

VoIP

SIP

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Design of VoIP architecture based on SIP for efficient media negotiation

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가 VoIP (Voice over IP)

가 (Diversity Problem)가 (Media Negotiation) Protocol) VoIP SIP(Session Initiation Protocol)

VoIP VoIP 가 VoIP SIP 50%

1.

가 VoIP IP VoIP (Round Trip Time) 가 SIP VoIP SIP (Local Domain)

가 (Diversity Problem) VoIP (PDA (VoIP VoIP 2 SIP SIP 3 VoIP VoIP 4 5 (Media Negotiation)

Network) IETF (Next Mobile SIP(Session Initiation Protocol)[1] VoIP 2. SIP (Session Initiation Protocol) 2.1 SIP SIP HTTP

SIP VoIP [1]

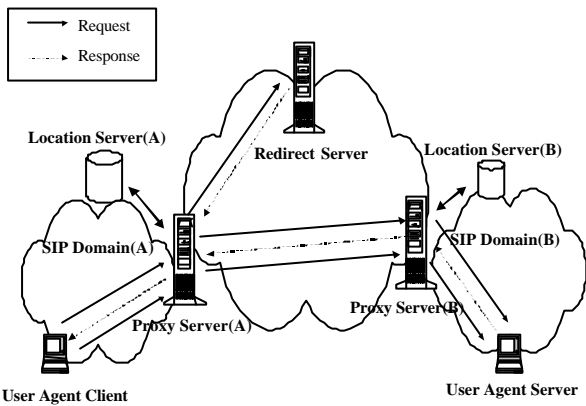
가 . User Agent Client(UAC) User Agent UAC
 Server(UAS) SIP

. Proxy Server Redirect Server SIP
 Proxy Server

Redirect Server 가 가
 (Location Server)

가
 (User Mobility)

[2].



[1] SIP VoIP

2.2 SIP
 SIP

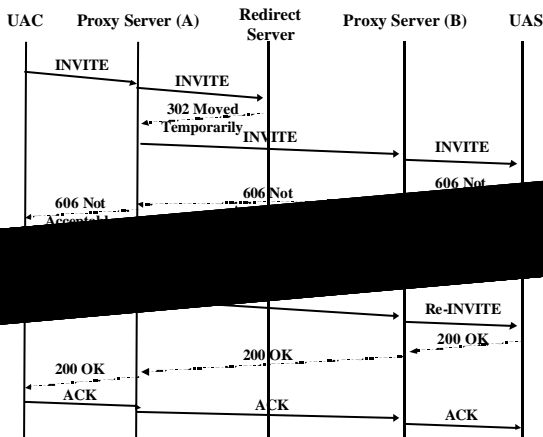
mbone

VoIP

IETF 1999 RFC 2543

SIP
 RFC 2543

[2]



[2] SIP

UAC가 UAS
 INVITE()

UAS " 606 Not Acceptable "

UAC (Media Gateway)
 (Media Transcoding) 가

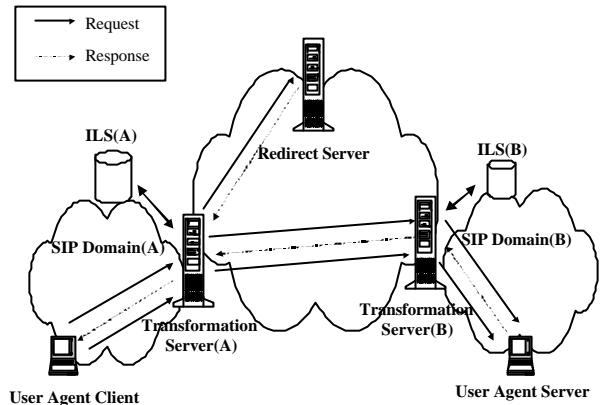
UAS INVITE UAS

가
 " 200 OK " VoIP

2.5 RTT(Round Trip Time)

3. SIP
 3.1

VoIP
 [3]



[3] VoIP

[3] VoIP

SIP (SIP-based
 Transformation Server) Intelligent Location Server
 (ILS) 가

3.1.1 SIP

SIP

Proxy Server
 ILS (Registration)
 가

UAS 가 INVITE 가 UAS

SIP 가 가

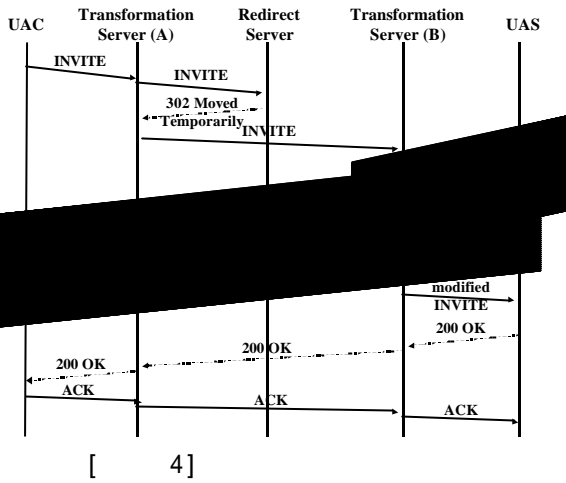
SIP MGCP(Media Gateway
 Control Protocol)[3]

INVITE
 SDP(Session Description
 Protocol)[4] SDP SIP

SIP INVITE UAS

[4]

VoIP



VoIP
 2.5 RTT 가
 1.5 RTT
 $2.5/1.5 = 1.667$
 VoIP
 500ms
 330ms
 $500/330 = 1.515$.
 ILS SIP
 $1.667 - 1.515 = 0.152$

3.1.2 Intelligent Location Server (ILS)

ILS 가
 가
 가 ILS
 가 가
 SIP
 ILS 50%
 ILS 5.

LDAP(Lightweight Directory Access Protocol)

SIP 가
 SIP VoIP
 SIP ILS

3.2

[4]
 가 UAS SIP INVITE
 UAS INVITE
 1.5 RTT
 SIP ILS Proxy Server
 SIP ILS
 VoIP
 50%

4.

VoIP ILS openLDAP[5] VoIP

6.
 [1] M.handley et al., "SIP : Session Initiation Protocol," IETF RFC 2543, Mar.1999.
 [2] E. Wedlund and H. Schulzrinne, "Mobility Support using SIP," WoWMoM, Aug. 1999
 [3] M. arango et al., "Media Gateway Control Protocol Version 1.0," IETF RFC 2705, Oct. 1999
 [4] M.handley et al., "SDP : Session Description Protocol," IETF RFC 2327, Apr.1998.
 [5] OpenLDAP homepage, <http://www.openldap.org>

