UX/UI Controller Component

Outline

eGovFramework offers the user an experience to enjoy one of the most efficient smart eGovSystem ever, thanks to the UX layers such as UI/UX Controller Component, JavaScript Module App Framework, HTML5 and CSS3.
eGovFramework runs based upon the opensource JQuery Mobile that is compatible with html5, CSS3 and javascript.
The Open Source was customized to use UI Layer function as described below.
Touch-optimized Essential UI Controller Component is provided to ensure flexible response in dealing with UI/UX Controller Component mobile web user environment (UX/UI)
HTML5 is a mark-up protocol by which the mobile tag device API is provided.
CSS3 allows the user to view the component in a way that fits the concerned mobile device and browser. Also provided is Json and Javascript structures that guarantee the efficient operation of JavaScript Module App Framework UX/UI controller component.

Guideline for Upgrade of Mobile Runtime Environment

In accordance with the update of eGov Standard Framework Mobile Web Runtime Environment, jQuery and jQueryMobile's library version was updated. In effect, some changes were made to the method and components.

Library Update

The mobile runtime environment of the original directory was replaced (js, CSS, etc).
Jquery-1.9.1 → jquery-1.11.2
Jquerymobile-1.3.2.js → Jquerymobile-1.4.5.js
Jquerymobile-1.3.2.css → Jquerymobile-1.4.5.css
EgovMobile-1.3.2.js → EgovMobile-1.4.5.js
EgovMobile-1.3.2.css → EgovMobile-1.4.5.css

Method changes in accordance with jQuery version update

As JQuery version (1.9 or higher) was updated, bind() and .live() methods were combined as .on() method. Therefore, the respective methods must be corrected and used as below:
$('#main').live('pageshow', init);
$(document).on('pageshow', '#main', init);

Component changes in accordance with jQueryMobile version update

DatePicker and TimePicker became obsolete as the same function can be executed in input=date in HTML5, and therefore was deleted. However,   to ensure previous function and browser compatibility, the component was added as Custom Library in Mobile Shared Component.

Further, the Progress Dialog/Bar was changed to Loader Widget, which is provided in jQueryMobile.

Description

UX processing layer is responsible for the screen display for mobile environment. 16 Components specialized for mobile screens, such as Button, Panel, Internal/External Link, Loader Widget, Menu, Check, Radio, Label/Text, Tabs, Form, Grid, List View ICon, Selector, and Collapsible Block are provided.

Mobile Page Declaration

jQuery Mobile must be declared as a doctype of HTML5. This can be used by Importing CSS, JS(jQuery, jQueryMobile), which are used in jQueryMobile.

jQuery Mobile uses jQuery Core.

Mobile Page Header

Import mobile runtime environment from the Header declaration of the Page.

```
<!DOCTYPE html>
<html>
<head>
<title>eGovFrame</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no">
<link rel="stylesheet" href="/css/egovframework/mbl/cmm/jquery.mobile-1.4.5.css"/>
<link rel="stylesheet" href="/css/egovframework/mbl/cmm/EgovMobile-1.4.5.css" />
<scriptsrc="/js/egovframework/mbl/cmm/jquery-1.11.2.min.js"></script>
<script src="/js/egovframework/mbl/cmm/jquery.mobile-1.4.5.min.js"></script>
<scriptsrc="/js/egovframework/mbl/cmm/EgovMobile-1.4.5.js"></script>
</head>
<body>
 ...
</body>
</html>
```

Mobile Page Body

jQuery Mobile's Page stucture is express by using div. The structure can be classified by using html5's 'data-*' properties.

```
<div data-role="page">
<div data-role="header">
</div>
<div data-role="content">
</div>
<div data-role="footer">
</div>
</div>
```

Mobile Page Link

jQuery Mobile manages a page in units of<div data-role="page">. If multiple <div data-role="page"> exist in a single HTML, the div page located on the top will be recognized as the first screen. Movement between these pages can be performed by using the #pageName of link property When movement to an external page occurs, jQuery Mobile intercepts the anchor tag link to call respective URL via ajax. Then, the <div data-role="page"> section of the called page is imported. The imported data is added to the DOM of the HTML page.

- The CSS and JS of the page called by Ajax is not imported. Therefore, the calling page must contain the JS and CSS of the called page.
- If ajax communication is not preferred for movement to an external page, use data-ajax="false"

UX Component

Component		Functions
Button	Description	Provision of components used in Command execution, option selection, and opening another conversation box.
	Form	Round tab(radius: 1em), Rectangular Tab(radius: 0em)
	Arrangement	vertical group, horizontal group
	Color	Black, Blue, Grey, White, Yellow, Red, Green
	Height	normal(39px), small (28px)
	Width	Fit Screen, Fit Text
Panel	Description	Page elements including Header/Footer
	Pattern	Cross stripe pattern provided
	Color	Black, Gray, Light Gray, White, Yellow, Red, Green
Panel Widget	Description	Component that uses the left and right side of the screen that cannot be seen. Element that can be used as navigation or menu.
	Arrangement	Left, Right side
	Effect	Reveal, Overlay, Push
Internal / External Link	Description	Provides standard link function. Standard link method provided is Ajax

	Link	Internal Link in page, internal link in domain, external link, email link, phone link, error page link.
Label / Text	Description	Guideline to designating color, position, size, and font provided.
	Color	Green, Red, Blue
	Arrangement	Left, Center, Right
	Size	15px, 25px, 30px
	Font	helvetica, verdana, tahoma
Tabs	Description	Used in header and footer. Tab button can be pressed to move between documents.
	Form	round tab(radius: 0.250em), normal tab(radius: 0em)
	Arrangement	1, 1/2, 1/3, 1/4, 1/5, 1/2 multiple row tab
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Form	Description	Optimize HTML Form elements in mobile environment.
	Elements	Text inputs, Search inputs, Sliders, Switches, Radio buttons, Check boxes, Selectors
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Menu	Description	Menu component functions provided by use Dialog, Grid, List, Collapsible component
	Effect	slide, slideup, slidedown, pop, fade, flip, turn, flow, slidefade
	Form	Dialog, Grid, List, Collapsible
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Loader Widget	Description	Provides loading dialog printing element for content switching through Ajax
	Effect	html, text, textVisible, textonly, theme
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Dialog	Description	Provides dialog function that enables interaction with the user.
	Form	Dialog, Action Sheet, Overlay, Alert, Prompt, Confirm
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Grid View	Description	Provides component that enables content arrangement in grid form.

	Arrangement	1/2, 1/3, 1/4, 1/5, Variable Grid View
Table / List View	Description	Provides component that enables content arrangement in table/list form.
	Form	Read-only list, Link list
	Function	Nested List, Numbered List, Split Button, List Divider, Count Bubble, Thumbnail, List icon, Content Formatting, Search Filter Bar, Change Mode List, Checked List
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Check/ Radio	Description	Profides function that enables selection of items in Check/Radio Format
	Arrangement	vertical group, horizontal group
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Icon	Description	Provides frequently used icons in mobile applications
	Form	arrow-l, arrow-r, arrow-u, arrow-d, delete, plus, minus, check, gear, refresh, forward, back, grid, star, alert, info, search, home, phone, mail, gps, audio, camera, file, mic, explorer
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Selector / Switch	Description	Provides function that enables selection of items in Selector/Swift form.
	Effect	pop-up, list
	Function	Multiple, Single Selection
	Shape	Round tab(radius: 1em), Rectangular Tab(radius: 0em)
	Width	Fit Screen, Fit Text
	Effect	Apply Shadow, Remove Shadow
	Form	Group, ungroup
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Collapsible Block	Description	Provides control function that enables folding and unfolding of content area
	Form	normal, Group, Nested
	Color	Black, Blue, Grey, White, Yellow, Red, Green
Popup Widget	Description	Provides element that enables pop-up of tooltips or pictures.

Form	Right close button, Left close button, Undismissible Popup
Arrangement	Window, Origin, #target
Effect	no transition, pop, fade, flip, turn, flow, slide, slide fade, slide up, slide down
Color	Black, Blue, Grey, White, Yellow, Red, Green

Browser Compatibility Guidelines and Standard for UX Components

1. Base Guideline: Ministry of Public Administration and Security Notification 2010-40
2. Reason for Amendment: Clarify public organization regulations for enhanced accessibility to mobile eGov services.
3. Notable Changes:
    o Recommend "Mobile web" method over "App" method in order to safeguard compatibility of various mobile devices.

- o Technology standard guidelines for mobile web development.
  - Same services provided for at least 3 different types of web browsers.
  - Obedience to ISO standard now mandatory.
4. Principles in providing eGov Mobile Service
   - o Development of mobile web applications recommended to meet user demands of various mobile devices.
   - o Refer to supported browsers (compatibility) for each mobile shared component.

Supported Browser for Each UX Component (Compatibility)

Test Device

갤럭시S2   갤럭시S3   아이폰4S   갤럭시탭   아이패드2

Test Browser

크롬   사파리   파이어폭스   오페라   안드로이드

Contents of Mobile Standard Framework User Experience(UX) Support Browser

▌ 지원 플랫폼

컴포넌트					
지원버전	5.1.7 ↑	18.0 ↑	16.0 ↑	12.0 ↑	4.0.4 ↑
Button	O	O	O	O	O
Panel	O	O	O	O	O
Internal/External Link	O	O	O	O	O
Label/Text	O	O	O	O	O
Tabs	O	O	O	O	O
Form	O	O	O	O	O
Menu	O	O	O	O	O
Processing Dialog / Bar	O	O	O	O	O
Dialog	O	O	O	O	O
Grid View	O	O	O	O	O
Table / List View	O	O	O	O	O
Date / Time Picker	O	O	O	O	O
Check/ Radio	O	O	O	O	O
Icon	O	O	O	O	O
Selector / Switch	O	O	O	O	O
Collapsible Block	O	O	O	O	O

References

- [Mobile Runtime Environment User Experience(UX)Support Function Guideline](#)