## Design Components

The e-government mobile standard framework provides screen navigation, definitions of screen components and resolution definitions.

Screen Navigation

Basic Principles

Simplification of information structure
The width of information structure means the number of options provided at the top level of the structure and the depth means the number of the levels. If the structure is too deep, the navigation may be complicated. Therefore avoid going more than three depths in the mobile environment and ensure the contents are quickly accessed and easily added, considering the width and depth of the information structure.


Narrow and deep structure   Wide and shallow strcuture
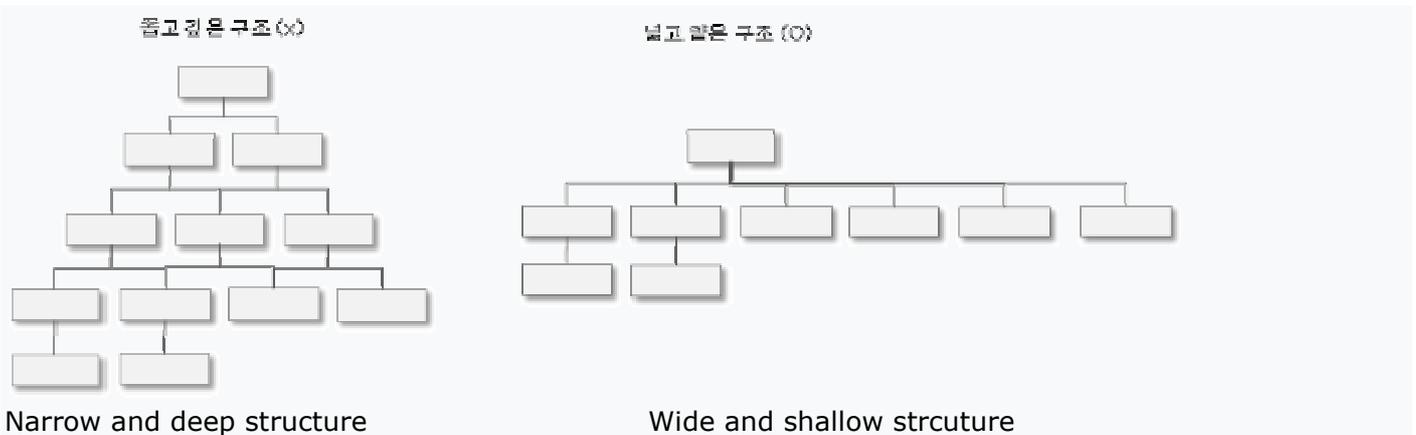
Menus

Grid type Menu
This menu is used to iconize and place contents of similar levels.
The menu is placed from left to right and from up to down. ①
If there are two or more menu pages, provide a visual clue on the location of the current menu page and the total number of menu pages. ②
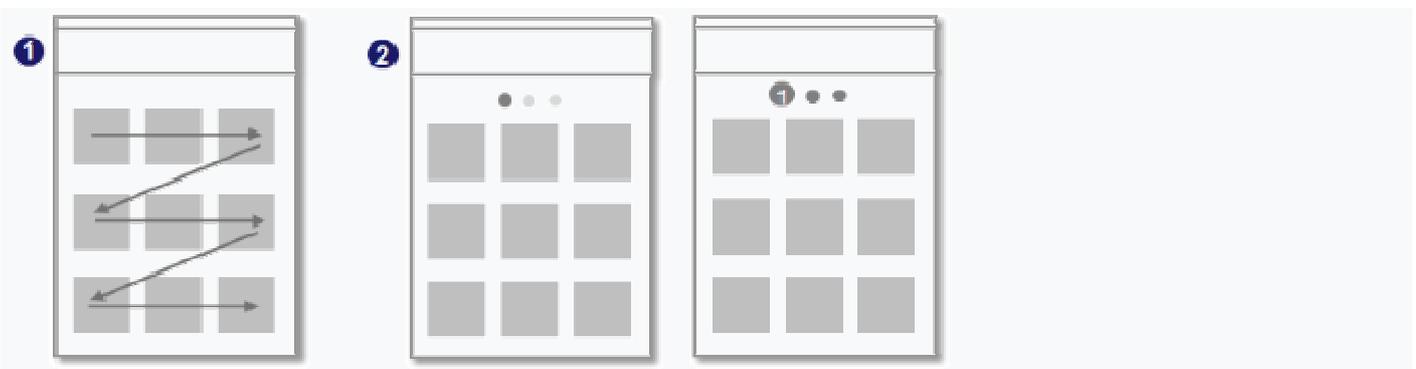
List type Menu
Provide labels or icons that represent sub content for each menu. The spatial restriction is less for additional menus and hence the scalability is better.
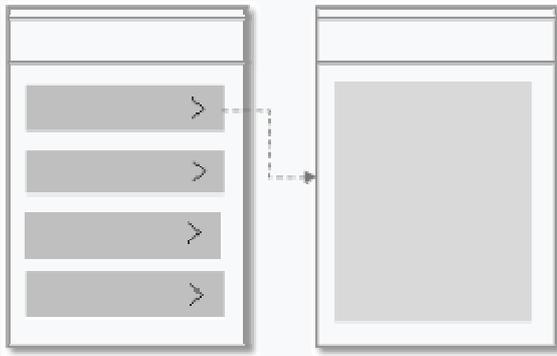
Bar type Menu

This is a text type menu presentation, similar to the global navigation bar in web screen.

The menu titles are placed horizontally.

This is used when a fixed menu zone should be provided for each screen.

Navigation between different levels is allowed on the same screen.

In order to secure the space for contents, it is suitable to apply two depths or less.

If it is impossible to show all menu titles on a screen, provide a visual clue to find hidden menus.
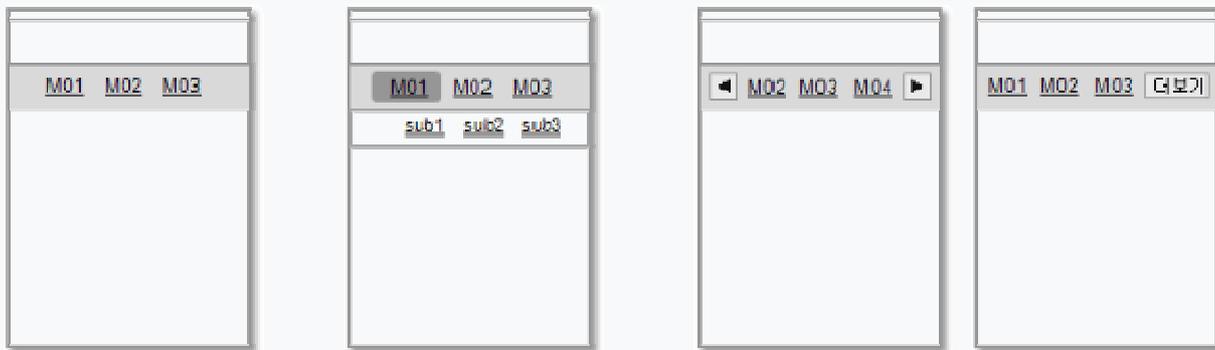

Accordion type Menu

This is a text type menu representation to fold and unfold a menu list.

Since the menu occupies much of a screen, this is usually used on the first screen.

Navigation between different levels is allowed on the same screen.
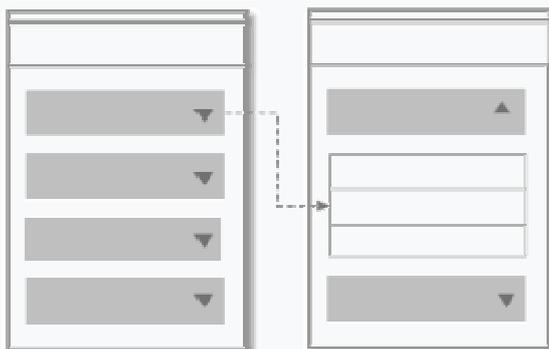

Location history

The location History shows the current and previous locations of the user.

The links to each screen from the current location up to the upper menus are usually provided.

This is used when there is no fixed navigation zone on the screen or when the menu structure is deep.

This is usually located below the title area (in the top of the screen).
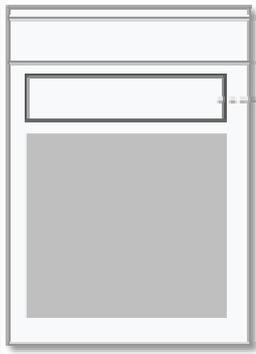
## Others

Home

Users should be able to Home screen from any page.

Various methods including the Home button or logo area are allowed.

Page Navigation

This is used to move through pages and usually provided at the bottom of the content area.

Previous (Back)/Upper

The previous link may be provided as standard in a browser or a device, but could be provided as button on the screen.

Home

◀ 1 2 3 4 5 ▶

이전 11/30 다음

◁이전
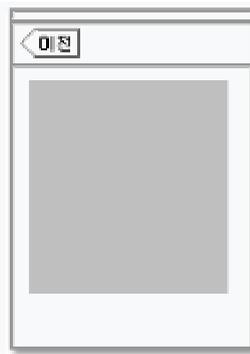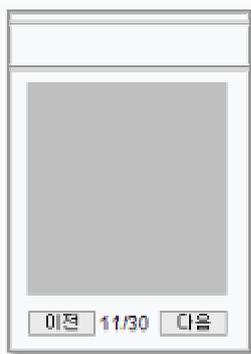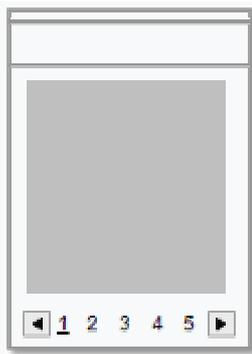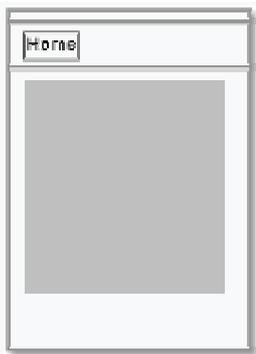
Whole menus/services

The link to the top level menu will be provided as a button, usually located in the top.

This is required if the Home screen is not provided.

Top

This is used to move up to upper position from the current screen, usually located at the top.

This is usually used on the screen that contains lots of content which are too much to view all at a glance.

전체 메뉴

맨 위로↑
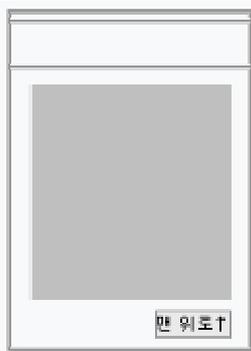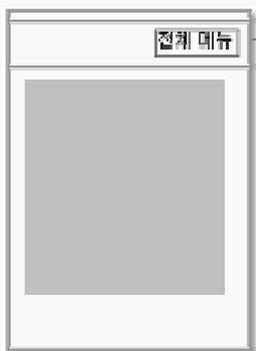
Definitions of Screen Components

Titles

Definition

This is the title area for the current screen.

Application guide

This is always located in the top of the screen. It can be located in the center of the top or left top.

The screen title area is relatively small and therefore the number of letters should limited.

In the tab type menu, the selected menu can be used instead of the title.

It is not recommended that one line is assigned for the screen title area.

Consider readability. Do not use decorative fonts or showy colors that disturb clarity.
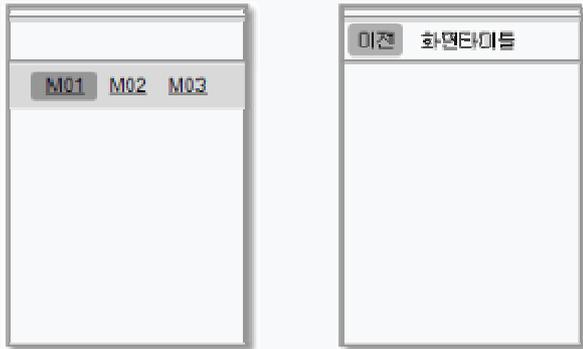
Menu

Definition

Menu is a content group provided for users to move to their wanted screens from any screen.

Application guide

Each menu item should not have redundant sub menus.

For an efficient and consistent flow, the menu structure will be organized hierarchically.

The menu will be placed with consistency at fixed locations and clearly so that they can be understood at a glance.

The style should be clearly defined so that the menu, as touchable elements, is distinguished from the body.

The status of menu selection and the change of the resulting screen after movement should be reflected clearly.

It is not recommended that the menu area is larger than the body area. (For menu layouts, refer to the guide per UI pattern)
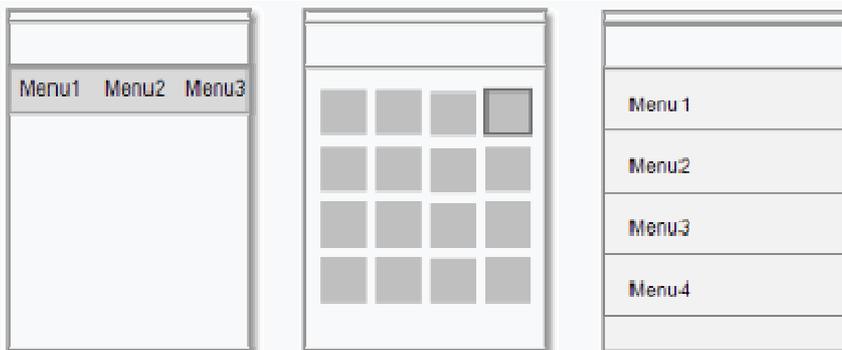
Tab Bar

Definition

The tab bar is a component used to select multiple menus.

Application guide

It is not recommended that one-menu tab is used as a title.

The number of tabs should not exceed 4 if possible. If 5 or more tabs are used, use More button instead of the fifth button to provide an accordion menu or a list menu.

The selected tabs should be clearly distinguished from other tabs by using a different shape.

In a tablet, 4 or more tabs can be used, but 7 is recommended at the maximum as too many tabs increases complexity.

The tab bar should keep the number of tabs and style regardless of the screen mode.

If icons are used in the tab bar titles, texts should be also provided.

Tab bar (portrait mode)   Tab bar (landscape mode)

Buttons

Definition

The button is a component used to carry out actions and navigation.

Application guide

The button should have no less than 40*40 pixel touchable area.

When the button is touched, it should provide a visual feedback.

Key buttons should be larger and placed on a well visible location.

The button name should be short if possible and deliver the meanings intuitively.

The button name should be in Korean.

Remove the spaces within the names except for English names.

The button text should be provided at a certain size so that readability is ensured.

The button shape should be seen as clickable.

The button has four states; Default, Disabled, Focused and Pressed. (In the touch screen, the focused state doesn't work)

The buttons can be arranged in the center or to the right. It is recommended that a consistent rule be applied per page.

It is recommended that the buttons are placed from left to right in the order of importance.

Now in CSS3, you can create Gradient, DropShadow and Round Corner effects, which needed images before, by using tags. You can reduce images by using this function.

Any button whose action can give negative effects should be represented in a different color and have an additional confirmation procedure. (e.g. Delete All button)

The selectable buttons should be clearly distinguished from non-selectable buttons.

Fonts & labeling

Application Guide

Different manufacturers provide different fonts on their device by default. It is recommended that the default font per device be used if possible.

Even the font provided by the same platform can be different in the default letter interval and bold type support depending on the version. It is recommended that the fonts be tested on various devices.

Keep in mind that users can change the font size and font type on the mobile devices (except iPhone).

Keep in mind that the PPI on the mobile device is higher than that of the PC monitor and therefore the same font is smaller on the mobile device. It is recommended that 14px or less font size be avoided.

In order to allow users to read required contents, it is recommended that the font magnification function be provided additionally.

The font colors should be clearly distinguished by using the base colors and brightness contrast.

A sufficient space between lines should be provided not to disturb readability.

Labeling should be as simplified as possible, as the space is limited.

Labeling should be in Korean and English proper nouns are written as read.

Labeling uses nouns and nominalized verbs. Predicative expressions and adjectives are not suitable for labeling.

Scroll

Definition

The scroll is a control used to indicate the current position if the contents are longer or wider than the current screen.

Application Guide

The scroll is represented as a bar in the right or at the bottom of the screen.

By default, the basic scroll is represented.

It is recommended that either of vertical and horizontal scrolls is represented.

The partial scroll is not recommended as the operation becomes difficult when it is represented together with the whole scroll.

가로모드 전환시

전체화면 스크롤(o)
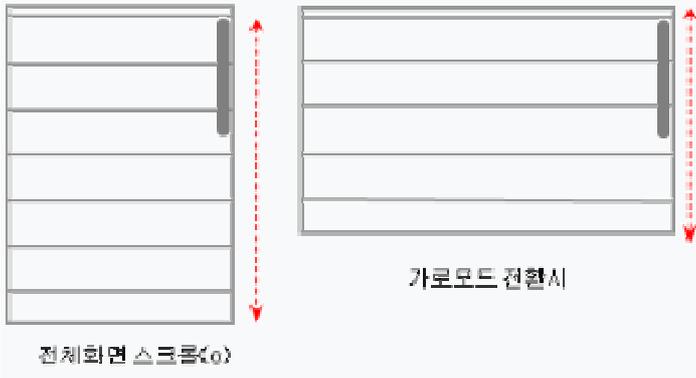
Colors

Application Guide

In general the colors play an important role for identity.

In order to keep the consistency of the identity, the images used in all the pages should follow color plan and application range.

The photos that are difficult to follow the color system will be excluded from the application range of the color system.

Introduce special colors to represent special contents or emphasize special themes if required.

Avoid using colors of high visual stress.

The text color should be contrast to the base color to make letters clear.

Avoid using a pattern or texture in the background of the body.

Limit the number of colors, as confusion will increase if too many kinds of colors are used.

Page Representation

Definition

The page indicator shows that how many pages are there and which page is shown now.

Application Guide

The pages are represented from left to right.

The currently selected page should be distinguished by visual differentiation.

Users can touch the left and right buttons or the page to carry out navigation.

This is used when the screens are at the same level, not suitable to showing the hierarchical structure.

It is recommended to use the page navigation represented in numbers if more pages should be represented.

In case that as in the page Indicator, a user touches a small area, secure sufficient space to the right and left to reduce the malfunction.

숫자형 Page indicator

Dot형 Page indicator

Popup

Definition
The popup is used to show an independent content that cannot be processed on the current screen, on an additional window.

Application guide
Avoid unnecessary popups on the mobile device.

Do not use selection or confirmation window excessively.

Check boxes

Definition
The check box is a control used to make multiple selections.

Application Guide
By default, no selection should be made.

If a check box is touched, 'V' is marked. If a selected check box is touched, "V" mark is removed.

If all select and all unselect are required, place a button in the top for controlling.

If too many items are provided and users go below the scroll area, the usability will be lowered. Therefore it is recommended to minimize the number of items.

Radio buttons

Definition
The radio button is a control used to select a menu when there are multiple menus.

Application Guide
By default, the current value is selected.

The items should be provided on one screen.

If you selected a new radio button, it is selected and the previously selected button is deselected automatically.

Ensure that operation will automatically saved, though without a save button.

Icons & Images

Application Guide
The icon is used when the space is too limited to use the text label or when the meaning is clearer by using an icon.

It is recommended to apply possible minimal elements to provide a lightweight design.

For the image format, PNG, JPG and GIF are recommended.

The icon and image are the element that builds the look and feel of the service and therefore should contain the service identity.

A metaphor should be contained in the icon so that users can identify the content intuitively.

The icon should be designed to get mixed together with the whole.

If multiple icons are used, there should be consistency in style and size between them.

The icons should be a simple image without excessive decorations and various colors.

Do not use the images that can infringe the copyright.

In order to improve user's understanding of public services, it is recommended that icons are used together with text labels.

Input Form

Definitions
This is the area for users to use the screen keyboard to enter information.

Application Guide
Since the text input is relatively difficult on the mobile device than on the PC, limit the user input if possible. If user input is inevitably required, simplify the items and avoid scroll using. Provide users with options than making them input texts. Use the frequently or recently selected option as the default value.

If the input content exists on the PC web, encourage users to use the PC version. ①
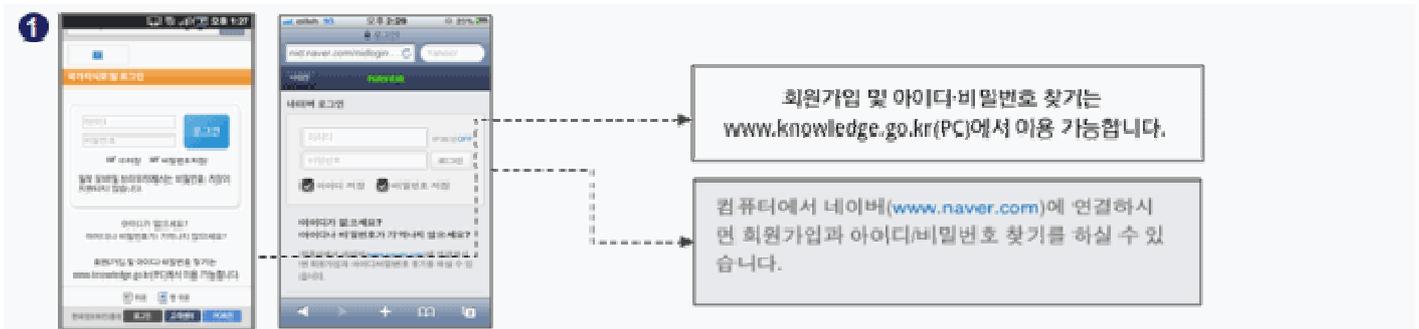
Video/Multimedia

Application Guide
The GIF animation and Flash should be avoided as they are not supported on some platforms.
The Apple products are not supporting Flash. Recent Android versions support Flash.
The video information should be provided together with texts or descriptions.

OS (Platform)	브라우저	Flash	GIF Animation	Multimedia
Android (v2.2)	Chrome	O	O	MP4, AVI, WMV, ASF (디바이스별로 다름)
iOS	Safari	X	X	MP4

| OS (Platform)	Browser	Flash	GIF Animation	Multimedia
Android (v2.2)	Chrome	O	O	MP4, AVI, WMV, ASF (it depends on the device)
iOS	Safari	X	X	MP4

Progress bar

Definition
The progress bar is a control showing the progress of a work.
It is used to foresee the completion time when downloading or uploading data.

Application Guide
The progress bar advances from left to right.
If multiple works are under progress, the progress bar appears once per work.
If the work time is 2 seconds or less the progress bar may be omitted.
The Cancel button may be provided.
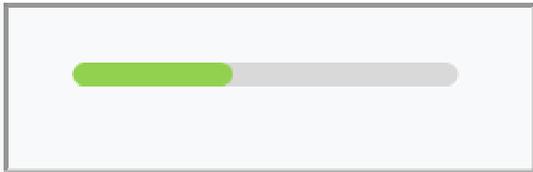
Progress bar

Progress indicator

Definition
The progress indicator is a control that shows the progress status when content is being loaded and completion time is unknown.

Application Guide
If there is content that takes a long time to be loaded, such as image, first show the text and then use the progress indicator.
The progress indicator is not interoperable with users.
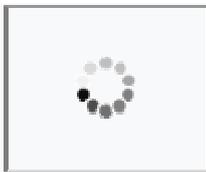
Progress indicator

Dropdown/picker

Definition
Both are controls used to select one from multiple items.

Application Guide
Dropdown/picker is provided when you touch the option bar or content area.
You can make a selection while viewing current value and other values.
If you select an item, it show details when the dropdown or picker is not closed.
If there are many items, a scroll may be provided to show more items.

Screen Resolution Definitions

Media Query Definition

Different styles should be applied depending on the mobile device.
Provide a style per mobile device.

```
<link media="only screen and (max-device-width: 480px)" href="small-device.css" type=
"text/css" rel="stylesheet">
<link media="screen and (min-device-width: 481px)" href="not-small-device.css"
type="text/css" rel="stylesheet">
```

If the portrait and landsacpe modes are used, a different style per mode should be applied.

```
<link rel="stylesheet" media="all and (orientation:portrait)" href="portrait.css">
<link rel="stylesheet" media="all and (orientation:landscape)" href="landscape.css">
```

Viewport Meta Tag Definition

This is a method to display properly to suit the mobile browsers of different sizes. It resolves the problem by inserting the viewport meta tag in the head area.

If the width of viewport is set to the width of the device;

```
<meta name = "viewport" content = "width = device-width" />
```

If the basic enlargement rate of the viewport is set to 100%;

```
<meta name = "viewport" content = "initial-scale = 1.0" />
```

If the basic enlargement rate of the viewport is set to 230% and user enlargement is disabled;

```
<meta name = "viewport" content = "initial-scale = 2.3, user-scalable = no" />
```

If Omnia viewport is selected based on iPhone;

```
<meta name="viewport" content="width=device-width; initial-scale=0.75; maximum-
scale=0.75;" />
```

If Safari, Operat and Chrome browsers are all supported;

```
<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-
scale=1.0, user-scalable=no" />
```

If the viewport is not supported;

The viewport is not supported on all the mobile browsers. Use different meta tags.

```
<meta name="HandheldFriendly" content="true" />
<meta name="MobileOptimized" content="320" />
```