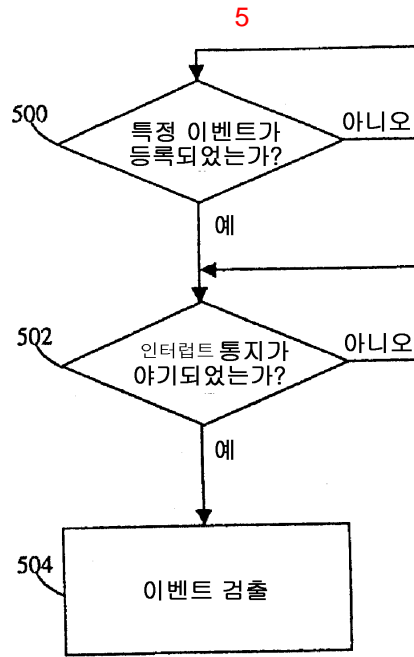


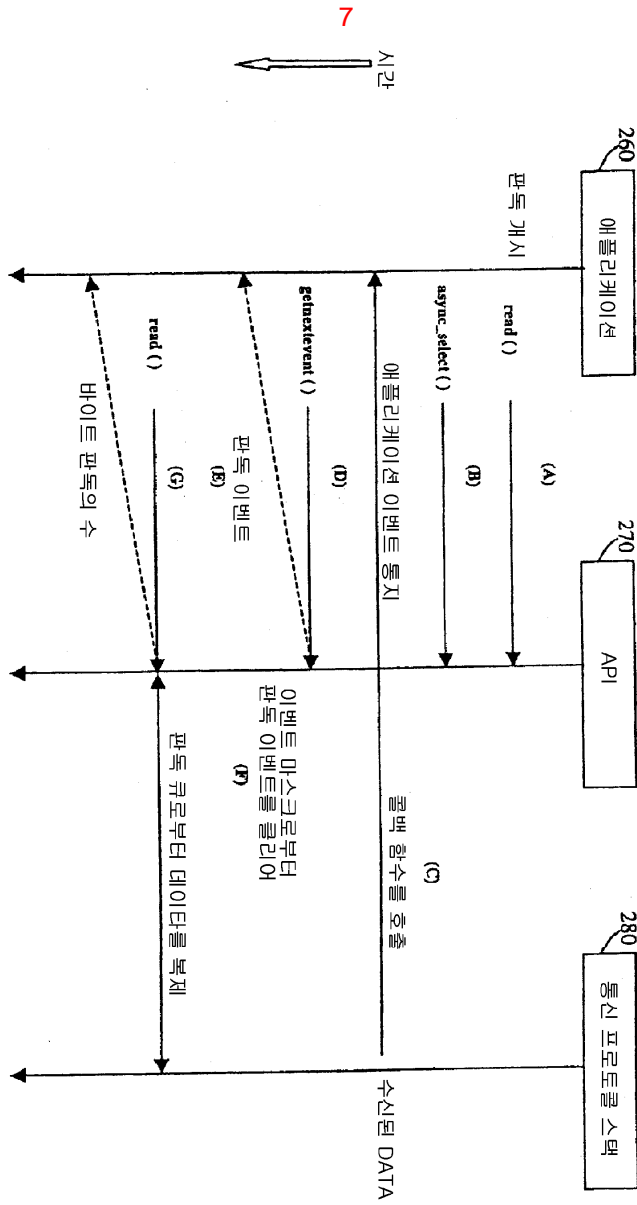
3



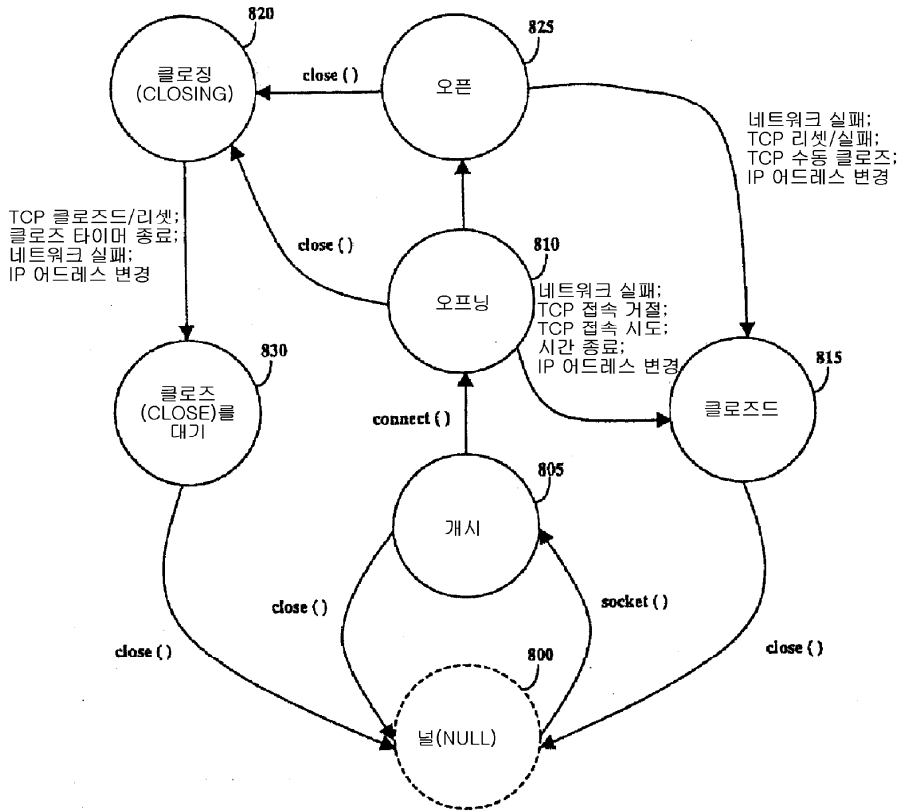
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