

SIP

Analysis of Session Control and Management for Multimedia Group Communication

(E.S. Kim)
(S.W. Choi)
(S.G. Kang)

가 , 1990 가 가
가 가
가
IETF 가

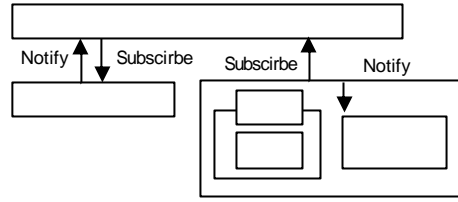
I. •2

(killer application) 가 가
가 가

•3

3 가 ON 가
•1 가

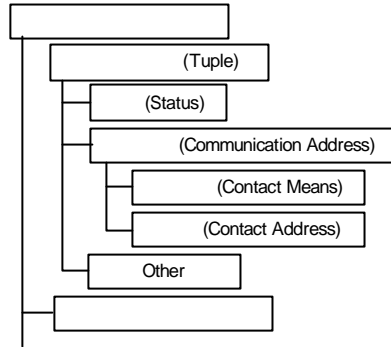
가 .
3 “
”
IETF



(1)

II.

가
VoIP, PDA,
가 (available)



(2)

(1)

[1]. (presentity),
(watcher)

가
“open close”,
”, “ (inbox)

IMPP

(subscribe) (fetcther)
(subscriber)

PUA

SIP REGISTER PUA REG-

가

200 OK

(2)

SUBSCRIBE

PUA가

(tuple)

PUA

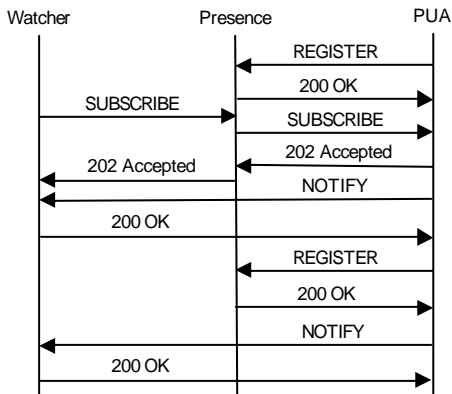
(status), (communication ad-
dress), (markup)

[2],[3]. PUA
cepted

202 Ac-
가

가
 가 , 가
 가 . 가 "on" 가
 , 가 NOTIFY
 PUA가
 NOTIFY
 200 OK
 PUA가
 REGISTER
 (3)
 SIP
 PIDF(Pres-
 ence Information Data Format)
 . PIDF

"RFC 2779, Instant Messaging and Presence Protocol Requirements"[4]
 "RFC 2778, A Model



(3) SIP

for Presence and Instant Messaging"[1]

PIDF

1) application/pidf+xml Content Type

XML MIME

content type

2)

- URL
- "pres" URL
-

- :
 - : OPEN/CLOSED /
 - : 가
 ().
 - : ()
 - : ()
 - :

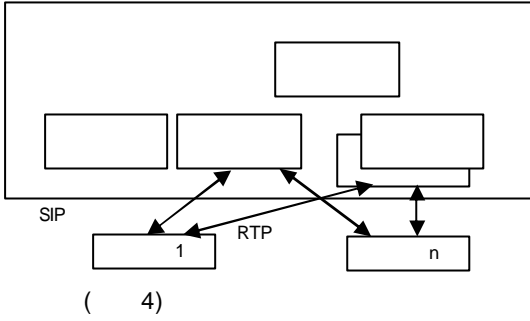
III.

(4) IETF SIP[5]

[6].

SIP user agent

SIP



SIP
(Conference Policy Control Protocol: CPCP)

[7].
가
(membership)
(floor)
(conference notification service) 가

[8].

가
RTP

가

IETF

[7].

XCAP

(CPCP)

가

가

XML

. XCAP

XML

(,
) 가

가

IV.

II III

XML

XCAP

[9],[10].

가 . Multipart/related
 , 가 (XML ,
) 가 . URI
 URI , 0 URI
 , URI 가 (subscriber) 가
 .
 pres URI URI SIP URI . , RLS 가
 (notifier) “ (RLS)”
 RLS .
 RLS 3. XCAP
 가 (subscription) . resource list
 가 fr.xml XCAP
 , RLS가 .
 가 가 (1) Bill .
 . “friends”
 • PUT
 • SIP URI pres URI http://xcap.example.com/services/resource -
 . URI , lists/users/bill/fr.xml HTTP/1.1
 가 가 . Content-Type:application/resource-lists+xml
 . <?xml version=“1.0” encoding=“UTF-8”?>
 , IVR, <resource-lists xmlns=
 . “urn:ietf:params:xml:ns:resource-lists”>
 • <list name=“friends”>
 . URI </list>
 SUBSCRIBE . RLS </resource-lists>
 . RLS
 가 가 (2) Bill RLS
 • RLS URI “sip:myfriends@example.
 . com”
 .
 PUT
 가 가 http://xcap.example.com/services/rls -
 . services/users/bill/index HTTP/1.1
 RLS 가 . Content-Type:application/rls-services+xml
 . RLS 가 <?xml version=“1.0” encoding=“UTF-8”?>
 . RLS 가 <rls-services xmlns=
 • multipart/related . “urn:ietf:params:xml:ns:rls-services”

```

xmlns:xsi="http://www.w3.org/2001/
  XMLSchema-instance">
<service uri="sip:myfriends@example.com">
  <resource -list>
http://xcap.example.com/services/
  resource -lists/users/bill/fr.xml/~~/resource -
lists/list%5b@name=%22friends%22%5d
  </resource -list>
  <packages>
  <package>presence</package>
  </packages>
  </service>
</rls-services>

```

(3) Bill

```

, 가 .
PUT
http://xcap.example.com/services/resource -
lists/users/
bill/fr.xml/~~/resource -lists/list%5b@
name=%22friends%22%5d/entry HTTP/1.1
Content-Type:application/xcap-el+xml
<entry uri="sip:bob@example.com">
  <display -name>Bob Jones</display -name>
</entry>

```

(4) Bill

```

GET
http://xcap.example.com/services/resource -
lists/users/bill/fr.xml HTTP/1.1

```

(5)

```

HTTP/1.1 200 OK
Etag: "wwhha"
Content-Type: application/resource-lists+xml
<?xml version="1.0" encoding="UTF-8"?>
  <resource -lists xmlns=
    "urn:ietf:params:xml:ns:resource-lists"
    xmlns:xsi="http://www.w3.org/2001/
    XMLSchema-instance">

```

```

  <list name="friends">
    <entry uri="sip:bob@example.com">
      <display -name>Bob Jones</display -name>
    </entry>
  </list>
</resource -lists>

```

(6) Bill 3

가 .

PUT

```

http://xcap.example.com/services/resource -
lists/users/
bill/fr.xml/~~/resource -lists/list%5b@name=
%22friends%22%5d/list%5b@name=%22
close -friends%22%5d HTTP/1.1
Content-Type: application/xml -fragment -body
<list name="close -friends">
  <entry uri="sip:joe@example.com">
    <display -name>Joe Smith</display -name>
  </entry>
  <entry uri="sip:nancy@example.com">
    <display -name>Nancy Gross</display -name>
  </entry>
  <entry uri="sip:petri@example.com">
    <display -name>Petri Aukia</display -name>
  </entry>
</list>

```

(7) Bill petri

DELETE

```

http://xcap.example.com/services/resource -
lists/users/
bill/fr.xml/~~/resource -lists/list/list/entry%5b@
uri=%22sip:petri@example.com%22%5d
HTTP/1.1

```

(8) Bill Nancy URI

GET
 http://xcap.example.com/services/resource -
 lists/users/
 bill/fr.xml/~~/resource -lists/list/list/entry%
 5b2%5d/
 @uri HTTP/1.1
 (9)
 HTTP/1.1 200 OK
 Etag: "ad88"
 Content-Type: application/xcap -att+xml
 "sip:nancy@example.com"

http://conf.etri.re.kr/conferences/Conference.xml?
 Conference/Conf -Mng[@Conf -URI=
 sip:conf1@etri.re.kr]/ACL HTTP/1.1
 Content-Type: application/conference -control +
 xml
 <?xml version="1.0" encoding="UTF-8"?>
 <Conference> <Member -Mng>
 <user uri="sip:joe@example.com">
 <display -name>Joe</display -name></user>
 <user uri="sip:nancy@example.com">
 <display -name>Nancy</display -name></user>
 </Member -Mng> </Conference>

4. XCAP

conference.xml XCAP

(1) Eunah sip:conf1@etri.re.kr URL

conference.xsd

PUT
 http://conf.etri.re.kr/conferences/Conference.xml?
 Conference HTTP/1.1
 Content-type: application/confererence - control +xml
 <?xml version="1.0" encoding="UTF-8"?>
 <Conference>
 <Conf -Mng>
 <Conf -URI> sip:conf1@etri.re.kr </Conf -URI>
 </Conf -Mng>
 <Member -Mng>
 <user uri="sip:eunah@etri.re.kr">
 <Display -name> Eunah Kim </Display -name>
 </Member -Mng>
 </Conf -Mng>

(2) Eunah sip:conf1@etri.re.kr
 가

POST

V.

II III

(5)

IV

(RLS)가
 XCAP

가

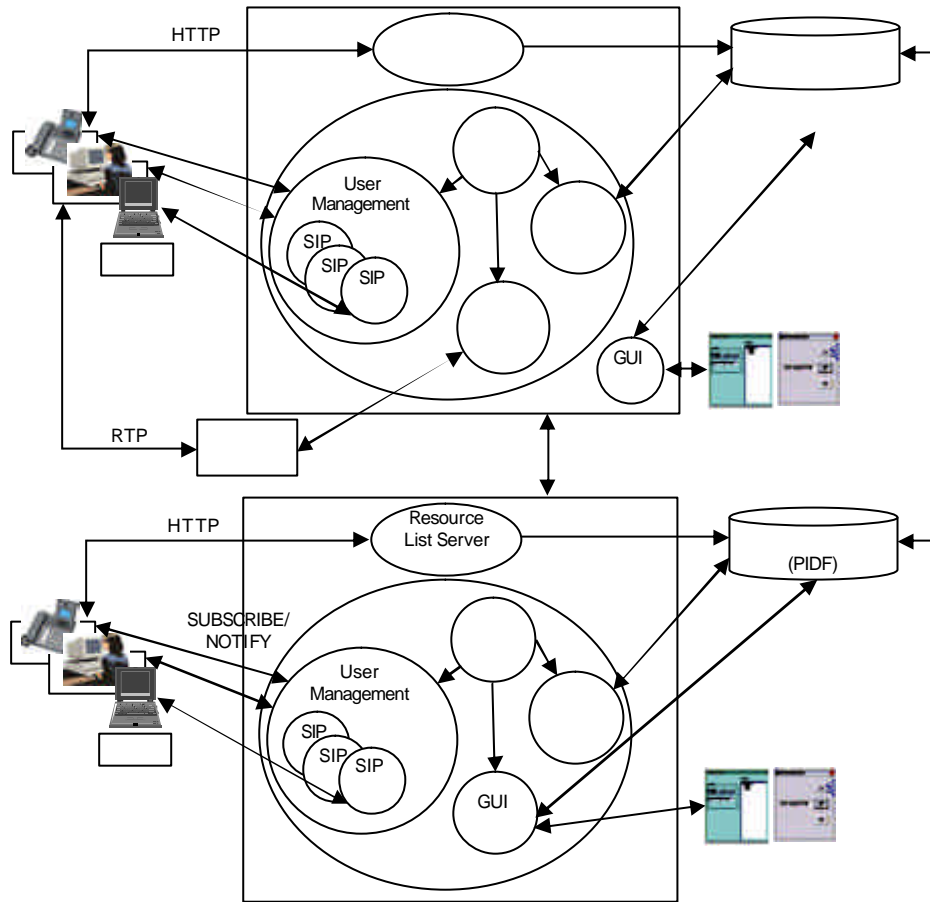
가

PUA

가 XCAP[9]

[2]

가



(5)

VI.

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가

- [5] J. Rosenberg et al., "SIP - Session Initiation Protocol," RFC 3261, June 2002.
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