NP SNS Facebook Library Overview

PlayStation®Vita Programmer Tool Runtime Library Release 3.50

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1 Library Overview

Purpose and Characteristics

The NP SNS Facebook library supports applications accessing APIs of Facebook®.

By using this NP SNS Facebook library, authentication information (access token) can be obtained for your application so that it can directly use Facebook Graph API. Obtaining an access token and using Facebook Graph API will then allow your application to obtain various user information on Facebook and post information onto Facebook.

The user must register the applicable account information required to access Facebook using the system software in advance, and the system software will subsequently automatically manage and use the registered information to access Facebook.

Main Features

The main features offered by NP SNS Facebook library are as follows:

- It calls Facebook Permission Dialog. Based on system status, Facebook Permission Dialog will display to the user a Facebook account login dialog, or dialogs requesting Extended Permissions.
- It provides functions for performing only the communication for obtaining access tokens without showing Facebook Permission Dialog. Since the dialog is not displayed with the functions for communication only, login processing and Extended Permission requests to the user will not be possible.

Embedding into a Program

Include np.h and np_sns_facebook_dialog.h in the source program. Various header files will be automatically included as well.

Load also the PRX module in the program as follows.

```
if ( sceSysmoduleLoadModule(SCE_SYSMODULE_NP_SNS_FACEBOOK) != SCE_OK ) {
    // Error handling
}
```

When building the program, link libSceNpSnsFacebook_stub.a.

Sample Programs

The following files are provided as sample programs that use the NP SNS Facebook library for reference purposes.

sample_code/network/api_np/np_sns_facebook/

This sample obtains access tokens using the NP SNS Facebook library, and accesses the Facebook Graph API.

Reference Materials

For an overview of PSN℠ features, refer to the following document.

- PSN℠ Overview

Refer to the following document regarding Network Check Dialog for switching service states of the NP library.

- Network Overview

For an overview of the coordination system of PSN℠ and Facebook on the PlayStation®Vita, and the method and guidelines for creating applications, refer to the following document.

- Facebook® Coordination System Overview

For an overview and the usage procedure of Common Dialog, refer to the following document.

- Common Dialog Overview

Facebook Graph API

The application must use Facebook Graph API (provided by Facebook) to write to Facebook or read user information from Facebook. For an overview of Facebook Graph API, refer to http://developers.facebook.com/docs/reference/api/

Note
The URL of reference destinations provided in this document has been checked to be valid as of January 24, 2014. Note that pages may have been moved or their contents modified since then.

2 Using the Library

Developer Preparation: Registering the Application to Facebook

To use Facebook Graph API for obtaining information from Facebook or posting information to Facebook, the application must be registered to Facebook in advance and its title ID must be bound. Go to the Facebook application development site (https://developers.facebook.com/) and register your application; then bind your title ID from the settings page. For details, refer to the "Facebook® Coordination System Overview" document.

Start up your application with the bound title ID included in PARAM.SFO, and call an NP SNS Facebook library function with the application ID obtained upon registering your application as an argument. This will enable you to obtain an access token, which in turn, will enable the use of Facebook Graph API.

User Preparation: Obtaining and Setting an Account

Before the features of Facebook Graph API can be used within the application, the user must carry out preparation processing as follows.

(1) Obtain a Facebook account

(2) Enter the relevant account information from **PSN℠ -> Facebook** of the Settings application of the system software. In addition, tap **Allow Access from Applications** to check it off and allow access from applications.

Also, if Facebook account information has not been input yet, when the application calls Facebook Permission Dialog the dialog for logging in to Facebook and the access permission dialog will be displayed. When the user enters his/her account information and login succeeds, "Allow Access from Games" will be enabled and processing can be continued.

Facebook Permission Dialog

By calling Facebook Permission Dialog using the NP SNS Facebook library, applications can obtain access tokens regardless of system status.

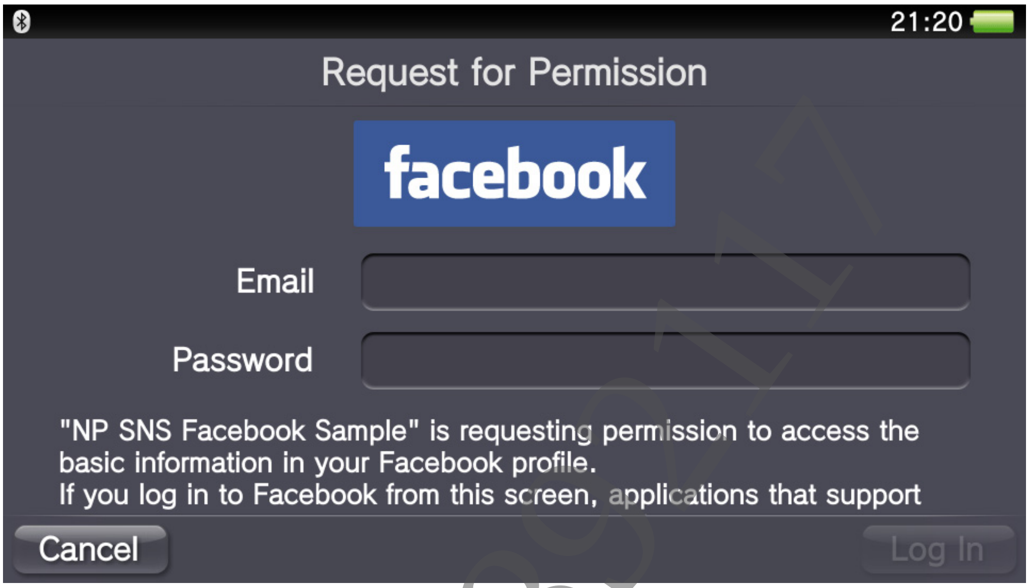
Facebook Permission Dialog displays the following types of dialog. Since the NP SNS Facebook library displays the dialogs below automatically based on system status, applications do not need to be aware of system status.

Note
When using a communication function, an error may return depending on system status, such as when the user has not registered a Facebook account, etc. Basically, applications should obtain access tokens by using Facebook Permission Dialog

Dialog for Facebook Login and Permission for Access From Applications

This will be displayed when the user has not registered his/her Facebook account information on the PlayStation®Vita. When this dialog is processed normally, Facebook account registration and **Allow Access from Applications** will be checked off and the settings will be enabled. When login is successful, the application's Extended Permissions will be checked, and a dialog requesting Extended Permissions will be displayed next.

Figure 1 Dialog for Facebook Login and Permission for Access From Applications

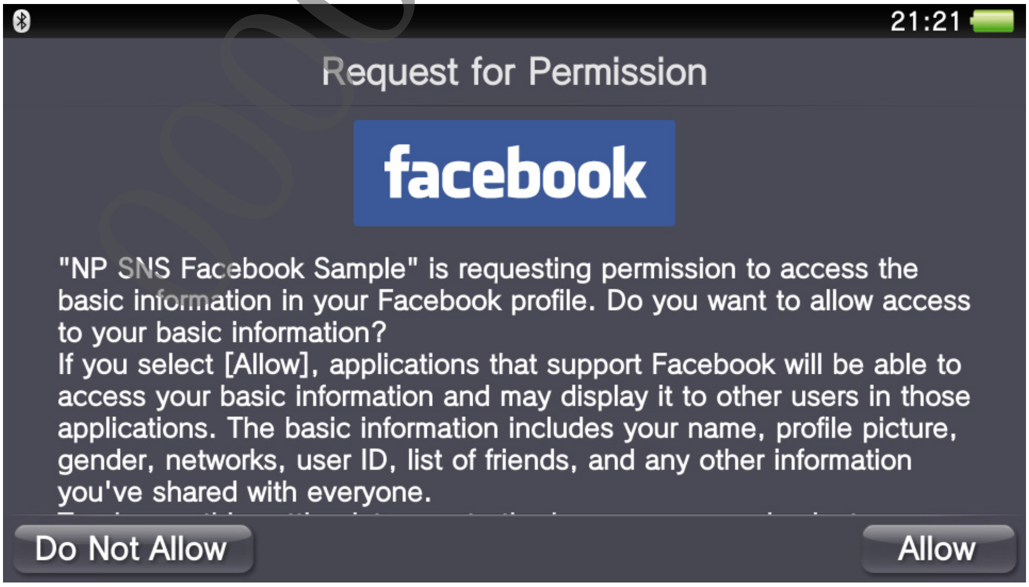


"NP SNS Facebook Sample" is requesting permission to access the basic information in your Facebook profile.
If you log in to Facebook from this screen, applications that support

Confirmation Dialog for Permission for Access from Applications

This dialog is displayed when the Facebook account has been registered, but the **Allow Access from Applications** setting is not enabled. If the user's permission is obtained, **Allow Access from Applications** will be checked off and the setting will be enabled. Next, the application's Extended Permissions will be checked, and if necessary a dialog requesting Extended Permissions will be displayed .

Figure 2 Confirmation Dialog for Permission for Access from Applications

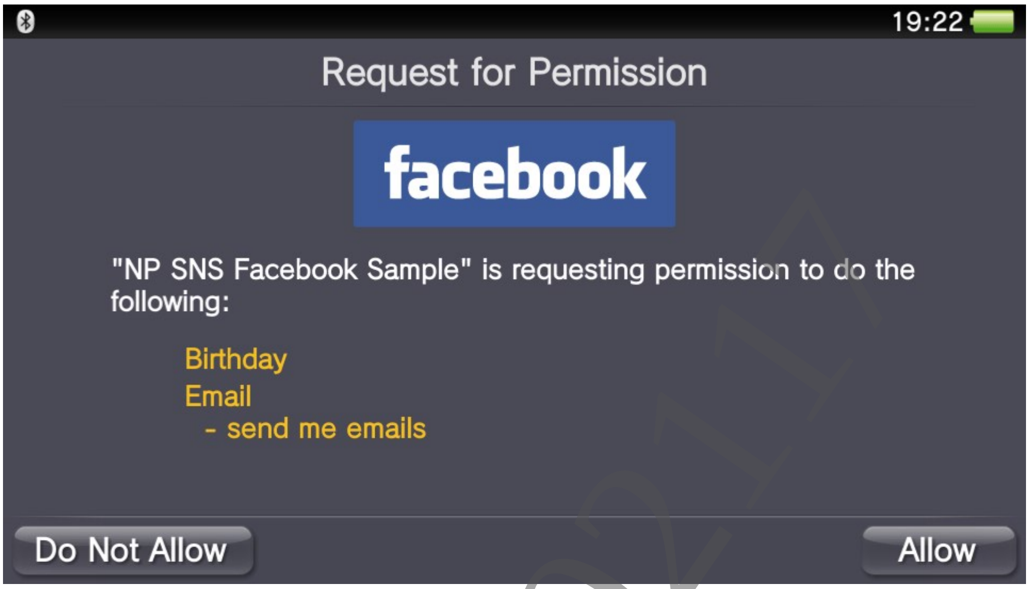


"NP SNS Facebook Sample" is requesting permission to access the basic information in your Facebook profile. Do you want to allow access to your basic information?
If you select [Allow], applications that support Facebook will be able to access your basic information and may display it to other users in those applications. The basic information includes your name, profile picture, gender, networks, user ID, list of friends, and any other information you've shared with everyone.

Request Dialog for Extended Permissions

If the Facebook account has been registered, and the **Allow Access from Applications** setting is enabled, the need for Extended Permissions for Facebook applications will be verified, and a dialog requesting Extended Permissions will be displayed if necessary.

Figure 3 Request Dialog for Extended Permissions



Request for Permission

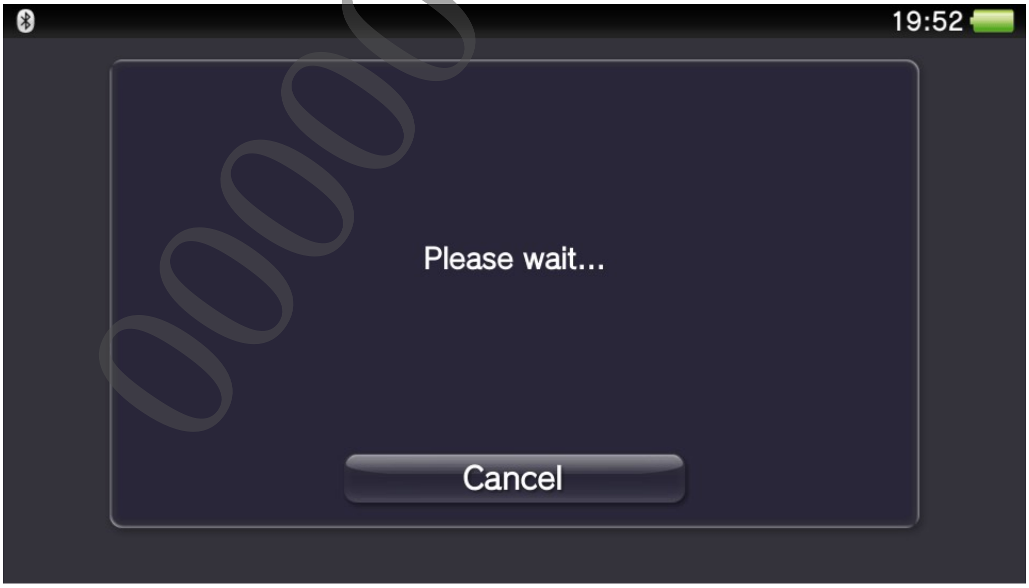
"NP SNS Facebook Sample" is requesting permission to do the following:

Birthday
Email
- send me emails

Dialog Indicating only the Communication is in Progress

If the application's Extended Permissions are enabled, Facebook Permission Dialog will not display any particular dialog and will only obtain access tokens. During communication, only the dialog below will be shown, and will be closed automatically once obtainment is successful.

Figure 4 Dialog During Communication



Please wait...

Other Dialogs

If Facebook account information is invalid, or a communication error occurs, Facebook Permission Dialog will ask the user to log in again, or display an appropriate error dialog.

When Facebook Permission Dialog Returns an Error

If the user chooses to cancel or not to give permission in one of the dialogs above, Facebook Permission Dialog will return `SCE_COMMON_DIALOG_RESULT_USER_CANCELED(1)` or an error code.

In other cases, such as when the user has not signed in to PSN℠, when the Sony Entertainment Network account does not allow chatting with a sub-account, or when a network error occurs, an error code will also return to the application.

Initialization

(1) Load the PRX Module

Call `sceSysmoduleLoadModule()` with `SCE_SYSMODULE_NP_SNS_FACEBOOK` specified as the module ID to load the PRX of the NP SNS Facebook library.

(2) Initialize the Library

Then, call `sceNpSnsFacebookInit()` to initialize the NP SNS Facebook library.

```
ret = sceNpSnsFacebookInit();
if (ret < 0) {
        // Error handling
}
```

Note
When using Facebook Permission Dialog, it will be necessary to load `SCE_SYSMODULE_NP_SNS_FACEBOOK` and to perform initialization with `sceNpSnsFacebookInit()`.

Obtainment of Access Tokens With Facebook Permission Dialog

With the following procedure, it is possible to display Facebook Permission Dialog and to obtain access tokens as execution results.

(1) Initialize Facebook Permission Dialog

Call `sceNpSnsFacebookDialogInit()` to initialize Facebook Permission Dialog. Specify the application ID registered on Facebook and the necessary Extended Permissions in the `SceNpSnsFacebookDialogParam` type variable of the argument.

Facebook Permission Dialog will display the appropriate dialog based on system status and on whether the user has given permission for this Facebook application ID.

(2) Obtain the operation status

Call `sceNpSnsFacebookDialogGetStatus()` to poll the operation status of Facebook Permission Dialog at every frame. `SCE_COMMON_DIALOG_STATUS_RUNNING` is returned as the operation status while Facebook Permission Dialog is displayed, so wait until `SCE_COMMON_DIALOG_STATUS_FINISHED` is returned.

`sceCommonDialogUpdate()` should be called while the operation status is not `SCE_COMMON_DIALOG_STATUS_NONE`. For details, refer to the "Common Dialog Overview" document.

(3) Obtain an access token

When operation status transitions to `SCE_COMMON_DIALOG_STATUS_FINISHED`, it will be possible to obtain the access token, which is a result of Facebook Permission Dialog, with `sceNpSnsFacebookDialogGetResultLongToken()`. Also, if the user has canceled processing with the dialog or if a communication error occurs, `SCE_COMMON_DIALOG_RESULT_USER_CANCELED(1)` or an error code will return.

(4) Terminating Facebook Permission Dialog

Once the call results have been obtained, call `sceNpSnsFacebookDialogTerm()` to perform the termination processing. As a result, the resources for Facebook Permission Dialog acquired during initialization are released.

Obtaining Access Tokens With a Communication Function

The NP SNS Facebook library also provides functions for communication only, which do not display Facebook Permission Dialog. When using the communication functions, an error may return depending on system status, such as when the user has not registered a Facebook account, etc. Below is an explanation of the procedure for using communication functions.

(1) Create a request

Create a request ID to use for aborting or deleting a request. A request ID must be created per request, and deleted after the request ends.

```
int ret, reqId;

ret = sceNpSnsFacebookCreateRequest();
if (ret < 0) {
        // Error handling
}
reqId = ret;
```

(2) Request

Execute a function for obtaining an access token. These functions block other processing until the information is obtained from the server.

```
// Execute obtainment of an access token
SceNpSnsFacebookAccessTokenParam param;
SceNpSnsFacebookLongAccessTokenResult result;

// Initialize the structures
memset(&param, 0x00, sizeof(param));
memset(&result, 0x00, sizeof(result));

// Store the application ID registered to Facebook in param.fbAppId
// Store Extended Permissions to param.permissions as necessary

ret = sceNpSnsFacebookGetLongAccessToken(reqId, &param, &result);
if (ret < 0) {
   // Error handling
}

....
```

(3) Destroy request

When the request ends, destroy the request with specifying the request ID.

```
// Destroy the request
sceNpSnsFacebookDeleteRequest (reqId);
```

Termination

(1) Terminate the NP SNS Facebook library

Call `sceNpSnsFacebookTerm()` to terminate the NP SNS Facebook library

```
// Call the following function when communication processing is over, or after
performing termination processing of Facebook Permission Dialog
sceNpSnsFacebookTerm();
```

Note
`sceNpSnsFacebookTerm()` is not multithread safe.
When `sceNpSnsFacebookTerm()` is called, the created request will be deleted automatically, however, it is recommended that this function be called after the request is explicitly deleted from the application side.

(2) Unload the PRX

Call `sceSysmoduleUnloadModule()` with `SCE_SYSMODULE_NP_SNS_FACEBOOK` specified as the module ID to unload the PRX.

3 Notes

How to Create Applications Using the Facebook Coordination System

Before creating an application using the Facebook coordination system, be sure to refer to the following document and to check the method and guidelines for creating applications:

- Facebook® Coordination System Overview

Info Bar, Background Color and Dimmer of Facebook Permission Dialog

In order to clearly inform the user that communication is in progress, Facebook Permission Dialog will display an info bar. For this reason, the only value that can be set in the info bar-related argument *infobarParam* is NULL. Also, the system's default value will be used for the background color; therefore, the only value that can be set in the background color argument *bgColor* is NULL. For the info bar and the background color and dimmer of Common Dialog, refer to the "Common Dialog Reference" document.