

1, 2, 3

1 2 3

{virtus78¹,gooday²,chowd³}@ajou.ac.kr

Community Management System to Support Seamless Collaboration of Services

Kim Hyeon Sook¹, Choi Dong Soon², Cho Wee Duck³
Center of Excellence for Ubiquitous System^{1 2 3}

(CM)
(CF) CM CF
(SM)

가

가

Keyword : HCI, Context-Aware, Distributed Computing, Community Computing

1.

가

(heterogeneity)

MDA(Model Driven Architecture)가 [2].

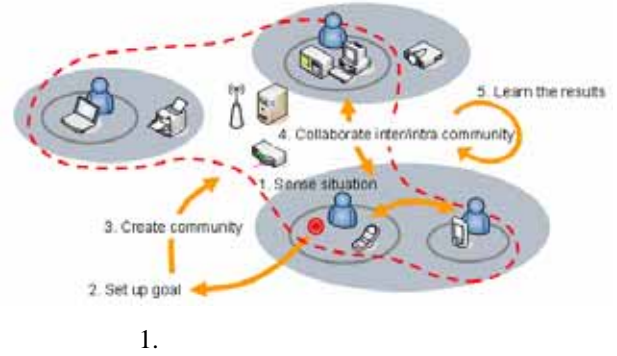
[1]. MDA MOF

[3].
가

[4][5][6].

MDA

static, dynamic,
autonomic,
semi-dynamic



가

2-1

가 가

2

CDL

3

(Community Description Language)

3

4

2.

가

가

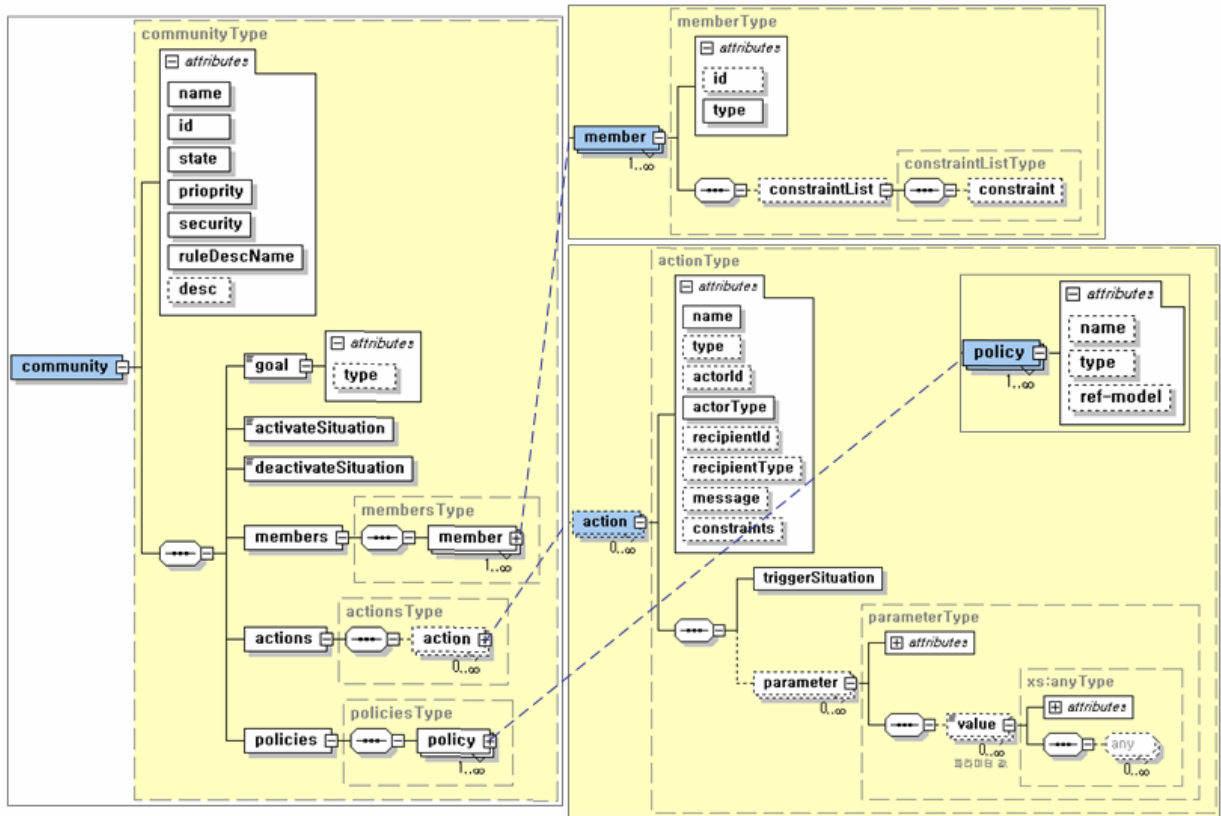
가

[7].



가 가
1

2.



2.

2

가 , , , , 가 : 가
 . 가 가
 , 가
 가 가
 가 가
 가
 가
 TEXT_VIEW 가
 가 가 2
 가 ,
 , , 가
 . STREAM_VIEW
 가
 - : AUTHENTICATION STREAM_VIEW
 .
 - : STREAM_VIEW MediaPlayer 가
 getAutneKey

가 [4].

가

Schild, \$L2

가

2

가

가

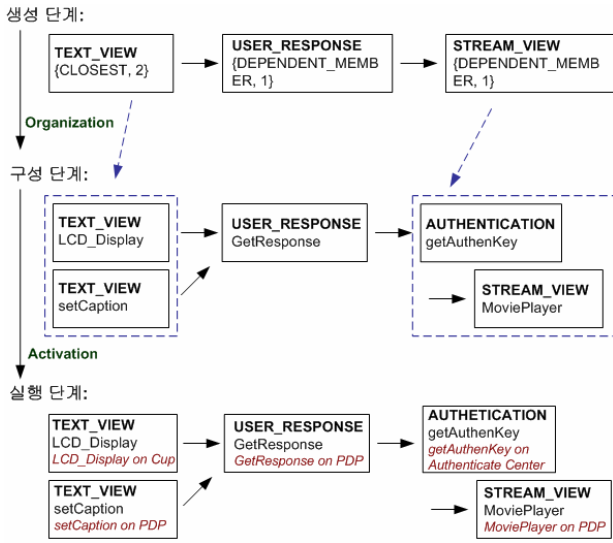
가

가

. SM

가

CM



CF

4.

. CF

2-2

(CM)

CM

(CF)

CM

CF

(SM)

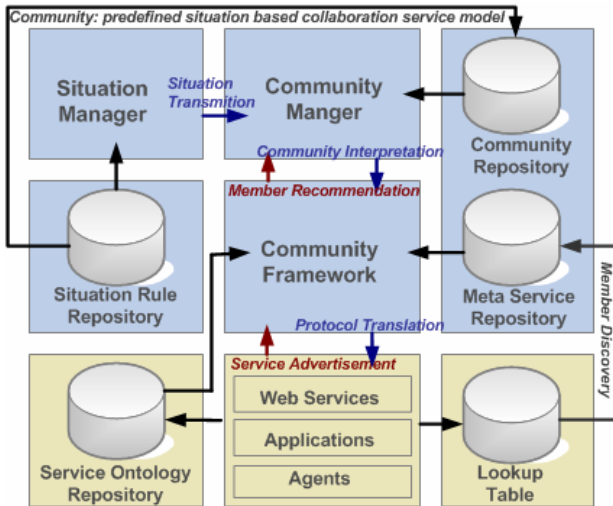
CM

SM

(Description)

가,

. CM



5.

3.

가

6

가

CM

가

가

SM

가

가

가

CM

가

가

'\$child entered in \$L2 area'

SM

가

CM

```

- <community ruleDescName="noRule" state="CREATED" id="" priority="1" name="NotifyL2" security="1"
desc="Notify that child is in the L2 area" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:noNamespaceSchemaLocation="D:\Project\U2
\DevProc\DynamicCommunityManager\Design\community.xsd">
  <goal type="PERMANENT">notify child's location</goal>
  <activateSituation>$child entered in $L2 area</activateSituation>
  <deactivateSituation>$L2 notification is finished</deactivateSituation>
  <members>
    + <member type="TEXT_VIEW">
    + <member type="TEXT_CLEAR">
    + <member type="ALARM_SOUND">
    + <member type="ALARM_RELEASE">
    + <member type="STREAM_VIEW">
    + <member type="STREAM_CLOSE">
    + <member type="AUTHENTICATION">
    + <member type="USER_RESPONSE">
  </members>
  <actions>
    + <action actorType="TEXT_VIEW" type="COMM">
    + <action actorType="ALARM_SOUND" type="COMM">
    + <action actorType="USER_RESPONSE" type="COMM" responseTimer="ON" responseTimerId="t1">
    + <action actorType="AUTHENTICATION" type="COMM">
    + <action actorType="STREAM_VIEW" type="COMM">
    + <action actorType="TEXT_VIEW">
    + <action actorType="TEXT_VIEW">
    + <action actorType="USER_RESPONSE" type="COMM" responseTimer="
    + <action actorType="TEXT_VIEW" type="COMM">
    + <action actorType="ALARM_RELEASE" type="COMM" responseTimer="
    + <action actorType="ALARM_RELEASE" type="COMM" responseTimer="
    + <action actorType="TEXT_VIEW" type="COMM">
    + <action actorType="ALARM_RELEASE" type="COMM" responseTimer="
    + <action actorType="TEXT_CLEAR" type="COMM">
    + <action actorType="ALARM_RELEASE" type="COMM" responseTimer="
    + <action actorType="STREAM_CLOSE" type="COMM">
    + <action actorType="STREAM_TRANSMIT_STOP" type="COMM">
    + <action actorType="CM" actorName="generateSituation" actorId="m
  </actions>
  <policies>
</community>
  <member type="TEXT_VIEW">
  - <constraintList>
    <constraint name="DISTANCE" value="CLOSEST" />
    <constraint name="SECURITY_LEVEL" value="1" />
    <constraint name="COUNT" value="1" />
  </constraintList>
  <action actorType="TEXT_VIEW">
  <triggerSituation>delegate authorization</triggerSituation>
  - <parameters>
    - <parameter name="text" type="String">
      <value>A member accepted the request..</value>
    </parameter>
  </parameters>
  </action>
  <action actorType="STREAM_VIEW" type="COMM">
  <triggerSituation>media authentication success</triggerSituation>
  - <parameters>
    - <parameter name="source_ip" type="String">
      <value>$source_ip</value>
    </parameter>
    - <parameter name="source_channel" type="String">
      <value>$source_channel</value>
    </parameter>
    - <parameter name="start_index" type="String">
      <value>0</value>
    </parameter>
  </parameters>
  </action>
  
```

6. L2 Notification Community

ALARM_SOUND

LCD_Display

Beep_On

CM

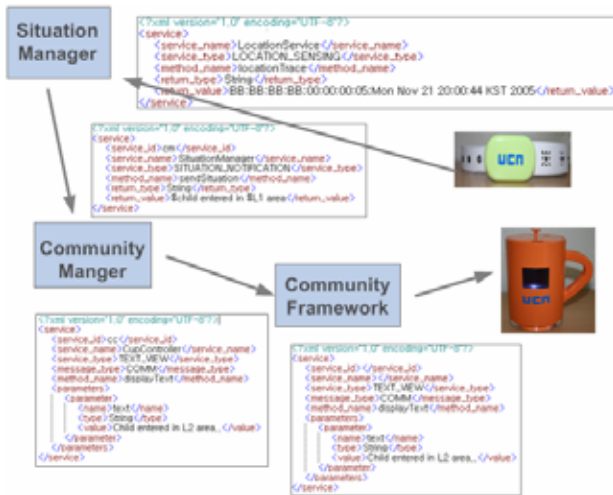
CF CM

가

가 가

TEXT_VIEW

가 7



7.

가

LCD

가

가

가 ,

STRAM_VIEW

MediaPlayer

가

가

PDP

PDP

5.

가 가

CM

MediaPlayer

, CM

가

PDP

TEXT_VIEW

가

가

, CM

APT Community

가

가

가

가

가

가

L2

Notification Community

*

(description) 가

4.