Site Navigation Customization Guide

Customization Guide

Customer Support

MT6000

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1   Introduction

1.1   Purpose

For CMCC Browser Feature requirement, most features are already implement in Android default browser. In this document, some lacking features and UI modification will be descript in UI flow.

In default browser page or start page when opening a new brwoser window, the short link of pre-defined website thumbnail or logo will list on it.User can quickly access these links at the beginning.

All customization code used in this document is in Browser app. And the code path is :

vendor/mediatek/proprietary/packages/apps/Browser/

1.2   Scope

The document provide the programming details of site naviagtion.

1.3   Who Should Read This Document

This document is primarily intended for:

- Engineers with technical knowledge of the browser
- Customers who want to customize the site naviagtion

1.4   How to Use This Manual

This segment explains how information is distributed in this document, and presents some cues and examples to simplify finding and understanding information in this document. **Error! Reference source not found.** presents an overview of the chapters and appendices in this document.

Table 1-1. Chapter Overview

#	Chapter	Contents
1	Introduction	Describes the scope and layout of this document.

1.4.1　Terms and Conventions

This document uses special terms and typographical conventions to help you easily identify various information types in this document. These cues are designed to simply finding and understanding the information this document contains.

Table 1-2. Conventions

Convention	Usage	Example
[1]	Serial number of a document in the order of appearance in the References topic	Look up Chapter 2: System Architecture in [1]
void xx(zz)	Source code	static int __stdcall cb_download_bloader_init(void *usr_arg){}
☞	Important	

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Site Navigation Customization Guide

2   Customization items list

Customization items list is as follows:

1.   How to use

2.   Site navigation number

3.   Define default thumbnail

4.   Site navigation feature option on/off

3 Abbreviations

Please note the abbreviations and their explanations provided in **Error! Reference source not found.**. They are used in many fundamental definitions and explanations in this document and are specific to the information that this document contains.

Table 3-1. Abbreviations

Abbreviations	Explanation
MTK	MediaTek, Asia's largest fabless IC design company.

4   Overview

This chapter first gives a brief description of the modules of the system and the relationship of the modules.

4.1   Architecture
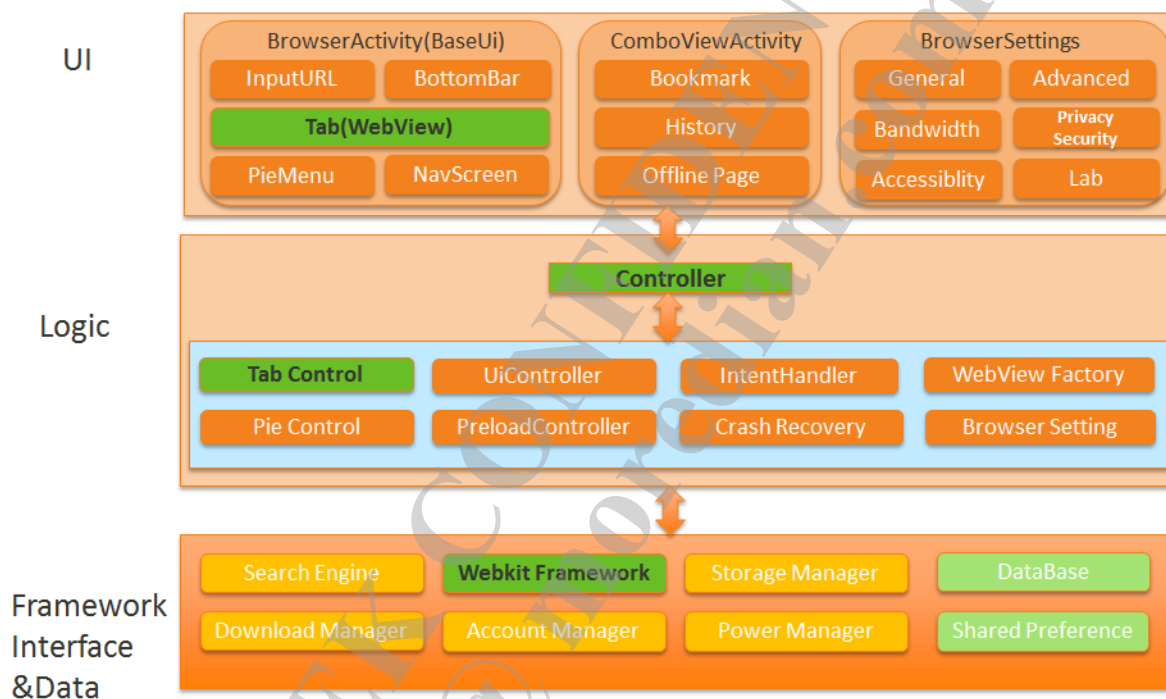
Figure 4-1. Browser Architecture

4.2   Source Code Organization

▼ 🏛 com.android.browser.sitenavigation
  ▶ 📄 RequestHandlerSiteNavigation.java
  ▶ 📄 SiteNavigation.java
  ▶ 📄 SiteNavigationAddDialog.java
  ▶ 📄 SiteNavigationProvider.java
  ▶ 📄 TemplateSiteNavigation.java

Figure 4-2. Source Code Directory Structure

The description of the directories and their subdirectories is given below:

| *com/android/browser/sit enavigation* | Contains the top-level source directory |
| *com/android/browser/sit enavigation/xxx.java* | Contains the site navigation entity |

5　Detailed Customization Procedure

5.1　How to use

When you want to know how to use site navigation, please see the Figure 5-1 bellow:

Figure 5-1.Site Navigation Use Procedure

5.1.1　Add function for android 2.3

(src/com/android/browser/SiteNavigationView.java)

```
private AdapterView.OnItemClickListener mListener = new AdapterView.OnItemClickListener() {
    public void onItemClick(AdapterView parent, View v, int position, long id) {
        String url = mAdapter.getUrl(position);
        if (url == null) {
            url = "";
        }

        if (mAdapter.isWebsite(position)) {
            mSelectedSiteNavigation = mAdapter.getSiteNavigationInfo(position);
            mBrowserActivity.loadUrlForSiteNavigation(url);
        } else {
            final Intent intent = new Intent(mBrowserActivity, SiteNavigationAddDialog.class);
            intent.putExtra("position",position);
            intent.putExtra(SiteNavigationHelper.APP_ID, SiteNavigationHelper.BROWSER_APP_ID);
            mBrowserActivity.startActivity(intent);
        }
    }
};
```
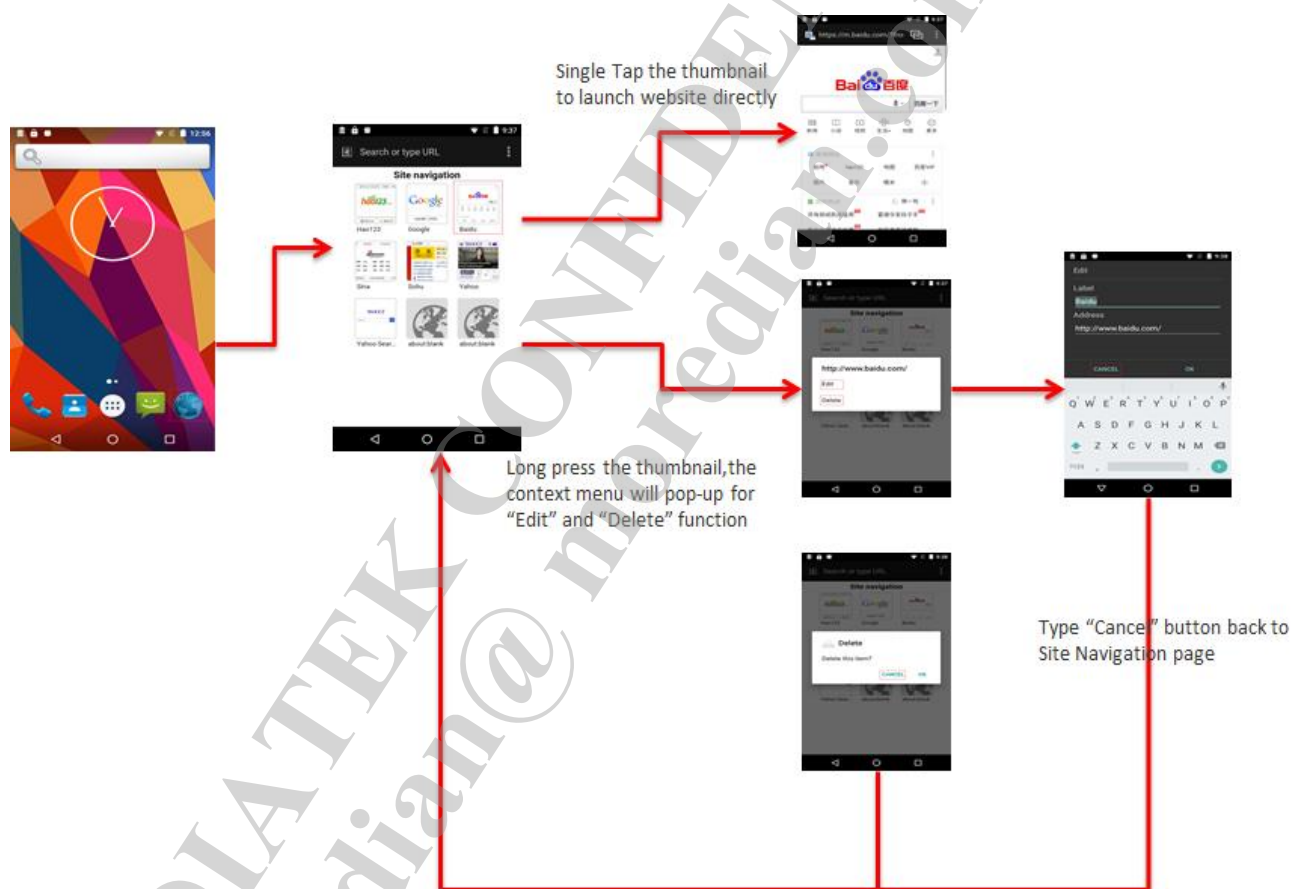
5.1.2 Add function for android KK/L/M

(src/com/android/browser/Controller.java::onOptionsItemSelected)

```
if (itemUrl != null) {
    if (isSiteNavigationAboutBlankUrl(itemUrl)) {
        // Add menu
        menu.findItem(R.id.add_sn_context_menu_id)
                .setOnMenuItemClickListener(new OnMenuItemClickListener() {
            @Override
            public boolean onMenuItemClick(MenuItem item) {
                final Intent intent = new Intent(Controller.this
                        .getContext(),
                        SiteNavigationAddDialog.class);
                Bundle bundle = new Bundle();
                /// M: Does not change the original url. @{
                //String url = Uri.decode(imageAnchorUrlExtra);
                String url = imageAnchorUrlExtra;
                /// @}
                bundle.putBoolean("isAdding", true);
                bundle.putString("url", url);
                bundle.putString("name", getNameFromUrl(url));
                intent.putExtra("websites", bundle);
                mActivity.startActivityForResult(intent,
                        SITE_NAVIGATION_ADD_DIALOG);
                return false;
            }
        });
```

5.1.3 Edit & Delete function for android 2.3

(src/com/android/browser/BrowserActivity.java::onContextItemSelected)

```
case R.id.sitenavigation_edit:
    //action for edit the SiteNavigation selected
    if (BrowserFeatureOption.BROWSER_SITE_NAVIGATION_SUPPORT) {
        SiteNavigationInfo siteNavigation = mSiteNavigationView.getSelectedSiteNavigation();
        if (siteNavigation != null) {
            final Intent intent = new Intent(this, SiteNavigationAddDialog.class);
            Bundle bundle = new Bundle();
            bundle.putString(SiteNavigationHelper.APP_ID, SiteNavigationHelper.BROWSER_APP_ID);
            bundle.putString("url", siteNavigation.getUrl());
            bundle.putString("title", siteNavigation.getTitle());
            bundle.putInt("position", siteNavigation.getPosition());
            bundle.putParcelable("favicon", siteNavigation.getFavicon());
            intent.putExtra("websites",bundle);
            startActivity(intent);
        }
    }
    break;
case R.id.sitenavigation_delete:
    //to delete the SiteNavigation selected
    if (BrowserFeatureOption.BROWSER_SITE_NAVIGATION_SUPPORT) {
        SiteNavigationInfo siteInfo = mSiteNavigationView.getSelectedSiteNavigation();
        if (siteInfo != null) {
            SiteNavigationHelper.promptDeleteWebsite(BrowserActivity.this,
                siteInfo.getTitle(), siteInfo.getPosition());
        }
    }
    break;
```

5.1.4   Edit & Delete function for android KK/L/M

(src/com/android/browser/Controller.java::onCreateContextMenu)

```
else {
    // Edit menu
    menu.findItem(R.id.edit_sn_context_menu_id)
        .setOnMenuItemClickListener(new OnMenuItemClickListener() {
            @Override
            public boolean onMenuItemClick(MenuItem item) {
                final Intent intent = new Intent(Controller.this
                    .getContext(),
                    SiteNavigationAddDialog.class);
                Bundle bundle = new Bundle();
                /// M: Does not change the original url. @{
                //String url = Uri.decode(imageAnchorUrlExtra);
                String url = imageAnchorUrlExtra;
                /// @}
                bundle.putBoolean("isAdding", false);
                bundle.putString("url", url);
                bundle.putString("name", getNameFromUrl(url));
                intent.putExtra("websites", bundle);
                mActivity.startActivityForResult(intent,
                    SITE_NAVIGATION_ADD_DIALOG);
                return false;
            }
        });
    // Delete menu
    menu.findItem(R.id.delete_sn_context_menu_id)
        .setOnMenuItemClickListener(new OnMenuItemClickListener() {
            @Override
            public boolean onMenuItemClick(MenuItem item) {
                /// M: Does not change the original url @{
                //showSiteNavigationDeleteDialog(Uri.decode(imageAnchorUrlExtra));
                showSiteNavigationDeleteDialog(imageAnchorUrlExtra);
                /// @}
                return false;
            }
        });
```

```
/// M: add for site navigation @{
private void showSiteNavigationDeleteDialog(final String itemUrl) {
    int title = R.string.delete;
    int msg = R.string.delete_site_navigation_msg;
    new AlertDialog.Builder(this.getContext())
        .setTitle(title)
        .setIcon(android.R.drawable.ic_dialog_alert)
        .setMessage(msg)
        .setPositiveButton(R.string.ok, new DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialog, int whichButton) {
                deleteSiteNavigationItem(itemUrl);
            }
        })
        .setNegativeButton(R.string.cancel, null)
        .show();
}
```

5.2　　　Site navigation number

There are only 9 websites shortcut can be added in default Site Navigation.You can see the picture as below:
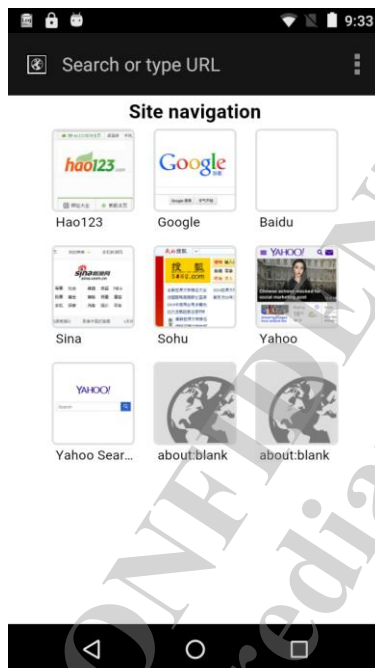

Figure 5-2.Numbers of Site Navigaion

If you want to modify the site navigation default number, you can find the related code as follow,

and modify the number.For android 2.3:

(src/com/android/browser/SiteNavigationHelper.java)

```
/** The number of websites in site navigation */
public static final int WEBSITE_NUMBER = 9;
```

For android KK/L/M

(src/com/android/browser/sitenavigation/SiteNavigation.java)

```
public static final int WEBSITE_NUMBER = 9;

public static final int WEBSITE_NUMBER_FOR_TABLET = 8;
```

5.3　　　Define default thumbnail

If you want to customize the default thumbnail,you can follow the three steps:

5.3.1　　Mofify resource file

Firstly,you should modify the resource file code as below:

(res/values/mtk_strings.xml)

```
<string-array name="predefined_websites_default_optr" translatable="false">
    <item>Hao123</item>
    <item>http://www.hao123.com/</item>
    <item>site_navigation_default_default1</item>

    <item>Google</item>
    <item>http://www.google.cn/</item>
    <item>site_navigation_default_default2</item>

    <item>Baidu</item>
    <item>http://www.baidu.com/</item>
    <item>site_navigation_default_default3</item>

    <item>Sina</item>
    <item>http://www.sina.com.cn/</item>
    <item>site_navigation_default_default4</item>

    <item>Sohu</item>
    <item>http://www.sohu.com/</item>
    <item>site_navigation_default_default5</item>

    <item>Yahoo</item>
    <item>https://yahoo.com/?.tsrc=mtkandroid/</item>
    <item>site_navigation_default_ymobile</item>

    <item>Yahoo Search</item>
    <item>https://search.yahoo.com/?.tsrc=mtkandroid/</item>
    <item>site_navigation_default_ysearch</item>
</string-array>
```

5.3.2   Add icons

Secondly,you should add some icon to resource folder raw as below

(res/raw/)

site_navigation_default_default1.jpg

site_navigation_default_default2.jpg

site_navigation_default_default3.jpg

site_navigation_default_default4.jpg

site_navigation_default_default5.jpg

site_navigation_default_default6.jpg

site_navigation_default_ymobile.jpg

site_navigation_default_ysearch.jpg

site_navigation.ktpl

sitenavigation_thumbnail_default.jpg

5.3.3   Provider Process

Thirdly,the provider will save the resource to the database,related code as follow:

(src/com/android/browser/sitenavigation/SiteNavigationProvider.java::initTable)

```java
private void initTable(SQLiteDatabase db) {
    CharSequence[] websites = null;

    mBrowserSiteNavigationExt = Extensions.getSiteNavigationPlugin(mContext);
    if (null == (websites = mBrowserSiteNavigationExt.getPredefinedWebsites())) {
        websites = mContext.getResources().getTextArray(R.array.predefined_websites_default_optr);
    }

    if (websites == null) {
        return;
    }
    int websiteSize = websites.length;
    int siteNavigationWebsiteNum = 0;

    if (!mContext.getResources().getBoolean(R.bool.isTablet)) {
        siteNavigationWebsiteNum = mBrowserSiteNavigationExt.getSiteNavigationCount();
        if (siteNavigationWebsiteNum == 0) {
            siteNavigationWebsiteNum = SiteNavigation.WEBSITE_NUMBER;
        }
    } else {
        siteNavigationWebsiteNum = SiteNavigation.WEBSITE_NUMBER_FOR_TABLET;
    }

    if (websiteSize > siteNavigationWebsiteNum * 3) {
        websiteSize = siteNavigationWebsiteNum * 3;
    }

    ByteArrayOutputStream os = null;
    Bitmap bm = null;
    ContentValues values = null;
    String fileName = null;
    try {
        for (int i = 0; i < websiteSize; i = i + 3) {
            os = new ByteArrayOutputStream();
            fileName = websites[i + 2].toString();
            try {
                if (fileName != null && fileName.length() != 0) {
                    int id = mContext.getResources().getIdentifier(fileName, "raw", mContext.getPackageName());
                    bm = BitmapFactory.decodeResource(mContext.getResources(), id);
                } else {
                    bm = BitmapFactory.decodeResource(mContext.getResources(),
                            R.raw.sitenavigation_thumbnail_default);
                }
            } finally {
                if (bm == null) {
                    bm = BitmapFactory.decodeResource(mContext.getResources(),
                            R.raw.sitenavigation_thumbnail_default);
                }
            }

            bm.compress(Bitmap.CompressFormat.PNG, 100, os);
            values = new ContentValues();
            CharSequence websiteDestination = BrowserProvider2.replaceSystemPropertyInString(
                    mContext, websites[i + 1]);
            values.put(SiteNavigation.URL, websiteDestination.toString());
            values.put(SiteNavigation.TITLE, websites[i].toString());
            values.put(SiteNavigation.DATE_CREATED, 0 + "");
            values.put(SiteNavigation.WEBSITE, 1 + "");
            values.put(SiteNavigation.THUMBNAIL, os.toByteArray());
            db.insertOrThrow(TABLE_WEB_SITES, SiteNavigation.URL,
                    values);
        }
        // Insert some empty rows if predefined websites is less than
        // designated number: about:blank
        for (int i = websiteSize / 3; i < siteNavigationWebsiteNum; i++) {
            os = new ByteArrayOutputStream();
            bm = BitmapFactory.decodeResource(mContext.getResources(),
                    R.raw.sitenavigation_thumbnail_default);
            bm.compress(Bitmap.CompressFormat.PNG, 100, os);
            values = new ContentValues();
            // Url must be unique, because we use this column to query and update
            // The number after about:blank is just the id in the database
            values.put(SiteNavigation.URL, "about:blank" + (i + 1));
            values.put(SiteNavigation.TITLE, "about:blank");
            values.put(SiteNavigation.DATE_CREATED, 0 + "");
            values.put(SiteNavigation.WEBSITE, 1 + "");
            values.put(SiteNavigation.THUMBNAIL, os.toByteArray());
            db.insertOrThrow(TABLE_WEB_SITES, SiteNavigation.URL, values);

        }
    } catch (ArrayIndexOutOfBoundsException e) {
        Xlog.e(TAG, "initTable: ArrayIndexOutOfBoundsException: " + e);
    }
}
```

5.4 Feature option on/off

The feature option of Site Navigation is in BrowserFeatureOption.java file.The feature option variable is BROWSER_SITE_NAVIGATION_SUPPORT. If turn off the site navigation function,browser will not support the site navigation feature. The related code is as follows

(src/com/android/browser/BrowserFeatureOption.java)

 public static final boolean BROWSER_SITE_NAVIGATION_SUPPORT = ture