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# Chinese IME Tutorial

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## 1. Overview

This tutorial will show the steps needed to add text input capability to a widget, using the IME feature of the widget manager. This will be done by creating a simple widget with a text input box and a password input box, and enabling user input with a virtual keyboard display. This widget will also demonstrate the optional notifications available from the IME feature, by displaying various status messages.



Picture 1-1 (12key keypad)

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Picture 1-2 (qwerty keypad)

## 2. Creating the Basic Widget

Start the SDK for Samsung TV widgets:

Add index.html in IMETutorial project, with contents as follows:

```
<!DOCTYPE HTML>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>IME Test widget</title>
<style type="text/css">
body{
    margin:0;
}
#item {
    position: absolute;
    left: 20px;
    top: 210px;
    padding:0 6px;
    font-size: 20pt;
    text-decoration: none;
    background:#809FFF;
}
#item2 {
    position:absolute;
    left:20px;
    top:440px;
    background:#809FFF;
}
#search {
    position: absolute;
    padding:5px;
    left: 40px;
    top: 350px;
    width: 375px;
    height: 70px;
    background:#E1E1E1;
}
#search div{
    float: left;
    font-size: 15pt;
    text-align:right;
    line-height:135%;
    border-color :skyblur;
    border-width: 1px;
    border-style:solid;
}
#searchText1, #searchText2{
    font-size: 12pt;
}
#resultBox{
    position: absolute;
    left: 20px;
    width:100px;
    height:60px;
    background:#FF99CC;
```

```
        top:470px;
    }
</style>
<script type="text/javascript" src="$MANAGER_WIDGET/Common/OpenSrc/jquery-
1.4.2.min.js"></script>
<script type="text/javascript"
src="$MANAGER_WIDGET/Common/Plugin/Define.js"></script>
<script type="text/javascript"
src="$MANAGER_WIDGET/Common/API/TVKeyValue.js"></script>
<script type="text/javascript" src="$MANAGER_WIDGET/Common/API/Widget.js"></script>
<script type="text/javascript" src="$MANAGER_WIDGET/Common/API/Plugin.js"></script>
</head>
<body onLoad="func_onLoad()">

<script type="text/javascript" src="ime_sample.js"></script>
<script type="text/javascript" src="$MANAGER_WIDGET/Common/IME_cn/ime.js"></script>

    <a id='item' href="javascript:" onkeydown=normalobjKeyFunc(this);
onfocus=itemFocus(this); onblur=itemBlur(this);>
        Refresh
    </a>

    <div id="search">
        <table width="100%" height="100%" border="0px" cellpadding="0px"
cellspacing="0px">
            <tr>
                <td>Search:</td>
                <td>
                    <input size=30 type="text" id="searchText1">
                </td>
            </tr>
            <tr>
                <td>Password:</td>
                <td>
                    <input size=30 type="password"
id="searchText2">
                </td>
            </tr>
        </table>
    </div>

    <a id='item2' href="javascript:" onkeydown=normalobjKeyFunc(this);
onfocus=itemFocus(this); onblur=itemBlur(this); onclick=normalobjKeyFunc(this)>
        SetString Test
    </a>
    <div id="resultBox"></div>

</body>
</html>
```

If you have unzipped the provided files, the widget should already have an HTML index page.

Add ime\_sample.js in IMETutorial project, with contents as follows

```
/**
 * Sample to use IME module for Samsung TV Widget
 */
```

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```
//Variable to save an IME object
var ime = null;
var ime2 = null;

/**
 * On load function
 */

function func_onLoad(){
    alert("func_onLoad begin...");

    keyc = new Common.API.TVKeyValue();
    widgetAPI = new Common.API.Widget();
    widgetAPI.sendReadyEvent();
    var pluginAPI = new Common.API.Plugin();
    pluginAPI.registAllKey();

    //Only support in 2012th TV
    //_g_ime.pluginMouse_use_YN = true;
    //_g_ime.dimmm_use_YN = false;
    //_g_ime.Recog_use_YN = true;
}
```

Now, start the SDK emulator. If you see the message 'alert() : func\_onLoad begin...!' in the log manager, that means you have successfully created the widget. You should be able to see the provided layout on the screen, consisting of several text boxes.

You should also be able to view this on the TV with the User Widget upload feature.

Important, sendReadyEvent(), registAllkey() functions,

This functions registering for the widget to event and handle all keys used by the IME

- 1.widgetAPI.sendReadyEvent(); //event send function for widget
- 2.pluginAPI.registAllKey(); //key registe funciton for widget

### 3. Basic Text Entry using the IME

In this section we will add the IME feature to the widget, which will enable us to enter text in the input boxes.

Add the following class definition to ime\_sample.js:

```
function func_onLoad(){
    alert("func_onLoad begin...");

    keyc = new Common.API.TVKeyValue();
    widgetAPI = new Common.API.Widget();
    widgetAPI.sendReadyEvent();
    var pluginAPI = new Common.API.Plugin();
    // pluginAPI.registIMEKey();
    pluginAPI.registAllKey();

    //Only support in 2012th TV
    //_g_ime.pluginMouse_use_YN = true;
    //_g_ime.dimm_use_YN = false;
    //_g_ime.Recog_use_YN = true;

    ime = new IMECNShell("searchText1", ime_init_text,this);
    if(!ime){
        alert("object for IMECNShell create failed", 3);
    }

    ime2 = new IMECNShell("searchText2", ime_init_passwd,this);
    if(!ime2){
        alert("object for IMEShell create failed", 3);
    }
}
```

This class creates an IMECNShell object for the specified HTML input element.

```
ime = new IMECNShell ('inputbox id',callback function, this);
parameters : inputbox id,
             callback function,
             this.content (option)
```

Note that the IME feature supports HTML <input> elements only; other kinds of element are not supported. The callback function ime\_init\_text is called when the IME object has been fully created. Creation of an IME object is asynchronous, and no IME methods should be called until the callback has been received. In the callback, we notify the index.html that this HTML input element is ready.

Add the following to the definition of callback function for searchText1

```
function ime_init_text(imeobj){

    //if you need input object, use "getInputObj" function
    var inputobj = imeobj.getInputObj();

    alert("start initializing : "+inputobj.id);

    //option : set function that keypad/qwerty select on IME start, default is
    'qwerty'
    //imeobj.setKeySetFunc('qwerty');
    //imeobj.setKeySetFunc('12key');
```



```
//option : keypad x,y position, IME XT9 default right alignment
//imeobj.setKeypadPos(1355, 159); //1080p
//imeobj.setQWERTYPos(860, 159);

imeobj.setKeypadPos(780, 150); //720p
imeobj.setQWERTYPos(570, 150);

//imeobj.setKeypadPos(427, 80); //540p
//imeobj.setQWERTYPos(430, 80); //IME XT9, new function
//imeobj.setWordBoxPos(150,15); //IME XT9, this function do not use more

//option : set function that runs after all key input (pass array as arguments)
//when IME runs the function, first argument is Keycode, second argument will be
the first element of the array
//imeobj.setAnyKeyFunc(testf2);

// option : set function that callwhen left key pressed on cursor position is at
the beginning of input box
// imeobj.setPrevEventOnLeftFunc(testf1);

// option : set function that called when letter is completed
imeobj.setOnCompleteFunc(onC);

// option : set function that called when enter key is pressed.
// imeobj.setEnterFunc(sampleEnter);

// option : set function that called when input reached maxlength
// imeobj.setMaxLengthFunc(sampleMaxLength);

//option : 키코드에 새로운 함수를 연결하고 싶을때.. ex) red key , blue key
//if fuctions is registered, keycode will be a parameter when the function is
called.
//if the function returns true, IME continues
//if the function returns false, IME returns
imeobj.setKeyFunc(88, textobjKeyFunc);
imeobj.setKeyFunc(keyc.KEY_UP, textobjKeyFunc);
imeobj.setKeyFunc(keyc.KEY_DOWN, textobjKeyFunc);
imeobj.setKeyFunc(keyc.KEY_RETURN, closeIME);
// imeobj.setBlockSpace(true);
// imeobj.setKeyFunc(keyc.KEY_5, testf1);

// imeobj.setKeyFunc(keyc.KEY_YELLOW, function(){});
// imeobj.setKeyFunc(keyc.KEY_RIGHT, function(){});

// to unregister key Function assign null function to keycode
// imeobj.setKeyFunc(5, function(){});

//option : when keypad/qwerty changed event callback function,for input object
x,y position change
imeobj.setKeypadChangeFunc('12key',move12KeyPosition);
imeobj.setKeypadChangeFunc('qwerty',moveqwertyPosition);

//option : when inputbox highlight event callback function,for input object focus
imeobj.setInputHighlightFunc(inputHighlight);

//get IME version : return string is 'XT9', 'T9'
alert("[IME] =====");
imeobj.IsSupportXT9: "+imeobj.IsSupportXT9);

//get IME mode : return string is '12key', 'qwerty'
var strKeySet = imeobj.getKeySet();
alert("[IME] ===== strKeySet:"+strKeySet);
```

```
//document.getElementById("item").focus();
//document.getElementById("item2").focus();

if(_g_ime_cn.pluginMouse_use_YN){
    imeobj._focus();
    document.getElementById('searchText1').focus();
}
else{
    document.getElementById('searchText1').focus();
}

/*
var ret;
if(ret = imeobj.setMode("_num")){
    alert("ret : true "+ret);
}
*/

alert("ime_init end...")
```

Now we will create the Input objects, and register to handle the keys needed for the IME to work correctly.

Add the following to the definition of callback function for searchText2, with password type.

```
function ime_init_passwd(imeobj){

    var inputobj = imeobj.getInputObj();

    alert("start initializing : "+inputobj.id);

    //imeobj.setKeypadPos(370,40);

    imeobj.setKeyFunc(keyc.KEY_UP, passwdobjKeyFunc);
    imeobj.setKeyFunc(keyc.KEY_DOWN, passwdobjKeyFunc);

    //document.getElementById("searchText2").focus();

    alert("ime_init_passwd end...")
}
```

### 4. Register Anykey callback function

And add the following code to complete ime\_ sample.js:

```
//2nd dummy function for testing
function testf2(a,b,c) {
    alert("----- test2 -----");
    alert("----- args1: "+ a +" -----");
    alert("-----");
}
```

1. setAnyKeyFunc – the specified callback function will be called each time a key is pressed, no matter what the key.

Parameter : key code of key press event.

### 5. Register keypad changed callback function

And add the following code to complete ime\_sample.js:

```
function move12KeyPosition(arg){
    //define 12key/qwerty keypad basic position : right alignment
    alert("12key position change:"+arg);
    if (arg == '12key') {
        if (curWidget.height == '720') {
            $("#search").css("right", 384); //1280-896
            $("#search").css("top", 106);
        }
        else {
            $("#search").css("right", 286); //960-676
            $("#search").css("top", 82);
        }
    }
    else
        if (arg == 'qwerty') {
            if (curWidget.height == '720') {
                $("#search").css("right", 714); //1280-566
                $("#search").css("top", 106);
            }
            else {
                $("#search").css("right", 534); //960-426
                $("#search").css("top", 82);
            }
        }
    }
}

function moveqwertyPosition(arg){
    alert("qwerty position change:"+arg);

    if (curWidget.height == '720') {
        $("#search").css("right",714); //1280-566
        $("#search").css("top",106);
    }
    else{
        $("#search").css("right",534); //960-426
        $("#search").css("top",82);
    }
}
}
```

1. numeric or qwerty keypad changed event callback function. IME keypad align left.

Parameter : keyset string, '12key', 'qwerty

```
function move12KeyPosition(arg){}
function moveqwertyPosition(arg){}
```

2.this is widget display resolution, height size ('540', '720')  
curWidget.height == '720';

### 6. Register Enter and other keypress event callback function

And add the following code to complete ime\_sample.js:

```
// Function for enter (argument : entered string)
function sampleEnter(str) {
    alert("Enter key pressed : "+str);
}
function textobjKeyFunc(keyCode){
    switch(keyCode) {
        case(29460) : // Up Key
            alert("[IME] ===== Up Key!");
            if (_g_ime.pluginMouse_use_YN) {
                ime._blur();
            }
            else{
            }
            document.getElementById('item').focus();
            break;

        case (29461) : // Down Key
            if(_g_ime.pluginMouse_use_YN){
                ime._blur();
                ime2._focus();
            }
            else{
                document.getElementById('searchText2').focus();
            }
            break;

        case (88) : // return Key
            alert("===== here is it!");
            return false;
            break;

        case (keyc.KEY_RED) : // RED Key

            break;

    }
    return false;
}
```

1.set enter key callback function

```
function sampleEnter(str)
```

2. Set a callback function that will be called when when a specific key is pressed.  
ex) red key, blue key,  
when return false of call back function, exit and do not more key event.

Parameter : keycode of keypress event

```
function textobjKeyFunc(keyCode){}
return false :
```

### 7. Register other callback function

- `setOnFocusFunc` - the specified callback function will be called when the input object is focused.
- `setEnterFunc` - the specified callback function will be called when the enter key is pressed on the input box. We will display a message on the HTML page when this callback is triggered.
- `setKeyFunc` - the specified callback function will be called when the specified key is pressed. We used this callback in the previous section to change the focus. Here we have added a new callback for the Info key, as an example of how key handling can be customised for the requirements of a particular widget. We will respond to this callback by displaying a message. We return true as we don't want to prevent the IME from taking action if it needs to.
- `setInputHighlight` - - the specified callback function will be called when input box highlight. in '12key' mode is always highlight and in 'qwerty' mode is move highlight with TV remocon

### 8. Register Control functions

- `setBlockSpace` – Block space input.
- `getKeySet` – return current keyset mode. ‘12key or ‘qwerty’ string
- `setInputMode` –If you just want to use one keyboard mode. (‘12key or ‘qwerty’)

## 9. IME Function and Value Reference

The following functions are all member functions of the IME object.

<i>Function</i> IMECNShell	
Create IME object	
<b>Syntax</b>	IMECNShell(inputObjId, callbackFunc, context)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>inputObjId: id of the input object</li> <li>callbackFunc: called when the IME object has been fully created</li> <li>context:</li> </ul>
<b>Return Value</b>	IME object
<b>Remarks</b>	None
<b>Example</b>	imeObj = IMECNShell('input_obj_id', callbackFunc, this);

<i>Function</i> setInputMode	
Set only one keyboard mode	
<b>Syntax</b>	setInputMode (imeObj, strkeySet)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>imeObj</li> <li>strkeySet: '12key' or 'qwerty'</li> </ul>
<b>Return Value</b>	None
<b>Remarks</b>	You can use this function when you only need one keyboard mode.('12key' or 'qwerty')
<b>Example</b>	imeObj.setInputMode (imeObj, '12key');

<i>Function</i> getInputObj	
Get input object from IME object	
<b>Syntax</b>	getInputObj ()
<b>Parameter</b>	<ul style="list-style-type: none"> <li>None</li> </ul>



<b>Return Value</b>	input object from IME object
<b>Remarks</b>	You can use this function when you need to get the HTML input object attached to an IME object.
<b>Example</b>	<code>var inputObj = imeObj.getInputObj();</code>

<i>Function</i> setAnyKeyFunc	
Set a callback function that will be called each time a key is pressed, no matter what the key.	
<b>Syntax</b>	setAnyKeyFunc(func)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• func: callback function with following parameters:                             <ul style="list-style-type: none"> <li>○ keyCode: code of the key that was pressed</li> <li>○ No return value</li> </ul> </li> </ul>
<b>Return Value</b>	None
<b>Remarks</b>	The function will be called after key handle process.
<b>Example</b>	<pre>var callback = function(keyCode) {     alert("Key pressed, code " + keyCode); } imeObj.setAnyKeyFunc(callback);</pre>

<i>Function</i> setKeyFunc	
Set a callback function that will be called when when a specific key is pressed.	
<b>Syntax</b>	setKeyFunc(keyCode, func)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• keyCode: code for the specific key that should trigger the callback</li> <li>• func: callback function with the following parameters:                             <ul style="list-style-type: none"> <li>○ keyCode: the key code that was pressed</li> <li>○ Return value:                                     <ul style="list-style-type: none"> <li>▪ true – IME will also handle this key if it needs to.</li> <li>▪ false – IME will not handle the key at all</li> </ul> </li> </ul> </li> </ul>
<b>Return Value</b>	none

<b>Remarks</b>	<p>Some keys are usually handled by the IME itself. For example, numeric keys are used for text input, and the left and right keys are used for moving the cursor. It is possible to register callbacks for these special keys using <code>setKeyFunc()</code>. The IME will call the callback function first, before handling the key itself. If the callback function returns true (or null), it will continue as normal to handle the key and take the usual action (like entering text or moving the cursor). If the callback function returns false, the IME will not take action for this key. This allows the client to block certain default behaviour of the IME (like cursor movement for example). This feature should be used with care as it prevents normal functioning of the IME.</p>
<b>Example</b>	<pre>var tvKey = new Common.API.TVKeyValue(); var callback = function(keyCode) {     if (keyCode == tvKey.KEY_LEFT)     {         alert("Blocking left key");         return false;     }     else     {         alert("Key code received: " + keyCode + ", allow IME to process");         /* Do some action here based on keyCode */         return true;     } } imeObj.setKeyFunc(tvKey.KEY_LEFT, callback); imeObj.setKeyFunc(tvKey.KEY_INFO, callback); imeObj.setKeyFunc(tvKey.KEY_MENU, callback);</pre>

### Function

#### setKeypadPos

Set the position for the display of the IME keypad window

<b>Syntax</b>	setKeypadPos(x, y, z)
<b>Parameter</b>	<ul style="list-style-type: none"><li>• x: horizontal offset of the IME keypad display from the left edge of the screen, in pixels</li><li>• y: vertical offset of the IME keypad display from the top edge of the screen, in pixels</li><li>• z: z-index offset of the IME keypad. This value beside CSS z-index of the keypad. This parameter is optional.</li></ul>
<b>Return Value</b>	None
<b>Remarks</b>	None
<b>Example</b>	imeObj.setKeypadPos(500, 40);

### Function

#### setQWERTYPos

Set the position for the display of the IME QWERTY keypad window

<b>Syntax</b>	setQWERTYPos (x, y, z)
<b>Parameter</b>	<ul style="list-style-type: none"><li>• x: horizontal offset of the IME keypad display from the left edge of the screen, in pixels</li><li>• y: vertical offset of the IME keypad display from the top edge of the screen, in pixels</li><li>• z: z-index offset of the IME keypad. This value beside CSS z-index of the keypad. This parameter is optional.</li></ul>
<b>Return Value</b>	None
<b>Remarks</b>	None
<b>Example</b>	imeObj. setQWERTYPos (500, 40);

### Function

#### setEnterFunc

Set a callback function that will be called when the enter key is pressed on the input box.

<b>Syntax</b>	setEnterFunc(func)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• func: callback function with the following parameters: <ul style="list-style-type: none"> <li>○ string: character string currently entered in the input box</li> <li>○ No return value</li> </ul> </li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	This is commonly used to indicate that entry of text on a form is completed.
<b>Example</b>	<pre>var callback = function(string) {     alert("User pressed enter, final text is " + string); } imeobj.setEnterFunc(callback);</pre>

### *Function*

#### setMaxLengthFunc

Set a callback function that will be called when the maximum length of the HTML input element is reached.

<b>Syntax</b>	setMaxLengthFunc(func)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• func: callback function with no parameters or return value</li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	The maximum length is specified as the HTML property "maxlength". This callback will not be triggered if a "maxlength" property has not been set for the input element.
<b>Example</b>	<pre>var callback = function() {     alert("Maximum length reached"); } imeObj.setMaxLengthFunc(callback);</pre>

### *Function*

#### setPrevEventOnLeftFunc

Set a callback function that will be called when the left key is pressed, and the cursor position is at the start of the input box.

<b>Syntax</b>	setPrevEventOnLeftFunc(func)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• func: callback function with no parameters or return value</li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	none

<b>Example</b>	<pre>var callback = function() {     alert("Left key pressed at left side of input box"); } imeObj.setPrevEventOnLeftFunc(callback);</pre>
----------------	--

<i>Function</i> <b>setOnCompleteFunc</b>	
Set a callback function that will be called when the entry of one character is completed.	
<b>Syntax</b>	setOnCompleteFunc(func)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• func: callback function with no parameters or return value</li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	<p>This function will be called when:</p> <ol style="list-style-type: none"> <li>1. Right key pressed</li> <li>2. Delete key pressed (delete key is indicated by IME display)</li> <li>3. A space character is added</li> <li>4. Entry of a character is completed</li> </ol> <p>For example, in a text style input box, the user may press a numeric key 3 times to choose the correct character. This callback will not be triggered until a short time is elapsed after this, or the user presses a different numeric key – this means that the user has chosen to keep this character in the string, and so the entry of one character is completed. This callback can be used, for example, to create a list of suggestions for completing entries in a search box.</p>
<b>Example</b>	<pre>var callback = function() {     alert("Entry of a character is complete"); } imeObj.setOnCompleteFunc(callback);</pre>

<i>Function</i> <b>setBlockSpace</b>	
Block space	
<b>Syntax</b>	setBlockSpace(block)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• block (optional, default: true) <ul style="list-style-type: none"> <li>○ true – IME will not allow the space character to be entered</li> </ul> </li> </ul>

	○ false – IME will allow the space character to be entered
<b>Return Value</b>	None
<b>Remarks</b>	This function can be used to block entry of the space character in an input box. For example, this can be useful when entering a user id or password.
<b>Example</b>	imeObj.setBlockSpace (true);

<i>Function</i> <b>setString</b>	
Set the string for display in the HTML input box associated with the IME object	
<b>Syntax</b>	setString(string)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>string: character string to display in the input box</li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	This function should be used instead of directly setting the value property of the HTML input box (element.value="..."). Directly setting the value property will cause unexpected behaviour in the IME.
<b>Example</b>	imeObj.setString("Hello world");

<i>Function</i> <b>setKeySetFunc</b>	
Set the string for start keypad layer with the IME object	
<b>Syntax</b>	setKeySetFunc(string)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>string: keypad layer type, '12key' or 'qwerty'</li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	This function should be used set keypad layer type of the IME object.
<b>Example</b>	imeObj.setKeySetFunc("qwerty");

<i>Function</i> <b>setKeypadChangeFunc</b>	
Set a callback function that will be called when exchange to 12key or qwerty with the IME object	

<b>Syntax</b>	setKeypadChangeFunc (string, func)
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• string: keypad layer type, '12key' or 'qwerty'</li> <li>• func: callback function with no parameters or return value</li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	Change position of the HTML Inputbox div When the IME keypad change event times.
<b>Example</b>	imeObj.setKeypadChangeFunc('12key',move12KeyPosition); imeObj.setKeypadChangeFunc('qwerty',moveqwertyPosition);

*Function*

setInputHighlight

Set a callback function that will be called when input box highlight.

<b>Syntax</b>	setInputHighlightFunc(func);
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• func: callback function with no parameters or return value</li> </ul>
<b>Return Value</b>	none
<b>Remarks</b>	'12key' mode – always highlight focus 'qwerty' mode – move highlight focus with remocon direction keypress
<b>Example</b>	imeObj.setInputHighlightFunc(inputHighlight);

*Global value*

\_g\_ime\_cn.dim\_use\_YN

Set background dim div use or not use with the IME object when use mouse

<b>Syntax</b>	_g_ime_cn.dim_use_YN = false;
<b>Parameter</b>	<ul style="list-style-type: none"> <li>• bool: true or false, default: true</li> </ul>
<b>Return Value</b>	Nothing
<b>Remarks</b>	Background dim div use or not use When use mouse If Apps use mouse, focus move to input box When background dim click. It's Global value of IME object. Add position: Before new IMEShell function. <b>This value is only support by 2012<sup>th</sup> TV</b>
<b>Example</b>	_g_ime_cn.dimm_use_YN = true;

## IME widget creation Tutorial

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	<pre>imeObj = new IMECNShell("searchText1", ime_init_text,this); if(!ime){     alert("object for IMEShell create failed", 3); }</pre>
--	---

### Global value

#### `_g_ime_cn.pluginRecog_use_YN`

Set the voice recognize guide message show or hide with the IME object

<b>Syntax</b>	<code>_g_ime_cn.pluginRecog_use_YN = false;</code>
<b>Parameter</b>	<ul style="list-style-type: none"> <li>bool: true or false, default: true</li> </ul>
<b>Return Value</b>	Nothing
<b>Remarks</b>	<p>Voice recognize use or not use on Apps.</p> <p>If TV support voice recognize, Apps can set show or hide voice recognize guide message of IME keypad bottom.</p> <p>It's Global value of IME object.</p> <p>Voice recognize don't support on SDK,</p> <p>Add position: Before new IMEShell function</p> <p><b>This value is only support by 2012<sup>th</sup> TV</b></p>
<b>Example</b>	<pre>_g_ime_cn.pluginRecog_use_YN = false; imeObj = new IMECNShell("searchText1", ime_init_text,this); if(!ime){     alert("object for IMECNShell create failed", 3); }</pre>

### Global value

#### `_g_ime_cn.pluginMouse_use_YN`

Get mouse support with the IME object

<b>Syntax</b>	<code>var mouse_use = _g_ime_cn.pluginMouse_use_YN;</code>
<b>Parameter</b>	Nothing
<b>Return Value</b>	<ul style="list-style-type: none"> <li>bool: true or false, default value : true</li> </ul>
<b>Remarks</b>	<p>Mouse use or not use on Apps.</p> <p>If Apps support mouse, Apps can get status or mouse use.</p> <p>It's Global value of IME object.</p>



	Add position: After new IMEShell function <b>This value is only support by 2012<sup>th</sup> TV</b>
<b>Example</b>	<pre> if(_g_ime_cn.pluginMouse_use_YN){     imeObj._focus();     document.getElementById('searchText1').focus(); } else{     document.getElementById('searchText1').focus(); } </pre>

<i>Function</i> _focus()	
Set show and start of IME keypad when mouse use.	
<b>Syntax</b>	imeObj._focus()
<b>Parameter</b>	Nothing
<b>Return Value</b>	Nothing
<b>Remarks</b>	<p>IME show and start function is defferent when Mouse use on Apps.                  If Apps not use mouse, show IME keypad by focus() event.                  If Apps use mouse, show IME keypad by _focus() function.  <b>This function is only support by 2012<sup>th</sup> TV</b></p>
<b>Example</b>	<pre> if(_g_ime.pluginMouse_use_YN){     imeObj._focus();     document.getElementById('searchText1').focus(); } else{     document.getElementById('searchText1').focus(); } </pre>

<i>Function</i> _blur()	
Set hide and close of IME keypad when mouse use.	
<b>Syntax</b>	imeObj._blur()

<b>Parameter</b>	Nothing
<b>Return Value</b>	Nothing
<b>Remarks</b>	<p>IME hide and close function is defferent when Mouse use on Apps.</p> <p>If Apps not use mouse, hide IME keypad by blur() event.</p> <p>If Apps use mouse, hide IME keypad by _blur() function.</p> <p><b>This function is only support by 2012<sup>th</sup> TV</b></p>
<b>Example</b>	<pre>if(_g_ime.pluginMouse_use_YN){     imeObj._blur();     imeObj2._focus();     document.getElementById('searchText2').focus(); } else{     document.getElementById('searchText2').focus(); }</pre>