GameFunSDK API Document

(iOS)

Name	Date	version	remark
Yuanjun	2024.08.30	1.0.0	

1. Description and definition

1.1 API call

Import <GameFunSDK/GameFunSDK.h>

Every API is called by [GameFunManager defaultManager] instance

1.2 Callback

error is a common field for every callback class. if error equals to nil, it means the api call is success.

1.3 Callback classes:

1.3.1 Login Callback

class: GAMFUNUserCompletionHandler

fields:

userInfo //the user information

error

1.3.2 Receive Notification Callback

class: GAMFUNNotificationCompletionHandler

fields:

result //the notification message

error

1.3.3 Logout Callback

class: GAMFUNLogoutCompleteHandler

fields:

success // BOOL type, indicate operation result

error

1.3.4 Get Friends Callback

class: GAMFUNFriendsCompletionHandler

fields:

list //fields list, contains from 0 -> N friend object

error

1.3.5 Share Callback

class: GAMFUNShareCompleteHandler

fields:

success // BOOL type, indicate operation result

error

1.3.6 Payment Callback

class: GAMFUNOrderProgressHandler

fields:

GAMFUNOderStatus //Payment order status

1.3.7 Payment Result Callback

class: GAMFUNOrderCompletionHandler

fields:

orderInfo //the payment order object

error

1.3.8 AppVersion Info Callback

class: GAMFUNVersionCompletionHandler

fields:

hasNewVersion //has new version

versionInfo //the version detail information. class model <GAMFUNAppVersion>

error

1.3.9 Common Callback

class: GAMFUNCompletionHandler

fields:

result //operation result

error

1.3.10 Account Kicked Callback

class: GAMFUNAccountKickedHandler

fields:

information //information of notification

1.3.11 Account Banned Callback

class: GAMFUNAccountBannedHandler

fields:

information //the reason of banned

time

1.4 Errors

GAMFUNPlatformErrorType_Unknow	unkown error
GAMFUNPlatformErrorType_AuthorizeFailed	authorized failed
GAMFUNPlatformErrorType_ForUserInfoFailed	request user data failed
GAMFUNPlatformErrorType_LoginFailed	login failed
GAMFUNPlatformErrorType_FriendsListFailed	get firends failed
GAMFUNPlatformErrorType_MessageSendFailed	send message failed
GAMFUNPlatformErrorType_PayFailed	payment failed
GAMFUNPlatformErrorType_ShareFailed	share failed
GAMFUNPlatformErrorType_NotInstall	app is not installed
GAMFUNPlatformErrorType_NotNetWork	network exception
GAMFUNPlatformErrorType_SourceError	third error
GAMFUNPlatformErrorType_NoPermission	no permissions
GAMFUNPlatformErrorType_UnauthorizedReques	unauthorized request, need login.
t	

2. Setup Initialize (must)

2.1 Launch

Methods in AppDelegate are implement like below:

2.1.1 Setup Configuration:

The launch animation for SDK-1.0.5 has been removed and the specific launch animation needs to be implemented by the game developers.

```
- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions {
    // set SDK Api Environment
```

```
[[GameFunManager defaultManager] setServerDomainTest];

// set Pay Enviroment

[[GameFunManager defaultManager] setPayEnvironmentTest];

// open log

[[GameFunManager defaultManager] openLogInfo];

// launch SDK

NSString *appId = @"xxxxxx";

NSString *appSecret = @"xxxxxxx";

[[GameFunManager defaultManager] setupWithAppId:appId Secret:appSecret

GameId:gameid Application:application Options:launchOptions];

return YES;
}
```

2.1.2 External Callback:

```
- (BOOL)application:(UIApplication *)app openURL:(NSURL *)url
options:(NSDictionary<UIApplicationOpenURLOptionsKey,id> *)options {
    return [[GameFunManager defaultManager] application:app openURL:url
options:options];
}
```

2.1.3 App Events:

```
- (void)applicationDidEnterBackground:(UIApplication *)application {
    [[GameFunManager defaultManager] applicationDidEnterBackground:application];
}
- (void)applicationWillEnterForeground:(UIApplication *)application {
    [[GameFunManager defaultManager] applicationWillEnterForeground:application];
}
- (void)applicationDidBecomeActive:(UIApplication *)application {
    [[GameFunManager defaultManager] applicationDidBecomeActive:application];
}
- (void)applicationWillTerminate:(UIApplication *)application {
    [[GameFunManager defaultManager] applicationWillTerminate:application];
}
```

2.1.4 Push Register:

```
- (void)application:(UIApplication *)application
didRegisterForRemoteNotificationsWithDeviceToken:(NSData *)deviceToken {
    [[GameFunManager defaultManager] registerDeviceToken:deviceToken];
}
- (void)application:(UIApplication *)application
didReceiveRemoteNotification:(NSDictionary *)userInfo fetchCompletionHandler:(void
(^)(UIBackgroundFetchResult))completionHandler {
    [[GameFunManager defaultManager] application:application
didReceiveRemoteNotification:userInfo];
}
```

2.1.5 Universal Link:

2.2 Check App Version (optional)

After SDK is launched, be sure to check the version to ensure that the current version is available. If you need to force upgrade, you can go to the appstore to download the latest version, otherwise the SDK function may not be available.

```
// Open appstore
     [[GameFunManager defaultManager]

openAppStoreWithStoreIdentifier:@"xxx"];
} else {
          // If update is not required, you can optionally prompt for an upgrade.
}
}
}];
}
```

2.2.1 Check Version

Method	checkAppVersionCompletion	
Callback	GAMFUNVersionCompletionHandler	
	hasNewVersion	// has new version <bool></bool>
	versionInfo	// the version detail information. class model <gamfunappversion></gamfunappversion>
	build	// app build code
	version	// app new version
	versionInfo	// the version information
	forceUpdate	// need to force upgrade <bool></bool>
	currentVersion	nCode // current version code

2.2.2 Open AppStore

Method	openAppStoreWithStoreIdentifier	
Params	identifier //App Store item identifier (NSNumber) of the product	

3. API: Configuration

3.1 Enbale Log Output

```
[[GameFunManager defaultManager] openLogInfo];
```

3.2 Disable Log Output(default)

[[GameFunManager defaultManager] closeLogInfo];

3.3 Set Test Environment

[[GameFunManager defaultManager] setServerDomainTest];

3.4 Set Production Environment(default)

[[GameFunManager defaultManager] setServerDomainProduction];

3.5 Set Sandbox Payment

[[GameFunManager defaultManager] setPEnvTest];

3.6 Set Production Payment(default)

[[GameFunManager defaultManager] setPEnvProduction];

3.7 Customer Service (Messenger)

[[GameFunManager defaultManager] contactusWithMessenger];

4. API: Login&User Info

User must agree the User Agreement & Privacy before do Login action

4.1 Show Agreement View

- (IBAction)agreement: (id) sender {

```
[[GameFunManager defaultManager] showAgreementView];
}
```

4.2 Login with Apple

Login with Apple only supports iOS13 and higher.

Method	loginWithAppleCompletion
Callback	GAMFUNUserCompletionHandler

example:

```
- (IBAction) appleLogin: (id) sender {
    GAMFUNHUD_NO_Stop(@"login...")
    _weak __typeof(self) weakSelf = self;
    [[GameFunManager defaultManager] loginWithAppleCompletion:^(id _Nonnull userInfo,
NSError * _Nonnull error) {
        if (!error) {
            //login success
            GAMFUNHUD_SUCCESS(@"success")
            [weakSelf closeLoginView];
        } else {
            //error info
            GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
        }
    });
}
```

4.3 Login with GameCenter

Method	loginWithGameCenterCompletion
Callback	GAMFUNUserCompletionHandler

```
- (void)gamecenterLogin {

GAMFUNHUD_NO_Stop(@"login...")
```

```
__weak __typeof(self)weakSelf = self;

[[GameFunManager defaultManager] loginWithGameCenterCompletion:^(id _Nonnull

userInfo, NSError * _Nonnull error) {

    if (!error) {

        //login success

        GAMFUNHUD_HINT(@"success")

        [weakSelf closeLoginView];

    } else {

        //error info

        GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);

    }

}];
```

4.4 Login with Facebook

Method	loginWithFacebookCompletion
Callback	GAMFUNUserCompletionHandler

```
- (void) facebookLogin {
    GAMFUNHUD_NO_Stop(@"login...")
    __weak __typeof(self) weakSelf = self;
    [[GameFunManager defaultManager] loginWithFacebookCompletion:^(id _Nonnull
userInfo, NSError * _Nonnull error) {
    if (!error) {
        //login success
        GAMFUNHUD_HINT(@"success")
        [weakSelf closeLoginView];
    } else {
        //error info
        GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
    }
};
```

4.5 Login with Twitter

Method	loginWithTwitterCompletion	
Callback	GAMFUNUserCompletionHandler	

example:

```
- (IBAction)twitterLogin:(id)sender {
    GAMFUNHUD_NO_Stop(@"login...")
    __weak __typeof(self)weakSelf = self;
    [[GameFunManager defaultManager] loginWithTwitterCompletion:^(id __Nonnull userInfo,

NSError * _Nonnull error) {
    if (!error) {
        //登录成功
        GAMFUNHUD_SUCCESS(@"success")
        [weakSelf closeLoginView];
    } else {
        //查看error信息
        GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
    }
};
```

4.6 Login with Botim

Method	loginWithBotimCompletion	
Callback	GAMFUNUserCompletionHandler	

```
- (IBAction)botimLogin:(id)sender {
   if ([[GameFunManager defaultManager] botimIsInstall]) {
      GAMFUNHUD_NO_Stop(@"login...")
   __weak __typeof(self)weakSelf = self;
```

```
[[GameFunManager defaultManager] loginWithBotimCompletion:^(id _Nonnull userInfo,

NSError * _Nonnull error) {
    if (!error) {
        //login success
        GAMFUNHUD_SUCCESS(@"success");
        [weakSelf closeLoginView];
    } else {
        //error info
        GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
    }
};
}else {
    // no app please hide login button
}
```

4.7 Login with Google

Method	loginWithGoogleCompletion
Callback	GAMFUNUserCompletionHandler

```
}
}
```

4.8 Login with Guest

Method	guestLoginCompletion
Callback	GAMFUNUserCompletionHandler

example

```
- (void)guestLogin {
    GAMFUNHUD_NO_Stop(@"login...")
    __weak __typeof(self)weakSelf = self;
    [[GameFunManager defaultManager] guestLoginCompletion:^(id _Nonnull userInfo,

NSError * _Nonnull error) {
        if (!error) {
            //login success
            GAMFUNHUD_HINT(@"success")
            [weakSelf closeLoginView];
        } else {
            //error info
            GAMFUNHUD_Stop
        }
    }];
}
```

4.9 Get User Info

Method	userInfoCompletion	
Callback	GAMFUNUserCompletionHandler	
Params	GAMFUNUserModel	
	userType	user type (GAMFUNLoginType by 4.10)

```
userId user's indentifier
thirdUid third-party user indentifier
nickname nickname
photoUrl head image url
pushOff push switch 0:push switch on 1:push switch off
```

example

```
- (void)getUserInfo {
    GAMFUNHUD_NO_Stop(@"")
    [[GameFunManager defaultManager] userInfoCompletion:^(id _Nullable userInfo,
    NSError * _Nullable error) {
        if (!error) {
            GAMFUNHUD_HINT(@"success")
            GAMFUNUserModel *model = userInfo;
            [self freshUserInfo:model];
        } else {
            //error info
            GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
        }
    }
}
```

4.10 Get Login Type

Method	loginType
Return	GAMFUNLoginType

Definition:

Enum	GAMFUNLoginType	
Description	Enum type for Login	
Enum Values		
GAMFUNLoginType_unloggedIn not login		
GAMFUNLoginType_TTk TTk user		

GAMFUNLoginType_GameCenter	GameCenter player
GAMFUNLoginType_Facebook	Facebook user
GAMFUNLoginType_Google	Google user
GAMFUNLoginType_Twitter	Twitter user
GAMFUNLoginType_Guest	Game guest

example:

```
- (void) showLoginView {
    if ([[GameFunManager defaultManager] loginType] == GAMFUNLoginType_unloggedIn) {
        //unlogged in and show login UI
        [self backgroundUI];
        [self loginView];
    } else {
        dispatch_after(dispatch_time(DISPATCH_TIME_NOW, (int64_t)(2.5 * NSEC_PER_SEC)),
        dispatch_get_main_queue(), ^{
            [self getUserInfo];
        });
    }
}
```

4.11 Notification of offline

Method	accountKickedNotification
Callback	GAMFUNAccountKickedHandler

```
[[GameFunManager defaultManager] accountKickedNotification:^(NSString * _Nullable
information) {
    //Your account has been logged in on another device, please login again.
    GAMFUNHUD_HINT(information);
    [self showLoginView];
}];
```

4.12 Notification of banned

Method	accountBannedNotification
Callback	GAMFUNAccountBannedHandler

example:

```
[[GameFunManager defaultManager] accountBannedNotification:^(NSString * _Nullable
information, NSString * _Nullable time) {
      //Your account has been banned.
}];
```

4.13 Get Available Token

Method	getAvailableAccessToken
Callback	GAMFUNUserCompletionHandler

example:

```
[[GameFunManager defaultManager] getAvailableAccessToken:^(id _Nullable userInfo,

NSError * _Nullable error) {

   if (userInfo) {

       GAMFUNUserModel *userModel = userInfo;

       NSLog(@"userid: %@", userModel.userId);

       NSLog(@"token: %@", userModel.accessToken);

   }

}];
```

4.14 Set Migration Code

Method	setupMigCode
--------	--------------

Note:

If you want to migrate users, be sure to use this API to set the migration code before logging in.

example:

```
[[GameFunManager defaultManager] setupMigCode:@"Your Mig Code"];
```

4.15 Custom Login with UI

Method	loginWithCustomUICompletion
Callback	GAMFUNUserCompletionHandler

example:

```
- (IBAction)customLogin: (id) sender {
    GAMFUNHUD_NO_Stop(@"login...")
    __weak __typeof(self)weakSelf = self;
    [[GameFunManager defaultManager] loginWithCustomUICompletion:^(id __Nonnull userInfo,

NSError * _Nonnull error) {
    if (!error) {
        //登录成功
        GAMFUNHUD_SUCCESS(@"success")
        [weakSelf closeLoginView];
    } else {
        //查看error信息
        GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
    }
};
```

5. API: Logout

Method	logout
Callback	GAMFUNLogoutCompleteHandler

```
- (IBAction)logout:(id)sender {
```

```
GAMFUNHUD_NO_Stop(@"logout...")

[[GameFunManager defaultManager] logout:^(BOOL success, NSError * _Nullable error) {

    if (success) {

        GAMFUNHUD_HINT(@"success")

        [self showLoginView];

    } else {

        //error info

        NSLog(@"%@",error.userInfo);

        GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);

    }

}];
```

6. API: Game Payment

6.1 Product Purchase

Order Status Definition:

GAMFUNOrderStatus_ProductQuerying	query product
GAMFUNOrderStatus_Generating	order init
GAMFUNOrderStatus_Generated	order init finish
GAMFUNOrderStatus_ProductPurchasing	order in trading progress
GAMFUNOrderStatus_ProductPurchased	order purchased
GAMFUNOrderStatus_ReceiptChecking	order verifying

6.1.1 IAP

```
Method

1. buyProductWithSKU: Progress: Completion:

2. buyProductWithSKU: WithName: Progress: Completion:(v1.1.17 or
```

	later)
Params	
sku	String, product id
name	String, product name or description
Progress	GAMFUNOrderProgressHandler
Completion	GAMFUNOrderCompletionHandler
	class GAMFUNOrderModel
	orderId
	orderRef //transaction_id
	channel //1
	env //0=sandbox, 1=production
	sku //product id
	amount //price
	createTime
	payTime
	cancelTime
	status //0=order created, 1=order payed, 2=order reset

6.1.2 Xsolla

Method	xslBuyProductWithSKU: Currency: Completion:(v2.0.0 or later)
Params	
sku	String, product id
currency	String, pay currency
Completion	GAMFUNOrderCompletionHandler
	class GAMFUNOrderModel
	orderId
	orderRef //transaction_id
	channel //1
	env //0=sandbox, 1=production

```
sku //product id
amount //price
createTime
payTime
cancelTime
status //0=order created, 1=order payed, 2=order reset
```

6.1.3 Payment Selector (recommend 2)

Method	1. selectBWithProductSKU: Name: Currency: Completion: (v2.1.0 or later)
	Note: The following methods require the game's order id, which is used
	for server notification. (v2.2.3 or later)
	2. selectBWithProductSKU: Name: Currency: GameOrder: Progress:
	Completion:
Params	
sku	String, product id
name	String, product name
currency	String, pay currency
gameOrder	String, game order id
progress	GAMFUNOrderProgressHandler
Completion	GAMFUNOrderCompletionHandler
	class GAMFUNOrderModel
	orderId //SDK order id
	orderRef //transaction_id
	cpOrderId //game order id
	channel //1
	env //0=sandbox, 1=production
	sku //product id
	amount //price
	createTime

```
payTime

cancelTime

status //0=order created, 1=order payed, 2=order reset
```

remark:

the Game Server should send the product to user's account after the order be payed, then check the order status by server api, Order status check is necessary for anti-spam

Server API: <GameFun Server API Document (to Game Developer)>

```
[[GameFunManager defaultManager] selectBWithProductSKU:@"com.amuse.game.coin"
Name:@"ios(apple)" Currency:@"AED" GameOrder:@"123456" Progress:^(GAMFUNOderStatus
orderStatus) {
    NSLog(@"order status: %ld", (long)orderStatus);
   } Completion:^(id _Nullable orderInfo, NSError * _Nullable error) {
       if (error) {
          NSLog(@"pay error\n%@\n",error);
       } else {
          if (orderInfo) {
              GAMFUNOrderModel *model = orderInfo;
              NSLog(@" orderId : %@", model.orderId);
              NSLog(@" orderRef : %@", model.orderRef);
              NSLog(@" cpOrderId : %@", model.cpOrderId);
              NSLog(@" channel : %@", model.channel);
              NSLog(@" sku
                                : %@", model.sku);
              NSLog(@" status : %@", model.status);
   }];
```

6.2 Query Order

Method	queryOrderWithOrderId: Completion:
Params	
orderId	the order's id
Completion	GAMFUNOrderCompletionHandler
	GAMFUNOrderModel by 6.1

example:

```
- (IBAction) query: (id) sender {
    [[GameFunManager defaultManager] queryOrderWithOrderId:@"xxx"

Completion:^(id _Nullable orderInfo, NSError * _Nullable error) {
    if (orderInfo) {
        //get order info
    } else {
        //error message
    }
};
```

6.3 Get Product Info

Method	getProductDetailWithSKU: Completion:
Params	
sku	String, product id
Completion	GAMFUNProductCompletionHandler
	class GAMFUNProductModel
	sku; //The string that identifies the product to the Apple App Store.
	price; //The cost of the product in the local currency.
	localeCurrency; //The currency code associated with the locale.
	localizedTitle; //The name of the product.
	localizedDescription; //A description of the product.

example:

```
- (void)getInfo:(NSString *)sku {
   [[GameFunManager defaultManager] getProductDetailWithSKU:sku
Completion: ^(id Nullable productInfo, NSError * Nullable error) {
      if (productInfo) {
         GAMFUNProductModel *model = productInfo;
                                    : %@", model.sku);
          NSLog(@" sku
                                   : %@", model.price);
         NSLog(@" price
          NSLog(@" localeCurrency
                                     : %@", model.localeCurrency);
         NSLog(@" localizedTitle : %@", model.localizedTitle);
          NSLog(@" localizedDescription : %@", model.localizedDescription);
      } else {
         // error info
  }];
```

7. API: SNS & Share

7.1 Field Description

GAMFUNBotimFriendModel

Params	Note
bimUid	botim user id
name	friend's name
photoUrl	friends' avatars

GAMFUNBotimPlayingFriendModel

Params	Note
bimUid	botim user id
userId	user id of friend
name	friend's name
photoUrl	friends' avatars

GAMFUNSocialBimMessage

Params	Note
bimUid	botim user id
contenString	shared text content
imageUrl	shared web picture address
title	shared title

7.2 Share (Third-Party)

Share to Facebook, WhatsApp.

7.2.1 Share To Facebook

Method	facebookShareMessage: completion:
Params	
Message	1.GAMFUNSocialFBInvite
	quote //message text
	2.GAMFUNSocialFBImages
	photoImage //photo image <uiimage></uiimage>
	3.GAMFUNSocialFBFriendsGameInvite
	inviteString //invite message text
completion	GAMFUNShareCompleteHandler

```
// share invite link to facebook
- (IBAction) fbShare: (id) sender {
    GAMFUNSocialFBInvite *obj = [[GAMFUNSocialFBInvite alloc] init];
    obj.quote = @"Join us";
    [[GameFunManager defaultManager] facebookShareMessage:obj completion:^(BOOL success,
NSError * _Nullable error) {
    if (success) {
        if (error) {
            GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
        }
}
```

```
}];
//share image to facebook
- (IBAction) fbpic: (id) sender {
   UIImage *image = [UIImage imageNamed:@"game logo 1024"];
   GAMFUNSocialFBImages *obj = [[GAMFUNSocialFBImages alloc] init];
   obj.photoImage = image;
   [[GameFunManager defaultManager] facebookShareMessage:obj completion:^(BOOL success,
NSError * Nullable error) {
       if (success) {
       } else {
           if (error) {
              GAMFUNHUD HINT([error.userInfo objectForKey:@"errorMsg"]);
  }];
//send invite to facebook friends (This feature is only available if you are logged in with
Facebook)
- (IBAction) fbGameInviteFriends: (id) sender {
   GAMFUNSocialFBFriendsGameInvite *obj = [[GAMFUNSocialFBFriendsGameInvite alloc]
init];
   obj.inviteString = @"join us";
   [[GameFunManager defaultManager] facebookShareMessage:obj completion:^(BOOL success,
NSError * _Nullable error) {
       if (success) {
           GAMFUNHUD_SUCCESS(@"sent the message");
       } else {
           if (error) {
              GAMFUNHUD HINT([error.userInfo objectForKey:@"errorMsg"]);
           }
```

```
}];
}
```

7.2.2 Share To WhatsApp

Method	whatsAppShareMessage: completion:
Params	
Message	1.GAMFUNSocialWAInvite contentString // whatsApp message text
	2.GAMFUNSocialWAImages photos //NSArray image <uiimage></uiimage>
completion	GAMFUNShareCompleteHandler

```
// share invite link to whatsApp
- (IBAction) whatsAppShare: (id) sender {
   GAMFUNSocialWAInvite *obj = [[GAMFUNSocialWAInvite alloc] init];
   obj.contentString = @"play games";
   [[GameFunManager defaultManager] whatsAppShareMessage:obj completion:^(BOOL success,
NSError * Nullable error) {
      if (success) {
       } else {
          if (error) {
              GAMFUNHUD HINT([error.userInfo objectForKey:@"errorMsg"]);
           }
   }];
// share picture to whatsApp
- (IBAction) wapic: (id) sender {
   GAMFUNSocialWAImages *obj = [[GAMFUNSocialWAImages alloc] init];
   UIImage *image = [UIImage imageNamed:@"game_logo_1024"];
   obj.photos = @[image];
```

```
[[GameFunManager defaultManager] whatsAppShareMessage:obj completion:^(BOOL success,
NSError * _Nullable error) {
    if (success) {
        if (error) {
             GAMFUNHUD_HINT([error.userInfo objectForKey:@"errorMsg"]);
        }
    }
}
```

7.3 Share (Botim)

7.3.1 Get Botim Friends

Method	getFriendsFromBotimCompletion
Callback	GAMFUNBimFriendsCompletionHandler

example:

7.3.2 Get Botim Playing Game Friends

Method	getPlayingFriendsFromBotimCompletion
Callback	GAMFUNBimFriendsCompletionHandler

example:

7.3.3 Share Botim Message

Method	sendToMessageToBotim:(id)message Completion:
Callback	GAMFUNShareCompleteHandler

example:

```
- (void) sendMessageToFriend {
    GAMFUNSocialBimMessage *model = [[GAMFUNSocialBimMessage alloc] init];
    model.bimUid = @"xxxxxxxxx";
    model.contentString = @"come and join us";
    model.title = @"play game";
    model.imageUrl =
@"http://t8.baidu.com/it/u=1484500186,1503043093&fm=79&app=86&f=JPEG?w=1280&h=853";
    [[GameFunManager defaultManager] sendToMessageToBotim:model Completion:^(BOOL success,
NSError * _Nullable error) {
    }];
}
```

8. API: Push

8.1 Register

in AppDelegate:

```
- (void)application:(UIApplication *)application
didRegisterForRemoteNotificationsWithDeviceToken:(NSData *)deviceToken {
    [[GameFunManager defaultManager] registerDeviceToken:deviceToken];
}
```

8.2 Receive Push Message

Method	getRemoteNotification
Callback	GAMFUNNotificationCompletionHandler

example:

```
- (void)recieveMessage {
    [[GameFunManager defaultManager] getRemoteNotification:^(id _Nullable result,

NSError * _Nullable error) {
        //Receive a push message and can customize the event based on the message.
        //Do something ...
}];
}
```

9. API: Track

9.1 Field Description

GAMFUNTrackEvent (NS_ENUM)

Params	Note
GAMFUNTrackEvent_Activity	activity event
GAMFUNTrackEvent_Guide	guide event
GAMFUNTrackEvent_GuideCompleti	guide completion event
on	
GAMFUNTrackEvent_Reward	reward event
GAMFUNTrackEvent_Rank	rank event

GAMFUNTrackEvent_VipInfo	vip info event
GAMFUNTrackEvent_AdClick	ad click event
GAMFUNTrackEvent_Other	other event

Track Event Param Keys

Keys Define	Values
GAMFUNTrackParamActivityId	af_activity_id
GAMFUNTrackParamActivityAction	af_activity_action
GAMFUNTrackParamGuideId	af_tutorial_id
GAMFUNTrackParamGuideDetail	af_tutorial_detail
GAMFUNTrackParamGuideSuccess	af_success
GAMFUNTrackParamRewardId	af_reward_id
GAMFUNTrackParamUserVip	af_user_vip
GAMFUNTrackParamAdId	af_ad_id

9.2 Track Event

Meth	nod	tracker_event: withValues:	

```
[[GameFunManager defaultManager] tracker_event:GAMFUNTrackEvent_Guide
withValues:@{GAMFUNTrackParamGuideId:@"guide test2",
         GAMFUNTrackParamGuideDetail:@"guide2"}];
- (IBAction)guideCompletion:(id)sender {
    \hbox{\tt [[GameFunManager\ defaultManager]\ tracker\_event:GAMFUNTrackEvent\_GuideCompletion]}
withValues:@{GAMFUNTrackParamGuideId:@"guide test",
       GAMFUNTrackParamGuideSuccess:@YES,
        GAMFUNTrackParamGuideDetail:@"test finish",}];
- (IBAction) reward: (id) sender {
    \hbox{\tt [[GameFunManager defaultManager] tracker\_event:} GAMFUNTrackEvent\_Reward\\
withValues:@{GAMFUNTrackParamRewardId:@"reward_222"}];
- (IBAction) rank: (id) sender {
    [[GameFunManager defaultManager] tracker event:GAMFUNTrackEvent Rank
withValues:@{@"af rank":@"R0"}];
- (IBAction) vip: (id) sender {
    \hbox{\tt [[GameFunManager defaultManager] tracker\_event:} GAMFUNTrackEvent\_VipInfo\\
withValues:@{GAMFUNTrackParamUserVip:@"Vip5"}];
- (IBAction) ad: (id) sender {
   [[GameFunManager defaultManager] tracker event:GAMFUNTrackEvent AdClick
withValues:@{GAMFUNTrackParamAdId:@"ad 222"}];
```

9.3 Track Event(Customized)

10. API: Customer Service

10.1 Contact us With Messenger

Method	contactusWithMessenger
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example:

[[GameFunManager defaultManager] contactusWithMessenger];