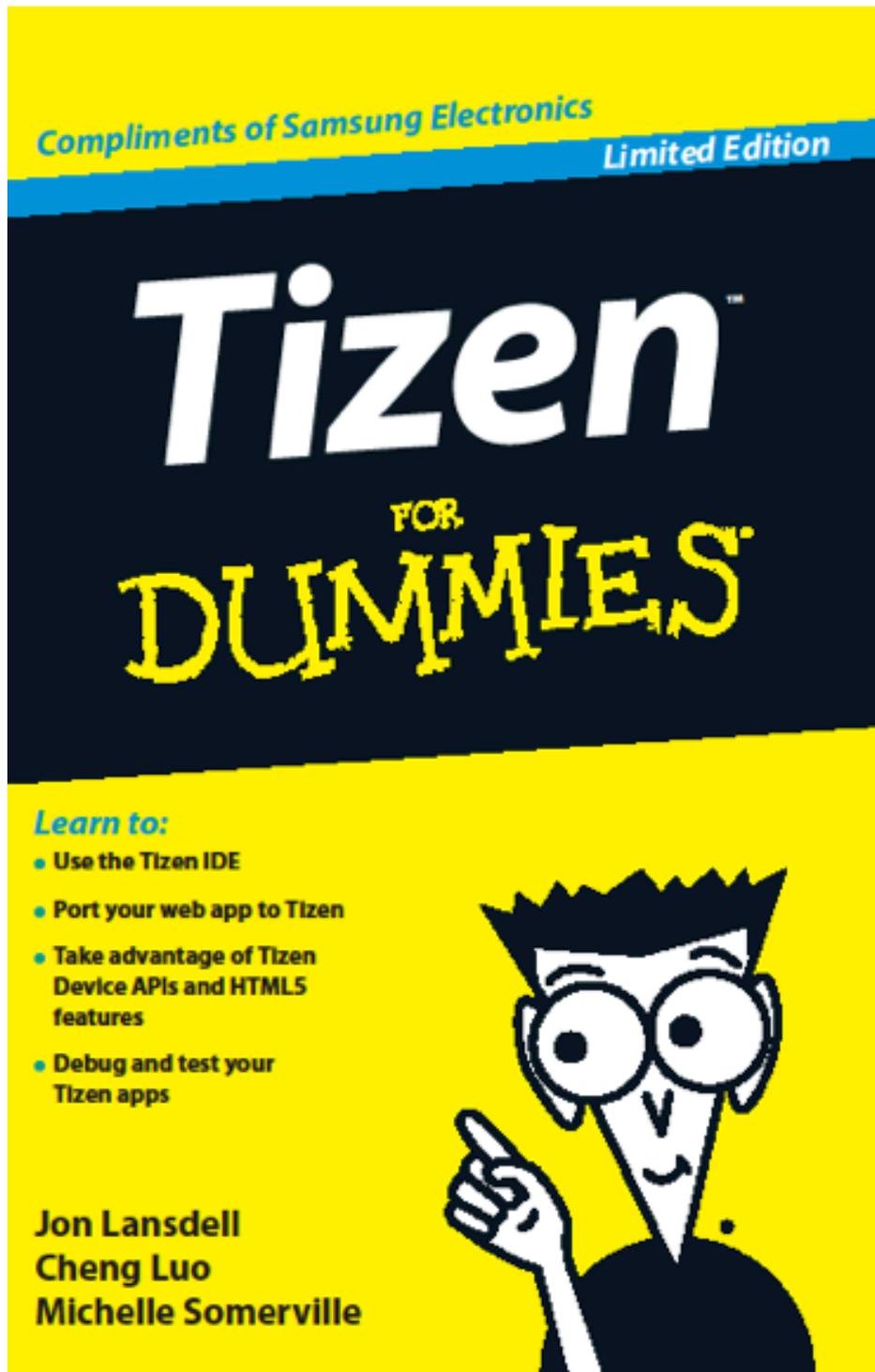


# Tizen For Dummies

Main changes between 2.0 Alpha and 2.1



# Introduction

Tizen for Dummies was written using version 2.0 alpha of the Tizen SDK and the 2.1 release brought with it quite a few changes. We've summarised the main changes in this document.

## Main changes at a glance

Chapter	Main Changes
Chapter 2, Architecture	Some namespaces have been removed while others have been renamed. The Bookmark, DataControl, DataSynchronization, MessagePort, NetworkBearerSelection, Package, Push, SecureElement and SystemSetting APIs have been added. Tizen now supports native app development.
Chapter 3, Getting Started	New sample apps have been added. HTML preview and CSS preview are now implemented in a Google Chrome window.
Chapter 4, Piecing Together the Application Jigsaw	The format for specifying access to groups of APIs has changed and features are now referred to as privileges. The format of the Tizen application id attribute has changed and a new package attribute has been added.
Chapter 5, Testing and Debugging	Emulator and device debugging is now done using the Remote Inspector in a Google Chrome window.
Chapter 7, Building Your UI	Due to changes in the UI Framework much of the code in this chapter is out-of-date, but the UI Builder information is still valid and useful.
Chapter 8, Taking Advantage of Location Based Services	The Geocoder and LBS APIs have been removed. Use the 3 <sup>rd</sup> Party alternatives, such as the Google Maps API discussed in this chapter.
Chapter 9, Working with Multimedia	The MediaContent API has been renamed to Content. The playlist parameter has been removed which affects the sample app. ApplicationService has become ApplicationControl.
Chapter 10, Using Hardware in Tizen	Some NFC API changes.
Chapter 11, Messaging	Changes to the layout of list view message boxes
Chapter 12, Working with Contacts	The Contacts API currently only supports vCard version 3.0.
Chapter 13, Getting Organized with Calendars	A new calendarId property has been added.

# Changes in detail

## Chapter 2, Architecture

Some namespaces have been removed- including the location based features and there are some new ones such as Bookmark, DataControl, DataSynchronization etc..

A more detailed description of any new and modified APIs can be found in the Tizen Release Notes and API Release Notes, which are available on the developer site at <https://developer.tizen.org/downloads/sdk/2.1-release-notes>.

The biggest change in the architecture is the new C++ native APIs. If you are writing an app which is performance intensive or you need to access device features not available through the web APIs, then writing a native app might be the best approach. We think web apps are the best approach for creating Tizen apps in most cases, but with the new native APIs, you have another option.

## Chapter 3, Getting Started

### P33 Using a sample app

The sample apps provided by the New Project wizard have changed. While the SystemInfo app is still there, new apps have been added to demonstrate the features of most of the Tizen device APIs, including content, contacts and sensors. The web apps section contains both Tizen API samples and web apps which just use HTML5 APIs.

### P 38 to 39 HTML Preview, CSS Preview

The HTML and CSS preview panes are now implemented using a Google Chrome window, so you'll need the Chrome browser installed. Since Chrome is Webkit based, the preview should provide a more accurate rendering of the HTML and CSS files.

To show the preview, open the HTML or CSS file and click the preview button on the toolbar at the top of the source code window or just hit CTRL+4. The preview will now open in Chrome.

## P39 Minifying JavaScript

A very useful new option has been added, a JavaScript or CSS code beautifier. This will undo the work of the minify option, adding back the spaces and inserting new lines to return the code to its easier to read layout. To use the beautifier, open a minified JavaScript or CSS file and click the JavaScript or CSS Beautifier button on the toolbar at the top of the window (it's next to the HTML preview icon). Alternatively just hit CTRL+6.

# Chapter 4, Piecing Together the Application Jigsaw

## P46 The Configuration File

A new package attribute has been added to the Tizen extension of the configuration file. This package attribute is a 10-character alphanumeric value, which is automatically assigned by the Tizen SDK e.g. "LCj1zMvDil"

The Tizen application id attribute has now changed to a value created from the package attribute and the project name e.g. "LCj1zMvDil.SysteminfoSample"

This change will affect any projects developed using previous versions of the SDK when you import them into the 2.1 SDK. The IDE will be unable to build the widget package, as the application id will be in the wrong format and the package attribute will not exist. To fix this you must update your configuration file. If in doubt, you can generate the application's id and package attributes by clicking on the Generate button in the configuration editor's Tizen tab.

## P50 Features Tab

The format for specifying that your app requires access to certain APIs at runtime has changed and what were referred to in 2.0 alpha as features, are now known as privileges. For example, if your app requires access to the systeminfo API, in 2.0 alpha you would add the following to your config.xml file:

<http://tizen.org/api/systeminfo>

In 2.1 this is now written as: <http://tizen.org/privilege/systeminfo>

You can add new privileges from the privilege tab of the configuration editor.

The features tab is now the place to specify required hardware or software features, which can be used for app filtering on the Tizen store.

As a result of these changes, some of details in the listings and screenshots in this chapter will be different from the current version of the SDK, but you should be able to follow along.

## P54 Tizen tab

Some new settings have been added, including encryption, background support and install location- which allows you to specify that the app can be installed on an SD card.

## P55 Start File

The Web Runtime also allows the start file to be located on an external server.

## P62 to 67, Example 2- Something a bit more complicated

The SystemInfo example now looks completely different, but the concepts introduced in this section remain the same and still represent a useful tutorial for getting to know the parts of a Tizen app.

# Chapter 5, Testing and Debugging

## P83 to 84 Debugging

The Remote Inspector for the Emulator and the device is no longer run from within the IDE. When the debug option is selected, the Remote Inspector is launched in a Google Chrome window, so you'll need the Chrome browser installed.

## Chapter 7, Building your UI

There have been a few changes in the UI framework and the ‘Building a Contacts UI’ section is now out of date. While it’s still a useful example of building a UI, most of the icons used in the app are no longer included in the UI framework. In addition, the controlbar UI element no longer exists and has been replaced by a tabbar, so the UI of the contacts app will look quite different.

However, the features of the UI Builder are still the same, so the chapter remains a good starting point for creating your app’s UI.

Refer to the SDK Help for the latest information on UI framework features and the availability of UI Widgets.

## Chapter 8, Taking Advantage of Location Based Services

### P127 Tizen Geocoder API

The Geocoder and LBS (Location Based Services) namespaces have been removed. You’ll need to use third party APIs such as the Google Maps API, which we also demonstrate in this chapter.

## Chapter 9, Working with Multimedia

### P134 to 136 Discovering Content

The MediaContent API has been renamed to Content. MediaAudio, MediaImage and MediaVideo are now known as AudioContent, ImageContent and VideoContent respectively. There is also no MediaSource object, the functionality of the Content API is now accessed using the ContentManager object stored in the tizen.content property. The privileges required to access content have also changed. You should now use the <http://tizen.org/privilege/content.read> and <http://tizen.org/privilege/content.write> privileges to access content functionality.

## P137 to 138 Creating a playlist

The playCount and playTime attributes have been removed, which does have a significant impact on our playlist sample app. The idea behind this is that the playcount and playtime are attributes which should be stored and updated by the app itself, rather than the system. However, while it would require some changes, the app is still a good example of creating filters and using them in a search, so it's still well worth referring to. Another change is that you no longer need to set the <http://tizen.org/privilege/tizen> privilege to use filters.

## P139 to 140 Using the ApplicationService

The ApplicationService object has been changed to ApplicationControl which also has a new category attribute, representing the category of application to be launched. Apart from the name change, the functionality is unchanged, so you can still make use of the content in this section.

The tizen.application.launchservice() function has been renamed to tizen.application.launchAppControl(). The reply callback has also changed; see the SDK Help for more details.

# Chapter 10, Using Hardware in Tizen

## P152 to 156, Using NFC in your Tizen Apps

The error handling callback has been removed from SetTagListener(), SetPeerListener() and SetReceiveNDEFListener().

# Chapter 11, Messaging

There are a few changes to be made to the code in this chapter to support Tizen 2.1 and we've included the modified listings here. The other listings in the book are unchanged. The example is based on the single-page Web UI Framework template, so you can make these changes to the code generated by the template, together with the code given in the other listings in the chapter, to build the complete example.

The privileges required to use messaging functionality have also changed. Refer to the SDK Help for more information about the privileges required for using the messaging APIs.

## P167-168 Creating the Page

We now use the standard search bar as the input type instead of tizen-search. Also note that we need to specify that a back button should be added to the page, since it's no longer added automatically:

### Listing 11-1 index.html

```
<body>
  <div data-role="page" id="main" data-add-back-btn="true">
    <div data-role="header" data-position="fixed">
      <h1>Messages</h1>
      <input type="search" id="searchBox" data-cancel-
btn="true"/>
    </div><!-- /header -->

    <div data-role="content">
      <ul id="msgList" data-role="listview"></ul>
    </div><!-- /content -->

    <div data-role="footer" data-position="fixed">
      </div><!-- /footer -->
  </div><!-- /page -->
</body>
```

## P169, Initialisation

We changed the Initialisation code, shown in Listing 11-2, to use the initialisation code from the Tizen SDK's UI Framework template:

### Listing 11-2 Page initialisation

```
var init = function () {
    $('#div[data-role="page"]:first .ui-btn-back').bind("click",
        function(event) {
            var currentApp =
tizen.application.getCurrentApplication();
            currentApp.exit();
        });
    $("#searchBox").bind("input", updateList);
    $("#searchBox").bind("change", updateList);

    // get message service
    getMessageService();
    console.log("init() called");
};
$(document).bind('pageinit', init);
```

In Tizen 2.1 you no longer need to set the <http://tizen.org/privilege/application> privilege to use the application's exit() method.

## P170-171 Drawing the List

As the UI theme in 2.1 has changed, the ListView bubble type used in our example appears slightly differently in the 2.1 version, so we've made some changes to the code and CSS file. You can see the result in the updated Figure 11-1.

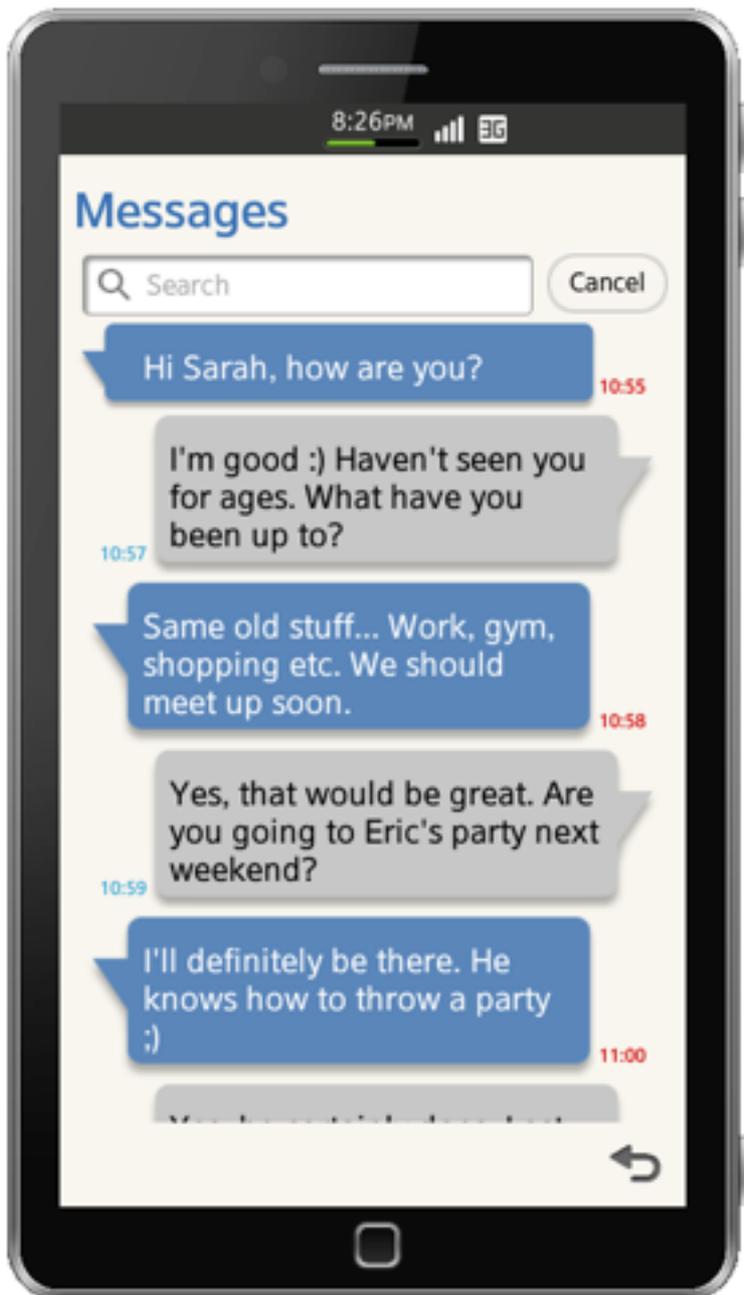


Figure 11-1 Message search app

In the 2.0 alpha version, the time stamp appears within the list bubble and in a small font size so the long format time could fit within the box.

Now the time stamp appears outside the message box, so we changed the code that adds the time stamp to the bubble list item:

#### Listing 11-4 List Drawing

```
var msgData = null;

function addZero(time) {
    return time < 10 ? "0" + time : time;
}

function drawList() {
    // Clear the list
    $('#msgList li').remove();

    // Draw the bubble list
    if(msgData){
        for(var i=0; i<msgData.length; i++){
            if(msgData[i].from == ''){
                $('#msgList').append('<li class="ui-li-
bubble-right">'
                    + msgData[i].body.plainBody
                    + '<span class="ui-li-bubble-time">'
                    + msgData[i].timestamp.getUTCHours() + ':'
                    +
                    addZero(msgData[i].timestamp.getUTCMinutes())
                    + '</span></li>');
            } else {
                $('#msgList').append('<li class="ui-li-
bubble-left">'
                    + msgData[i].body.plainBody
                    + '<span class="ui-li-bubble-time">'
                    + msgData[i].timestamp.getUTCHours() + ':'
                    +
                    addZero(msgData[i].timestamp.getUTCMinutes())
                    + '</span></li>');
            }
        }

        // Refresh the list
        $('#msgList').listview('refresh');
    }
}
```

We also added some code to the CSS file to improve the layout of the message boxes:

```
.ui-listview .ui-li-bubble-right {  
    margin-left: 50px;  
}  
  
.ui-listview .ui-li-bubble-left {  
    margin-right: 50px;  
}
```

## Chapter 12 Working with Contacts

### P176 to 179 Contacts

Version 2.1 of the vCard format is no longer supported. You no longer need to specify the vCard format when creating a new contact from a formatted vCard string, since it will be assumed to be vCard format version 3.0.

The categories property has been renamed to groupIds.

## Chapter 13 Getting Organized With Calendars

A new calendarId property has been added.