

SIP

VoIP

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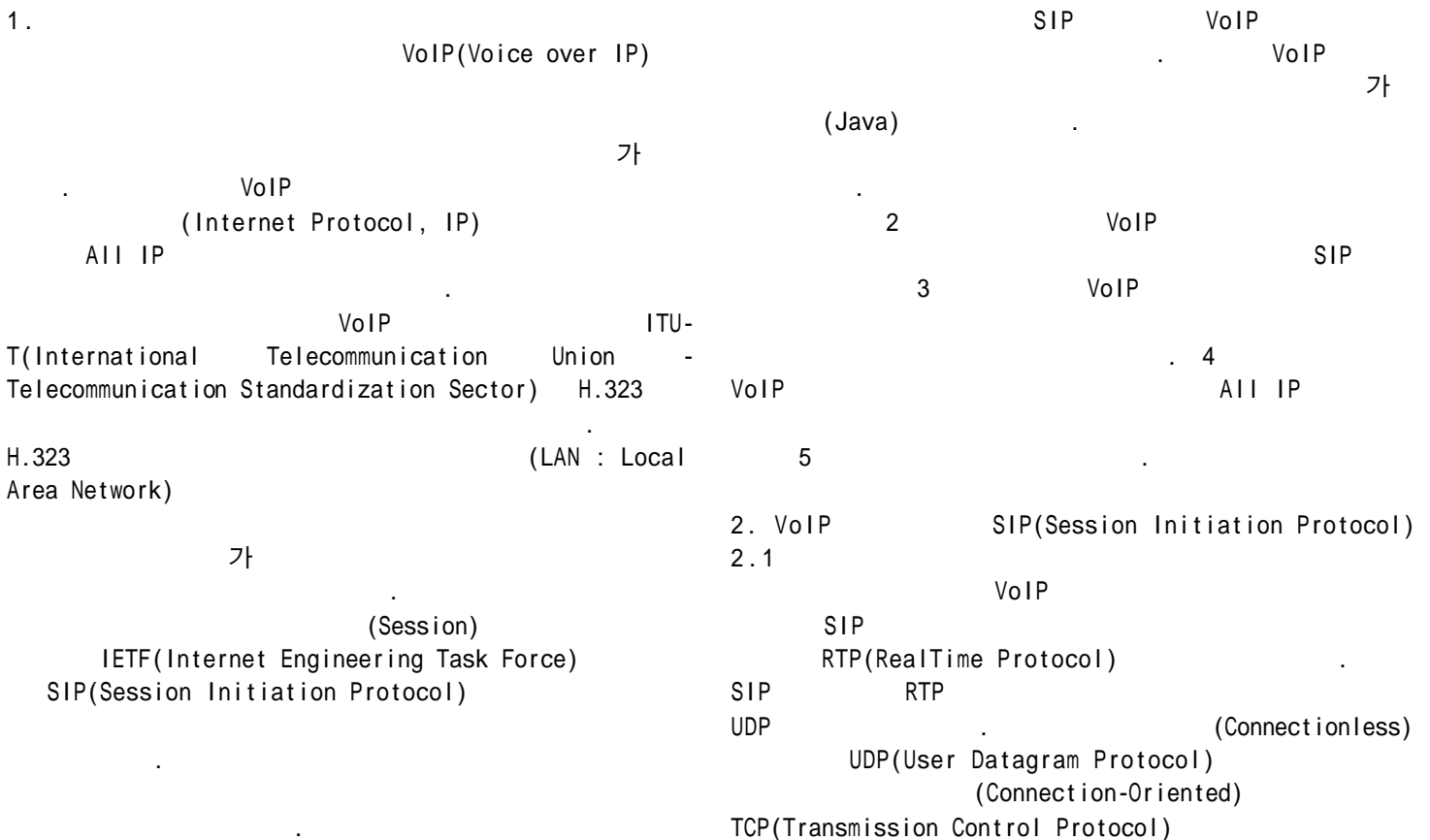
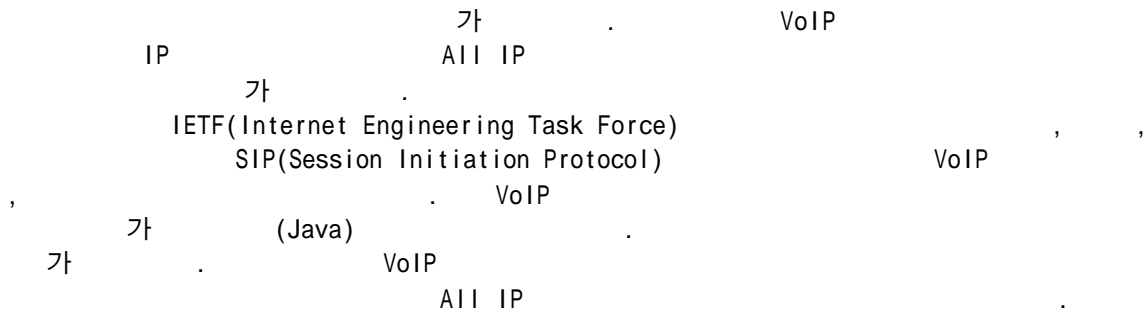
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Design and Implementation of VoIP System Using SIP

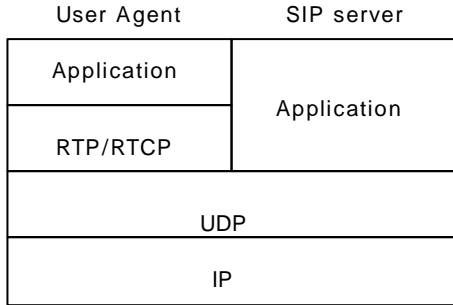
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VoIP(Voice over IP)



가

VoIP



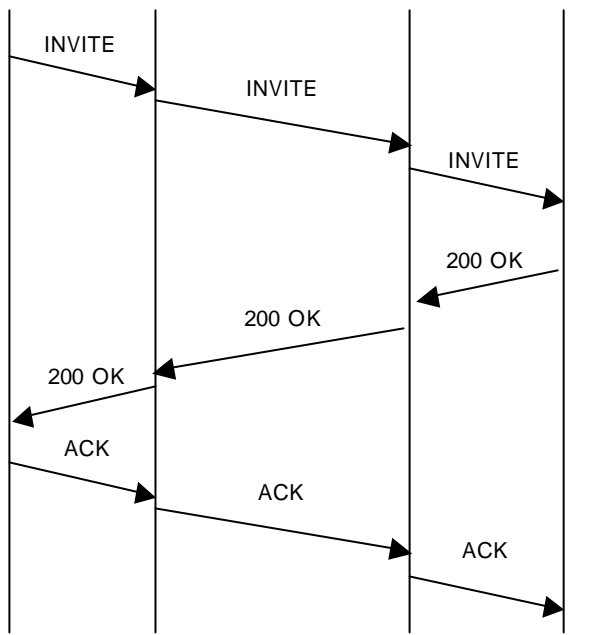
[1] VoIP

2.2 (Call Setup)

VoIP

SIP
SIP

3-way handshake



Caller Server Server Callee
[2] 3-way handshake

(Callee)
(Request)

VoIP

SIP
SIP
(Proxy Server)
2.3

(User Agent : UA)

INVITE
(Response)

INVITE

가

“ 200 OK ”

가

가
ACK

2.3

SIP
SIP

VoIP

SIP

INVITE

VoIP

C++

G.711

RTP

SIP

SIP

SIP
SIP

SIP
(Redirect Server)

(Firewall)
SIP
(Linux)

가

3.

3.1

VoIP

?

SIP

가

SIP

SIP

가

(Multi-Thread)

가
sipd/sipc

SIP

C

SIP

가 가

SIP

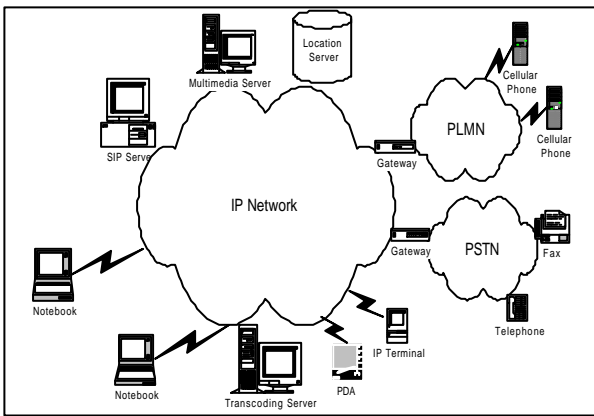
VoIP

3.2 가 ? SIP RFC 2543[1] SIP 가

INVITE	
ACK	INVITE
BYE	
CANCEL	
REGISTER	

[1] SIP 가 OPTIONS, INFO RFC(Requests For Comments) (Draft) SIP 가

4. VoIP IP SIP (Testbed)



[3]

4.1 SIP VoIP

SIP

MPEG-2 Presence (Location Server) (Media Transcoding Server) 가,

4.2 IMT-2000 3 4 가 IP All IP All IP Generation Partnership Project)[5], 3GPP2(3rd Generation Partnership Project 2)[6] IP SIP 가 All IP

ad-hoc 가 VoIP 가

IP 5. 가 SIP VoIP VoIP 3-way handshake

VoIP All IP

6. [1] M.handley et al., "SIP : Session Initiation Protocol," RFC 2543, Mar.1999
 [2] H.Schulzrinne et al., "The Session Initiation Protocol : Internet-Centric Signaling," IEEE Comm., Oct. 2000.[3] Hong Liu, Mouchtaris, "Voice over IP signaling: H.323 and beyond," IEEE Communications Magazine , Oct. 2000
 [4] Hua Zou et al., "Prototyping SIP-based VoIP Services in Java," WCC - ICCT 2000.
 [5] 3GPP homepage, <http://www.3gpp.org>
 [6] 3GPP2 homepage, <http://www.3gpp2.org>