Cooperation – Mobile Device Identification

Summary

Identification of mobile devices provides the functions to check operation system, type of browsers and versions by comparing user-agent of the mobile device.

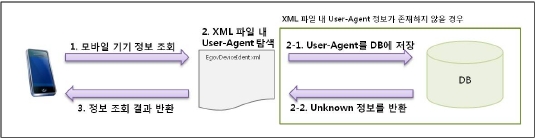
The user-agent refers to the user-agent field data of the HTTP Protocol Header containing the information of the browser. The user-agent displays different values in each operation system and browser. The user can et the information on the operation system and the browser of the currently connected devices.

\* Function Flow



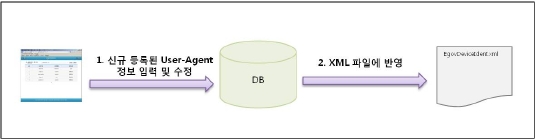
\* Device Identification Flow

Mobile device information inquiry for users



When the user inquires device information through the mobile device, the server primarily searches the user-agent value from the “EgovDeviceIdent.xml” file and provides information. When there is no information in the XML file, the user-agent value is registered on the DB and provides unknown information.

Mobile device information management for managers



The manager can input newly registered user-agent information through the mobile device information management page. When the mobile device information is input and updated, the update is reflected on the “EgovDeviceIdent.xml” file.

The development and testing of the mobile screen of this component is completed. It is also noted in development since the supports on HTML5 and CSS3 vary between the PC browser and mobile browser in the same brand.

The tested device and browsers are GalaxyS2, GalaxyS, iPad2, iPhone4, GalaxyTab1 and the web browsers, Firefox, Safari, Opera Mobile.

The test results are as following.

Android

The operation of HTML5, CSS3 and components of the Firefox(6.xx) and opera mobile was stable in android OS 2.3 (gengerbread).

However, in the lower version browsers, android 2.1, 2.2, the operation of components was unstable and UI realization was not smooth due to insufficient HTML5 and CSS3 supports.

For Opera Mobile, it caused problems in colors and event processing in UI. Therefore, it was excluded from the subject. Galaxy, GalxyS2 and GalaxyTab1 were chosen as test mobile devices.

iOS

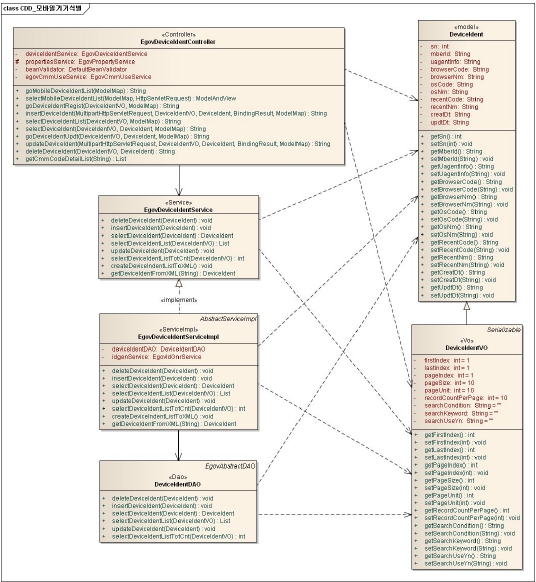
The iOS is one of three supported browsers and was tested in versions 4.2 and 4.3. The support for HTML5 and CSS3 were relatively smooth.

iPhone4 and iPad2 were chosen as test mobile devices.

Description

The mobile device identification is composed of the management function, mobile device information list inquiry, detailed inquiry, register, update and delete, as well as the mobile information inquiry. (Refer to Related Function)

Class Diagram



Related sources

|  |  |  |
| --- | --- | --- |
| Type | Target source names | Note |
| C ontroller | egovframework.mbl.com.mdi.web.EgovDeviceIdentC ontroller.java | Mobile device identification C ontroller C lass |
| Service | egovframework.mbl.com.mdi.service.EgovDeviceIdentService.java | Mobile device identification Service C lass |
| ServiceImpl | egovframework.mbl.com.mdi.service.impl.EgovDeviceIdentServiceImpl.java | Mobile device identification ServiceImpl C lass |
| Model | egovframework.mbl.com.mdi.service.DeviceIdent.java | Mobile device identification Model C lass |
| VO | egovframework.mbl.com.mdi.service.DeviceIdentVO.java | Mobile device identification VO C lass |
| DAO | egovframework.mbl.com.mdi.service.impl.DeviceIdentDAO.java | Mobile device identification Dao C lass |
| JSP | /WEB-INF/jsp/egovframework/mbl/com/mdi/EgovDeviceIdentList.jsp | Mobile device information list inquiry page |
| JSP | /WEB-INF/jsp/egovframework/mbl/com/mdi/EgovDeviceIdentRegist.jsp | Mobile device information registration page |
| JSP | /WEB-INF/jsp/egovframework/mbl/com/mdi/EgovDeviceIdentUpdt.jsp | Mobile device information modification page |
| JSP | /WEB-INF/jsp/egovframework/mbl/com/mdi/EgovDeviceIdentDetail.jsp | Mobile device information detail inquiry page |
| JSP | /WEB-INF/jsp/egovframework/mbl/com/mdi/EgovMobileDeviceIdentList.jsp | Mobile device information inquiry page |
| QUERY XML | resources/egovframework/sqlmap/mbl/com/mdi/EgovDeviceIdent\_SQL\_XXX.xml | Mobile device identification QUERY XML |
| Validator Rule XML | resources/egovframework/validator/validator-rules.xml | XML that defines Validator Rule |
| Validator XML | resources/egovframework/validator/mbl/com/mdi/EgovDeviceIdent.xml | Mobile device identification Validator XML |
| Message properties | resources/egovframework/message/message-common\_ko\_KR.properties | Mobile device identification Message properties |
| Idgen XML | resources/egovframework/spring/com/context-idgen-mobile.xml | Mobile device information Id generation Idgen XML |

ID Generation

In order to use ID Generation Service, add MDI\_ID (mobile device information ID) to COMTECOPSEQ, the sequence storing page.

Related Tables

|  |  |  |
| --- | --- | --- |
| Table name | Table name (English) | Note |
| Mobile device information | C OMTNDEVIC E | Manage mobile device information |

Login / membership management / permission management

Mobile device identification requires the administrator authentication in Mobile device information inquiry, Mobile device information list inquiry, detail inquiry, registration,

modification and deletion.

For authentication, you can connect with login, membership management and permission management components. If you use Spring Security for authentication, make change as in the followings.

src/main/java/resources/egovframework/spring/com/context-common.xml

<!--Service class that can check the authenticated user’s LoginVO, permissions and authentication-->

<bean id="egovUserDetailsHelper" class="egovframework.com.cmm.util.EgovUserDetailsHelper">

<property name="egovUserDetailsService">

<ref bean="egovUserDetailsSecurityService" />

</property>

</bean>

<!-- Bean that will use Security-based authentication-->

<bean id="egovUserDetailsSecurityService" class="egovframework.com.sec.ram.service.impl.EgovUserDetailsSecurityServiceImpl"/>

web.xml

<!-- 2. Spring Security Setup-->

<filter>

<filter-name>springSecurityFilterChain</filter-name>

<filter-class>org.springframework.web.filter.DelegatingFilterProxy</filter-class>

</filter>

<filter-mapping>

<filter-name>springSecurityFilterChain</filter-name>

<url-pattern>/\*</url-pattern>

</filter-mapping>

<listener>

<listener-class>org.springframework.security.ui.session.HttpSessionEventPublisher</listener-class>

</listener>

<!-- security end-->

<!-- 4. Filter setup for Spring Security logout setup-->

<filter>

<filter-name>EgovSpringSecurityLogoutFilter</filter-name>

<filter-class>egovframework.com.sec.security.filter.EgovSpringSecurityLogoutFilter</filter-class>

</filter>

<filter-mapping>

<filter-name>EgovSpringSecurityLogoutFilter</filter-name>

<url-pattern>/uat/uia/actionLogout.do</url-pattern>

</filter-mapping>

<!-- 4. Filter setup for Spring Security login setup -->

<filter>

<filter-name>EgovSpringSecurityLoginFilter</filter-name>

<filter-class>egovframework.com.sec.security.filter.EgovSpringSecurityLoginFilter</filter-class>

</filter>

<filter-mapping>

<filter-name>EgovSpringSecurityLoginFilter</filter-name>

<url-pattern>\*.do</url-pattern>

</filter-mapping>

As in the above, add Spring Security filter to web.xml.

For details on login/membership management/permission management, refer to the followings.

login: general login

Membership management: user management

Permission management: Permission management

The following pages need the user/administrator permissions.

|  |  |  |
| --- | --- | --- |
| Permission type | Page path | Description |
| User | /mbl/com/mdi/goMobileDeviceIdent.mdo | Mobile device information inquiry screen |
| Administrator | /mbl/com/mpa/selectDeviceIdentList.mdo | Mobile device information list inquiry screen |
| Administrator | /mbl/com/mpa/selectDeviceIdent.mdo | Mobile device information detail inquiry screen |
| Administrator | /mbl/com/mpa/goDeviceIdentRegist.mdo | Mobile device information registration screen |
| Administrator | /mbl/com/mpa/insertDeviceIdent.mdo | Mobile device information registration |
| Administrator | /mbl/com/mpa/goDeviceIdentUpdt.mdo | Mobile device information modification screen |
| Administrator | /mbl/com/mpa/updateDeviceIdent.mdo | Mobile device information modification |
| Administrator | /mbl/com/mpa/deleteDeviceIdent.mdo | Mobile device information deletion |

Settings and Notes

\* The currently distributed mobile common component adopts HTML5 and CSS3 and this means that it doesn’t support the standards for mobile web site validity check of Mobile OK and W3C. For details on correct validity check, please contact the competent professional institute.

\* Security verification is under progress on the currently distributed mobile component. We plan to complete security verification as soon as possible to release a new security-patched version.

Environmental settings

The followings are required items and the environment settings to utilize Mobile device identification functions.

Property file setup

mdi.properties

#-----------------------------------------------------------------------

#

#

mdi.properties :

Config file that shows mobile device information

#

#-----------------------------------------------------------------------

#

#

1.

2.

key = value structure

The key cannot include space. The value can include space

#

3.

Korean is not allowed for key,

but allows for value.

#

4.

To create a new line, put '\' to the end of the line(to use '\' letter, use '\\'.)

#

#

5.

6.

In Windows, use '\\' or '/' as the directory symbol (do not use '\' )

In Unix, use '/' as the directory symbol

#

7.

For comments

use #.

#

8.

If there is space after a value, an error may occurs when referenced in the sublets, use trim() or set the property value without space.

#-----------------------------------------------------------------------

# Mobile device information XML file

deviceIdentXMLPath = c:/EgovDeviceIdent.xml

In the above, you have to set #DeviceIdentXMLPath. This designates the path of the XML that contains mobile device information.

EgovDeviceIdent.xml

<?xml version="1.0" encoding="UTF-8"?>

<DeviceIdents>

<DeviceIdent>

<UserAgent>Mozilla/5.0 (iPhone; U; CPU iPhone OS 4\_2\_1 like Mac OS X; ko-kr) AppleWebKit/533.17.9 (KHTML, like Gecko) Version/5.0.2 Mobile/8C148 Safari/6533.18.5</UserAgent>

<Browser>Safari 5.0.2</Browser>

<OS>iPhone</OS>

</DeviceIdent>

<DeviceIdent>

<UserAgent>Mozilla/5.0 (Android; Linux armv7l; rv:5.0) Gecko/20110615 Firefox/5.0 Fennec/5.0</UserAgent>

<Browser>Firefox 5.0</Browser>

<OS>Android</OS>

</DeviceIdent>

<DeviceIdent>

<UserAgent>Opera/9.80 (Android 2.3.3; Linux; Opera Mobi/ADR-1107051709; U; ko) Presto/2.8.149 Version/11.10</UserAgent>

<Browser>Opera 9.80</Browser>

<OS>Android</OS>

</DeviceIdent>

<DeviceIdent>

<UserAgent>Mozilla/5.0 (Linux; U; Android 2.3.3; ko-kr; Build/GINGERBREAD) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1</UserAgent>

<Browser>Android 2.3.3</Browser>

<OS>Android</OS>

</DeviceIdent>

</DeviceIdents>

The above file is the xml that contains browser and OS information per user agent. A user, when connecting using Mobile device identification, can get browser and OS information.   
This file can be edited from the administrator’s page.

Related functions

Mobile device identification is largely composed of Mobile device information inquiry for users, Mobile device information list inquiry for administrators, Mobile device information  
detail inquiry, Mobile device information registration, Mobile device information modification and Mobile device information deletion.

Mobile device information inquiry

Business rules

You can retrieve the identified Mobile device information.

Related codes

N/A

Screen and execution manual

|  |  |  |  |
| --- | --- | --- | --- |
| Action | URL | Controller method | QueryID |
| device information inquiry | /mbl/com/mdi/selectMobileDeviceIdent.mdo | selectMobileDeviceIdentList | “DeviceIdentDAO.selectDeviceIdentList” |

Mobile device identification information list inquiry

Business rules

You can use the inquiry conditions to retrieve lists. You can click the Register button to move to Mobile device identification information registration screen to register Mobile device identification information.

Related codes

N/A



N/A

Screen and execution manual

10 Mobile device identification information lists are retrieved per page and paging is carried out on 10 page basis. The search conditions are browser, OS and registration status.

To change the search range per page, modify pageUnit and pageSize in context-properties.xml (This setting have an influence on the entire common service functions.).

Inquiry: to retrieve Mobile device identification information, select search conditions in the top, enter a key word and click the Inquiry button.

Register: to register Mobile device identification information, use the Register button in the top to move to Mobile device identification information registration screen.

Click list: moves to Mobile device identification information detail inquiry screen.

Mobile device identification information detail inquiry

Business rules

By clicking a list on Mobile device identification information list inquiry, you can move to this screen, which shows details on Mobile device identification information.

Related codes

N/A

Screen and execution manual

On Mobile device identification information detail inquiry screen, you can carry out Mobile device identification information modification, Mobile device identification information deletion and Mobile device identification information list inquiry.



|  |  |  |  |
| --- | --- | --- | --- |
| Action | URL | Controller method | QueryID |
| Inquiry | /mbl/com/mdi/selectDeviceIdentList.mdo | selectDeviceIdentList | “DeviceIdentDAO.selectDeviceIdentList” |
|  | /mbl/com/mdi/selectDeviceIdentList.mdo | selectDeviceIdentListTotC nt | “DeviceIdentDAO.selectDeviceIdentListTotC nt” |
| Register | /mbl/com/mdi/goDeviceIdentRegist.mdo | goDeviceIdentRegist |  |
| Click list | /mbl/com/mdi/selectDeviceIdent.mdo | selectDeviceIdent | “DeviceIdentDAO.selectDeviceIdent” |

|  |  |  |  |
| --- | --- | --- | --- |
| Action | URL | Controller method | QueryID |
| Modify | /mbl/com/mdi/goDeviceIdentUpdt.mdo | goDeviceIdentUpdt |  |
| Delete | /mbl/com/mdi/deleteDeviceIdent.mdo” | deleteDeviceIdent | “DeviceIdentDAO.deleteDeviceIdent” |
| List | /mbl/com/mdi/selectDeviceIdentList.mdo | selectDeviceIdentList | “DeviceIdentDAO.selectDeviceIdentList” |



Modify: Click the Modify button to move to Mobile device identification information modification screen to modify Mobile device identification information.

Delete: Click the Delete button to delete information after being prompted to select whether to delete.

List: Moves to Mobile device identification information list inquiry screen.

Mobile device identification information registration

Business rules

- The red \* at the right of input entry indicates the required item.

- When stored, MDI\_ID is automatically granted through “egovframework.rte.fdl.idgnr.impl.EgovTableIdGnrService”.

Primary Key => MDI\_ID : a serial number is automatically granted.

<bean name="egovDeviceIdentGnrService"

class="egovframework.rte.fdl.idgnr.impl.EgovTableIdGnrService"

destroy-method="destroy">

<property name="dataSource" ref="dataSource" />

<property name="blockSize"

<property name="table"

<property name="tableName"

value="10"/>

value="COMTECOPSEQ"/>

value="MDI\_ID"/>

</bean>

Related codes

The followings are codes and its settings used in Mobile device identification.

Code

Code name

C OM083 browser type BRS001 Unknown

C OM083 browser type BRS002 C hrome

C OM083 browser type BRS003 C hrome 11

C OM083 browser type BRS004 C hrome 12

C OM083 browser type BRS005 C hrome 13

C OM083 browser type BRS006 C hrome 14

C OM083 browser type BRS007 Firefox

C OM083 browser type BRS008 Firefox 3

C OM083 browser type BRS009 Firefox 4

C OM083 browser type BRS010 Firefox 5

C OM083 browser type BRS011 Firefox 6

C OM083 browser type BRS012 Firefox 7

C OM083 browser type BRS013 IEMobile

C OM083 browser type BRS014 IEMobile 6

C OM083 browser type BRS015 IEMobile 7

C OM083 browser type BRS016 IEMobile 8

C OM083 browser type BRS017 Opera

C OM083 browser type BRS018 Opera 4

C OM083 browser type BRS019 Opera 5

C OM083 browser type BRS020 Opera 6



C OM083 browser type BRS020 Opera 6

C OM083 browser type BRS021 Opera 7

C OM083 browser type BRS022 Opera 8

C OM083 browser type BRS023 Opera 9

C OM083 browser type BRS024 Opera 10

C OM083 browser type BRS025 Opera 11

C OM083 browser type BRS026 Opera 12

C OM083 browser type BRS027 Opera Mini

C OM083 browser type BRS028 Opera Mini 3

C OM083 browser type BRS029 Opera Mini 4

C OM083 browser type BRS030 Opera Mini 5

C OM083 browser type BRS031 Opera Mini 6

C OM083 browser type BRS032 Opera Mobile

C OM083 browser type BRS033 Opera Mobile 10

C OM083 browser type BRS034 Opera Mobile 11

C OM083 browser type BRS035 Safari

C OM083 browser type BRS036 Safari 3

C OM083 browser type BRS037 Safari 4

C OM083 browser type BRS038 Safari 5

C OM083 browser type BRS039 Android

C OM083 browser type BRS040 Android 1.5

C OM083 browser type BRS041 Android 1.6

C OM083 browser type BRS042 Android 2.1

C OM083 browser type BRS043 Android 2.2

C OM083 browser type BRS044 Android 2.3

C OM083 browser type BRS045 Android 3.0

C OM083 browser type BRS046 Android 4.0

C OM084 OS type OS01

C OM084 OS type OS02

C OM084 OS type OS03

C OM084 OS type OS04

C OM084 OS type OS05

C OM084 OS type OS06

C OM084 OS type OS07

Unknown

Android

iOS

Symbian

BrackBerry

Windows Mobile

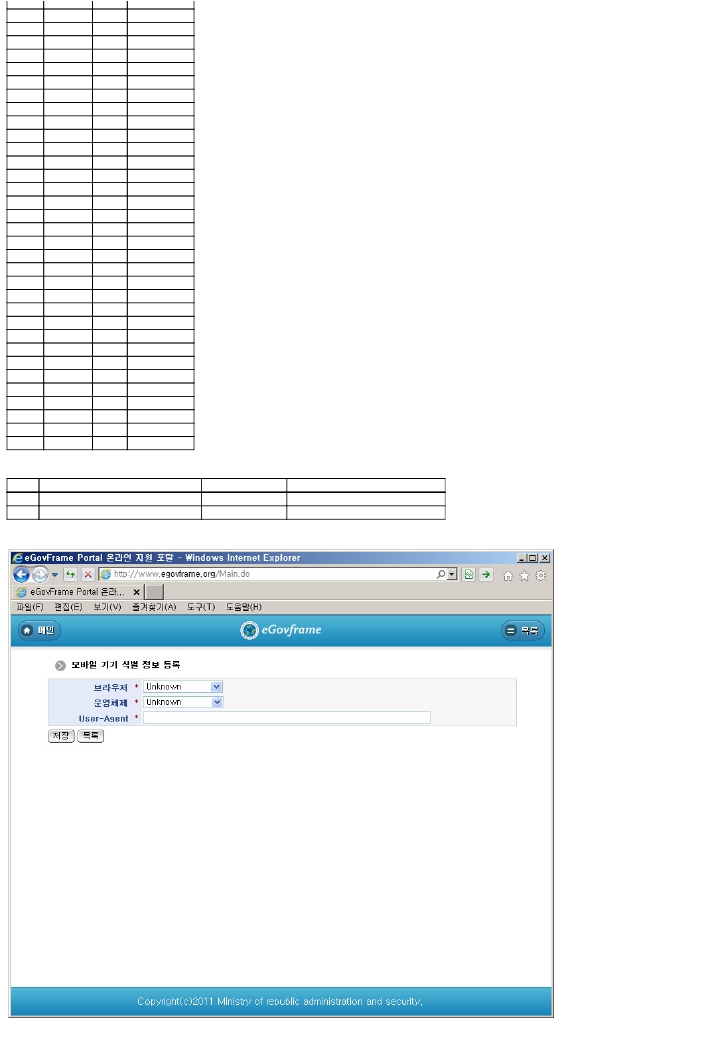
Windows Phone

Screen and execution manual

The basic data on Mobile device identification information is inputted and stored.

Register: stores the inputted Mobile device identification information.

List: moves to Mobile device identification information list inquiry screen.



|  |  |  |  |
| --- | --- | --- | --- |
| Action | URL | Controller method | QueryID |
| Register | /mbl/com/mdi/insertDeviceIdent.mdo | insertDeviceIdent | “DeviceIdentDAO.insertDeviceIdent” |
| List | /mbl/com/mdi/selectDeviceIdentList.mdo | selectDeviceIdentList | “DeviceIdentDAO.selectDeviceIdentList” |

List: Moves to Mobile device identification information list inquiry screen.

Mobile device identification information modification

Business rules

- The red \* at the right of input entry indicates the required item.

Related codes

N/A

Screen and execution manual

The inputted mobile device identification information is stored.

Modify: stores the modified mobile device identification information.

List: moves to Mobile device identification information list inquiry screen.

References

Refer to execution environment: ID Generation Service

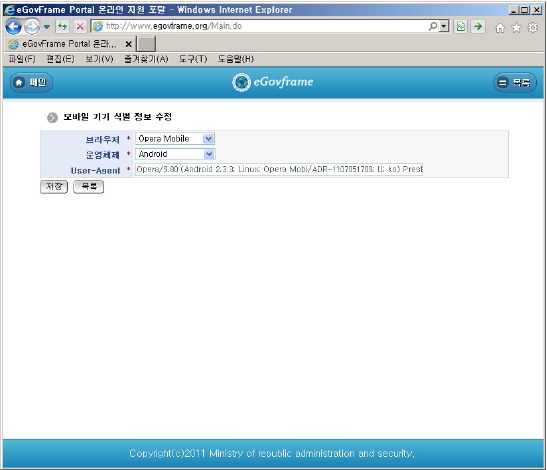
Distribution and test: Mobile Common Component System and distribution package plan

Related database structure and schema : Related database structure and schema

e govfram e work /m com /mobile device identification.tx t · Last m odifie d: 2011/10/10 12:35 by m com

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|  |  |  |  |
| --- | --- | --- | --- |
| Action | URL | Controller method | QueryID |
| Modify | /mbl/com/mdi/updateDeviceIdent.mdo | updateDeviceIdent | “DeviceIdentDAO.updateDeviceIdent” |
| List | /mbl/com/mdi/selectDeviceIdentList.mdo | selectDeviceIdentList | “DeviceIdentDAO.selectDeviceIdentList” |