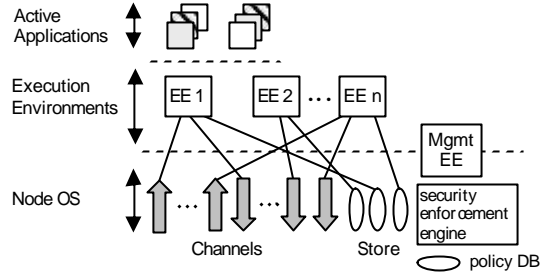


[1].
 (customized computation) 가 (1)



(mobile code) 가
 가
 (, ATM,)

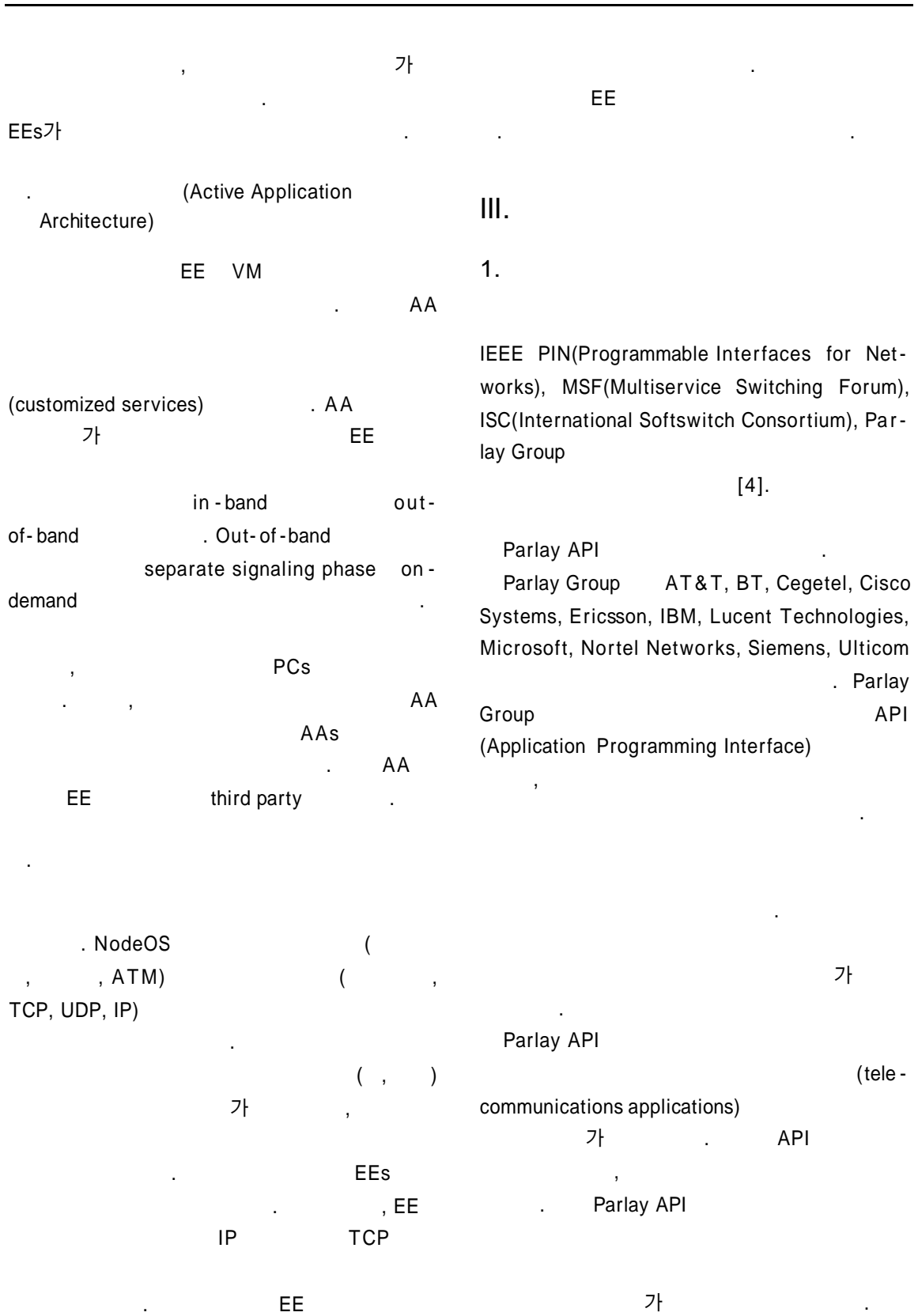
가.
 NodeOS
 . NodeOS
 (, ,)
 NodeOS EEs . EEs NodeOS

가
 (active packet) 가

[3].
 QoS , NodeOS EEs . EE가
 NodeOS
 (principal)
 EE ,
 ()
 NodeOS
 (enforcement engine)

2.
 (NodeOS), (Execution Environment: EE),
 (AA) 가 가 (1)

EE 가
 . EEs “ ” 가
 가 EEs
 , EE “shell”



2. Parlay API

Parlay API 가

- Service Interfaces ?

가 Generic Call Control Service, INAP1 Call Control Service, Generic Messaging Service, Generic User Interaction Service, Call User Interaction Service(Voice prompt to user, DTMF input from user) [5].
- Framework Interfaces ?

가

Authentication, Discovery, Event Notification, Integrity Management, Operation, Administration, Maintenance

Parlay API (2) . API
(2)
"Resource API"가 . Resource API

가 , H.323 INAP API
Resource API Parlay
Group Par-
lay API가

Parlay Group UML
(Microsoft IDL, CORBA IDL)
API
. API API

API가

API 가 , IT

가 가

. API

API

API

IV. /

() 가

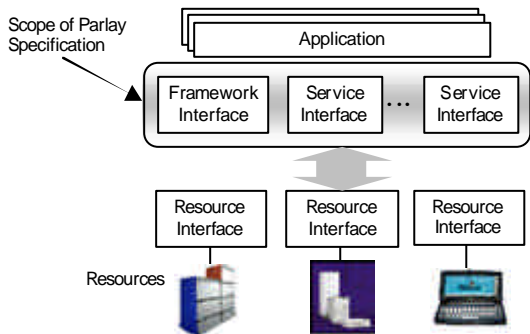
가 API

API

가

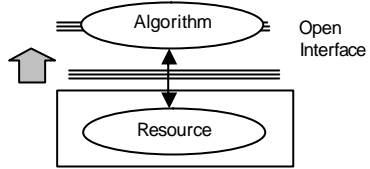
가

가



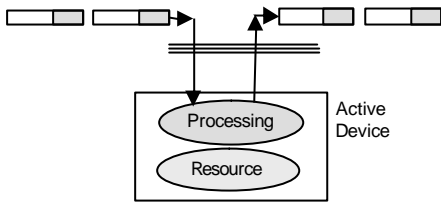
(2) Parlay Network API Architecture

Expose functionalities of NE to outside world



(a)

Flexibility to modify behavior of NE(Active Signalling, etc.)



(b)

(3) /

가 ,

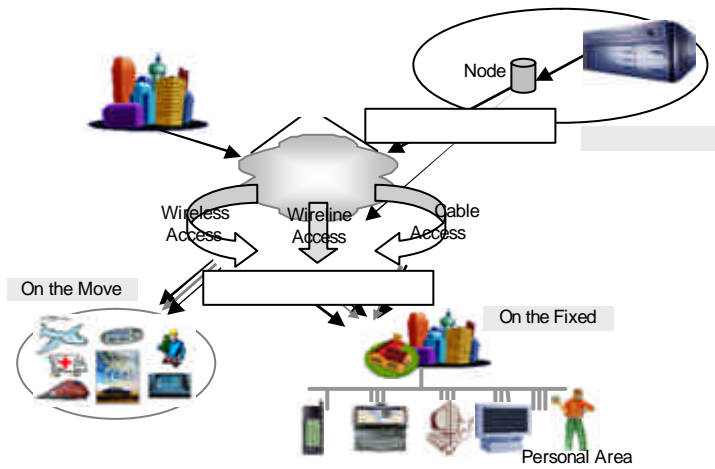
1.

(4)

가

((3)).

V.



(4)

가
ward)

(store and for-

가
(store-compute-forwar)

가

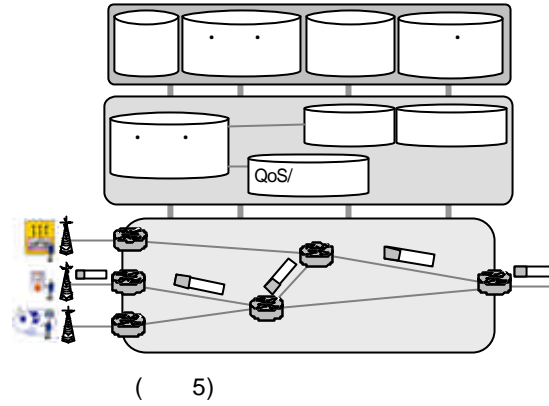
가

2.

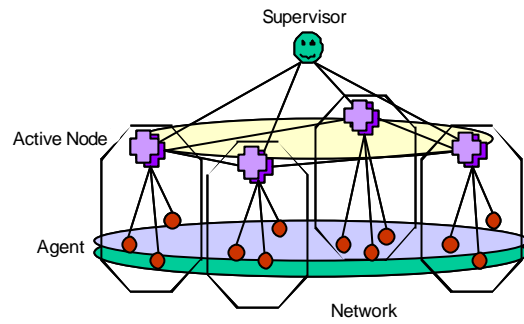
가 가 ,

QoS

가



(5)



(6)

• Agent

가 가

• Active node

• Supervisor

(dropping, alleviation)

가

3.

(

(7)

5)

가 ,

• QoS , ,

가

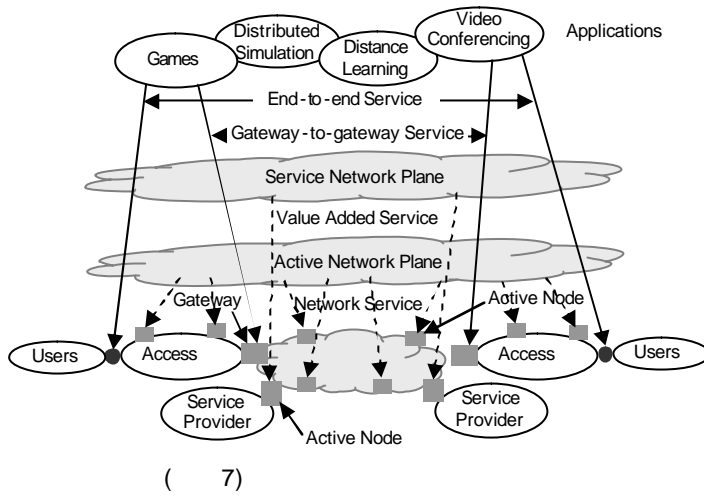
•

• :

• :

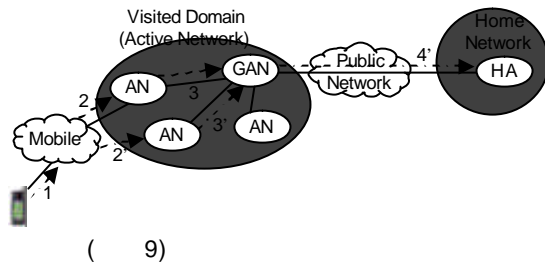
(6) ,

• 가 : Web application developers, 3rd party service providers, end users



• End-to-end :

가.



. (8)

가

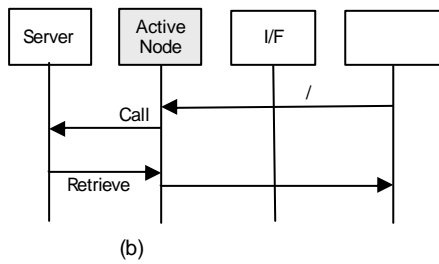
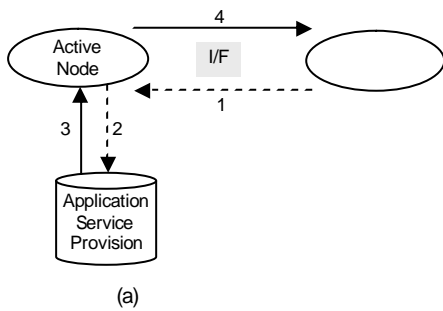
(9)

AN(Active Node)

가

가

HA(Home Agent)



(8)

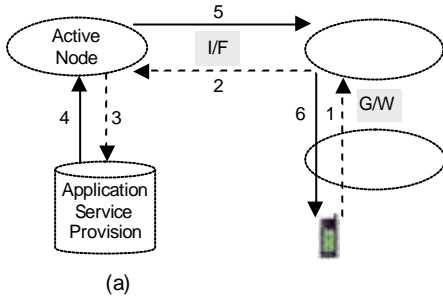
- 1 : 가
- AN AN
- 2 : AN가 GAN(G/W AN)
- 3 : 가
- GAN HA

가

(10)

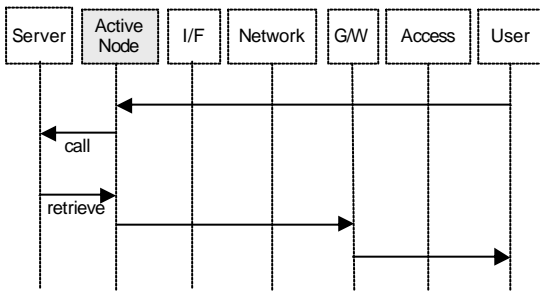
가

(11)



(a)

[6].

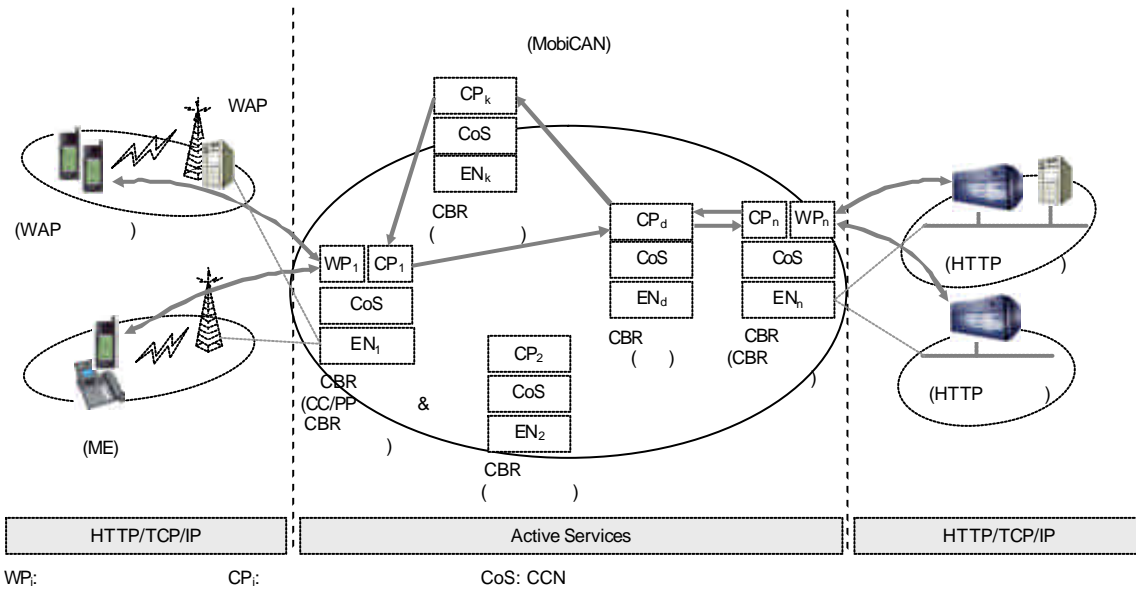


(b)

(10)

가

가



(11)

가

가

가

(redirection)

(13)

(12)

가

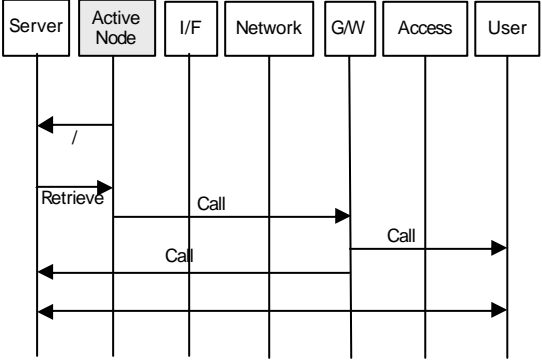
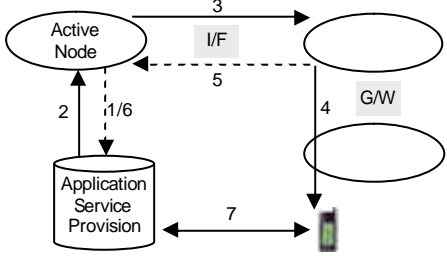
(self-configuration), (self-adaptation),

가

[7].

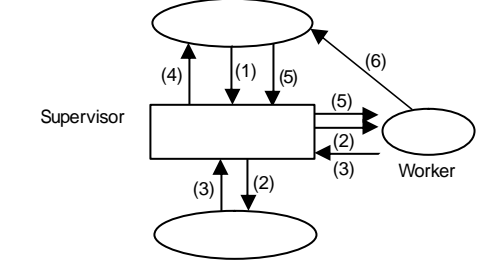
- Supervisor : (edge) (caching proxies)
- Worker :

ference)



(12) 가

- 가
- 가 가 가 가



- (1) /
- (2) REQUEST
- (3) RESPONSE
- (4) /
- (5) /
- (6) /

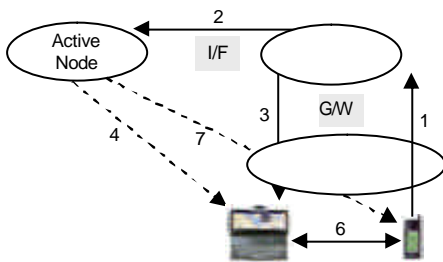
(13)

- 가 IP (request routing)
- /

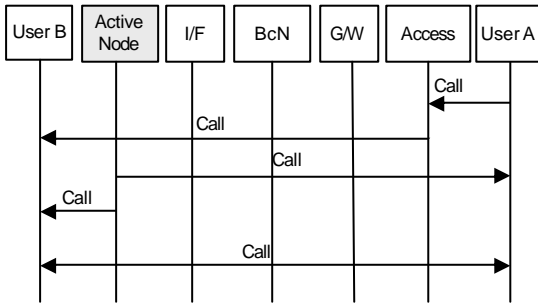
e2e
e2e

(14)

IP



(a) e2e



(b) e2e

(14) e2e

- [1] Konstantinos Psounis, "Active Networks: Applications, Security, Safety and Architecture," IEEE Communications Surveys, 1999, <http://www.comsoc.org/pubs/surveys>.
- [2] Active Networks Working Group, Architectural Framework for Active Networks Version 1.0, Active Network Working Group RFC Draft, July 27, 1999, <http://www.cc.gatech.edu/projects/canes>
- [3] Larry Peterson(Editor), "NodeOS Interface Specification," DARPA AN NodeOS Working Group Draft, 1999.
- [4] Parlay API Specification 1.2, Generic Messaging Service Interfaces, 2004.
- [5] Parlay API Specification 1.1 – Core Specification Document, 2004, <http://www.parlay.org>
- [6] Oguz Anging, Andrew T. Campbell, and E. Michael, "Mobiware Toolkit: Programmable Support for Adaptive Mobile Network," IEEE Personal Communications, Aug. 1998, pp.32-43.
- [7] S. Floyd, "Adaptive Web Caching," Boulder Cache Workshop '97, June 9-10, 1997, in AWC, <http://www-nrg.ee.lbl.gov/floyd/web.html>

VI.

, in -service