EC TSDK

6.1.T2

Demo Guide(Android)

Issue   **01**

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Contents

1 Introduction

"CloudEC_Client_API_Demo_Android"fit to CloudEC 6.1 solution, base on Terminal SDK，provides basic service implementation samples for third-party applications.

Developers can customize interfaces based on the samples to develop their own special services.

2 Quick Experience

2.1 Applying for a Service Account

Use Huawei eSDK RemoteLab Enviroment

For details on how to schedule and use RemoteLab, see the **Operating Instructions for RemoteLab**，Obtain the service server address and service account information.

Use the partner's own test or production environment

Contact to your environment administrator to obtain service server address and service account information.
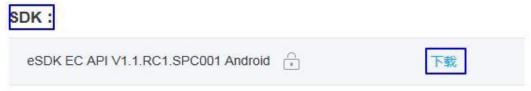
2.2 Development Environment Preparation

Development tools

- Operating system：Windows 7 professional Edition.
- Android Studio：Android Studio1.5 and above version.

SDK software package

- Access **http://developer.huawei.com**，obtain eSDK API Android SDK。

Demo Source code

- Access **https://github.com/Huawei**，obtain"CloudEC_Client_API_Demo_Android"。

2.3 SDK Import

Step 1 Unzip the downloaded eSDK API Android SDK package to disk：

Step 2 Unzip the downloaded Demo source code and copy it to the working directory：

Step 3 Copy the"Step 1"unpacked package to the "SDKWrapper"folder：

Step 4 Click"SdkCopy.bat"，automates ImSDK decompression、copying, and sorting，move ImSDK content to the upper ImSDK directory.

☷**NOTE**

1、Due to ImSDK support use independently，In this all Demo，there has repeat *.jar and *.so will affect compilation builds，so it need to defragment the duplicate files;

2、For non-Windows developers，do this batch in Windows at first，or refer to this batch content，manually cut and copy.

----End

2.4 Debug Run Demo

Step 1 Open Android Studio，import Demo project processed in capture 2.3.

Step 2 According to Gradle prompt of Android Studio Gradle，and local Gradle and Android SDK version，modify build.gradle configure of project.

☷**NOTE**

Mainly modify gradle version、compileSdkVersion、buildToolsVersion。

Step 3 Build

📖**NOTE**

> In general situation，there is no error in the build process，and if there are errors，please correct them according to the Android studio.

Step 4 Connect Android to machine debug，install compiled EC_SDK_Demo.apk。

📖**NOTE**

> Due to Android Studio3.xxx and Android Studio2.xxx has difference to complie，apk complied by 3.xxx will lead to NoClassDefFoundError error in the run time. It can resolve by refering to how to config multidex from the internet.

Step 5 Complete configuration of server address, port，enter login account and password，finish login.

----End

3 Demo Code Framework

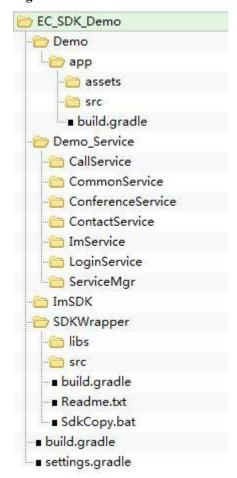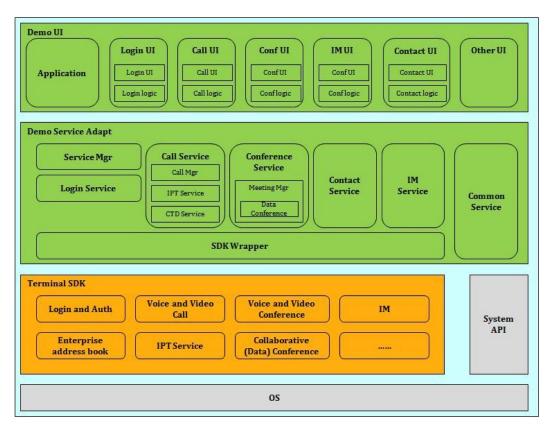## 3.1 Folder Structure

Figure 3-1 folder structure

Table 3-1 folder description

Folder	Description
Demo	UI project library folder that contains the UI layer service logic for the demo, user interface rendering, and resource files(picture, audio, text, and so on).
Demo_Service\CallService	"Audio and video call service" project library folder, including the implementation of audio and video calls based on the SDK, IPT service and CTD service code
Demo_Service\CommonService	"Public Service" project library folder, which contains other service dependent public function implementation code, such as string processing, crash output, logging, broadcast message, and so on.
Demo_Service\ConferenceService	"Audio and video conference services" project library folder, including the implementation of audio and video conference based on the SDK(including data conference) service code.
Demo_Service\ContactService	"Contact Service" project library folder, containing service code for enterprise contact (address book) based on SDK.
Demo_Service\ImService	"Instant Message Service" project library folder, containing service based on SDK implementation PGM(status, group, and message).
Demo_Service\LoginService	"Login Service" project library folder, containing the implementation code for the overall login entry for all service logic based on the SDK implementation demo.
Demo_Service\ServiceMgr	"Service Management" project library folder, containing the implementation code for the demo's configuration of the specific business (whether it supports a service), initialization, and uninitialization of ervice management.
ImSDK	ImSDK saved path
SDKWrapper\libs	Except ImSDK，other SDK saved path

3.2 Logic Framework

4 Demo Function List

Function Item	Function Sub Item	Whether Open	Demo Whether Support
Authentication and Login	normal login	Y	Y
	ticket authentication login	Y	N
	logout	Y	Y
Voice Call	voice Call Setup	Y	Y
	end/cancel/reject call	Y	Y
	accept voice call	Y	Y
	set(or cancel) mute mic	Y	Y
	send DTMF signal	Y	Y
Video Call	video call setup	Y	Y
	end/cancel/reject call	Y	Y
	accept video call	Y	Y
	switch voice call to a video call	Y	Y
	switch video call to a voice call	Y	Y
	accept or reject switch voice call to a video call	Y	Y
	open local video preview	Y	N
	close local video preview	Y	N
	open or close local camera	Y	Y
Device management	switch mic	Y	N

	switch speak	Y	Y
	switch camera	Y	Y
	set call volume	Y	N
Hold&Unhold	hold and unhold voice call	Y	Y
	hold and unhold video call	Y	Y
Divert	call divert	Y	Y
Transfer	blind transfer	Y	Y
Regist IPT service	regist or deregist call wait	Y	Y
	regist or deregist DND	Y	Y
	regist or deregist forward	Y	Y
CTD	set up CTD call	Y	Y
Conference management	book conference	Y	Y
	query conference list	Y	Y
	query conference details	Y	Y
Basic conference control	create instant conference	Y	Y
	get conference info	Y	Y
	invite attendee	Y	Y
	delete attendee	Y	Y
	end conference	Y	Y
	leave conference	Y	Y
	mute conference	Y	Y
	mute attendee	Y	Y
	lock conference	Y	Y
	release chairman	Y	Y
	request chairman	Y	Y
	prolong conference	N	NA
	set or cancel hand up	Y	Y
	display speaker	Y	N
	join a conference from the conference list	Y	Y
	join conference by an access code	Y	Y

	IVR join conference	Y	Y
Progressive Conference	Two-Party Call-to-Conference Conversion	Y	N
	upgrade conference	Y	Y
Base control	join data conference	Y	Y
	leave data conference	Y	Y
	end data conference	Y	Y
Video	base video control	Y	Y
	watch video	Y	Y
	set video param	Y	Y
Desktop Sharing	watch desktop sharing	Y	Y
Application Sharing	watch application sharing	Y	Y
Document	watch document sharing	Y	Y
Whiteboard	watch white board sharing	Y	Y
Annotation	watch annotation	Y	Y
Chat	send public instant message	Y	N
Personal information access and setting	get and set user information	Y	Y
	get and set user icon	Y	Y
Personal contact	get contact and group list	Y	Y
	obtain icon	Y	Y
	add friend	Y	Y
	delete contact or friend	Y	Y
Enterprise contact	query enterprise contact	Y	Y
	query user info	Y	Y
Status and remind	set personal status	Y	Y
	subscribe user status	Y	Y
Fixed group	dissolution fixed group	Y	Y
	modify fixed group	Y	Y
	approve fixed group invitation	Y	Y
	quite fixed group	Y	Y
	obtain fixed group list	Y	Y

	obtain fixed group member list	Y	Y
	obtain fixed group detail	Y	Y
Discussion group	create discussion group	Y	Y
	fix discussion group	Y	Y
	modify discussion group	Y	Y
	invite discussion group member	Y	Y
	delete discussion group member	Y	Y
	quite discussion group	Y	Y
	obtain discussion group list	Y	Y
	obtain discussion group member list	Y	Y
	obtain discussion group detail	Y	Y
Text message	send instant message	Y	Y
	get roaming messages	Y	Y
	set message has read	Y	Y
	message notify	Y	Y
Push	open Push	Y	N
	close Push	Y	N
	Push message handle	Y	N
Rich media	send and receive picture	Y	Y
	send and receive audio	Y	Y
	send and receive video	Y	Y
	send and receive normal offline file	Y	Y
Internet address book	query contact	Y	Y
	query department	Y	Y
	get and set contact icon	Y	Y

4.1 Supporting CloudEC Function

Charact	Function Item	Function Sub Item	Whether Open (Hosted)	Demo Whether Support	Demo Description
Login	Authentication and Login	normal login	Y	Y	not support STG at present
		ticket authentication login	Y	N	not supprt server enviroment, low priority
		logout	Y	Y	not support STG at present
VoIP	Voice Call	voice Call Setup	Y	Y	
		end/cancel/reject call	Y	Y	
		accept voice call	Y	Y	
		set(or cancel) mute mic	Y	Y	
		send DTMF signal	Y	Y	
	Video Call	video call setup	Y	Y	
		end/cancel/reject call	Y	Y	
		accept video call	Y	Y	
		switch voice call to a video call	Y	Y	
		switch video call to a voice call	Y	Y	
		accept or reject switch voice call to a video call	Y	Y	
		open local video preview	Y	N	not implemented
		close local video preview	Y	N	not implemented

Charact	Function Item	Function Sub Item	Whether Open (Hosted)	Demo Whether Support	Demo Description
		open or close local camera	Y	Y	
	Device management	switch mic	Y	N	use system config
		switch speak	Y	Y	
		switch camera	Y	Y	
		set call volume	Y	N	use system config
IPT	Hold&unhold	hold and unhold voice call	Y	Y	
		hold and unhold video call	Y	Y	
	Divert	call divert	Y	Y	
	Transfer	blind transfer	Y	Y	
	Regist IPT service	regist or deregist call wait	Y	Y	
		regist or deregist DND	Y	Y	
		regist or deregist forward	Y	Y	
	CTD	set up CTD call	Y	Y	
ConfCtrl	Conference management	book conference	Y	Y	
		query conference list	Y	Y	
		query conference details	Y	Y	
	Basic conference control	create instant conference	Y	Y	
		get conference info	Y	Y	
		invite attendee	Y	Y	
		delete attendee	Y	Y	
		hang up attendee	Y	Y	

Charact	Function Item	Function Sub Item	Whether Open (Hosted)	Demo Whether Support	Demo Description
		recall attendee	Y	Y	
		end conference	Y	Y	
		leave conference	Y	Y	
		mute conference	Y	Y	
		mute attendee	Y	Y	
		lock conference	Y	Y	
		release chairman	Y	Y	
		request chairman	Y	Y	
		prolong conference	Y	N	not implemented
		set or cancel hand up	Y	Y	
		display speaker	Y	N	not implemented
		join a conference from the conference list	Y	Y	
		join conference by an access code	Y	Y	
		IVR join conference	Y	Y	
	Video control	set conference mode	Y	Y	
		broadcast conference	Y	Y	
		watch conference	N	Y	
	Progressive Conference	Two-Party Call-to-Conference Conversion	Y	N	not implemented
		upgrade conference	Y	Y	
	data sharing	active sharing data	Y	N	not implemented
		watch data	Y	N	not implemented

Charact	Function Item	Function Sub Item	Whether Open (Hosted)	Demo Whether Support	Demo Description
DataConf	Base control	join data conference	Y	Y	
		leave data conference	Y	Y	
		end data conference	Y	Y	
	Desktop Sharing	watch desktop sharing	Y	Y	
	Application Sharing	watch application sharing	Y	Y	
	Document	watch document sharing	Y	Y	
	Whiteboard	watch white board sharing	Y	Y	
	Annotation	watch annotation	Y	Y	
	Chat	send public instant message	Y	N	not implemented
IM	Personal information access and setting	get and set user information	Y	Y	
		get and set user icon	Y	Y	
	Personal contact	get contact and group list	Y	Y	
		obtain icon	Y	Y	
		add friend	Y	Y	
		delete contact or friend	Y	Y	
	Enterprise contact	query enterprise contact	Y	Y	
		query user info	Y	Y	
	Status and remind	set personal status	Y	Y	
		subscribe user status	Y	Y	
	Fixed group	dissolution fixed group	Y	Y	
		modify fixed group	Y	Y	

Chara ct	Function Item	Function Sub Item	Whet her Open (Host ed)	Demo Whether Support	Demo Description
		approve fixed group invitation	Y	Y	not implemented
		quite fixed group	Y	Y	
		obtain fixed group list	Y	Y	
		obtain fixed group member list	Y	Y	
		obtain fixed group detail	Y	Y	
	Discussion group	create discussion group	Y	Y	
		fix discussion group	Y	Y	
		modify discussion group	Y	Y	
		invite discussion group member	Y	Y	
		delete discussion group member	Y	Y	
		quite discussion group	Y	Y	
		obtain discussion group list	Y	Y	
		obtain discussion group member list	Y	Y	
		obtain discussion group detail	Y	Y	
	Text message	send instant message	Y	Y	
		get roaming messages	Y	Y	
		set message has read	Y	Y	
		message notify	Y	Y	

Charact	Function Item	Function Sub Item	Whether Open (Hosted)	Demo Whether Support	Demo Description
	Push	open Push	Y	N	not implemented
		close Push	Y	N	not implemented
		Push message handle	Y	N	not implemented
	Rich media	send and receive picture	Y	Y	
		send and receive audio	Y	Y	
		send and receive video	Y	Y	
		send and receive normal offline file	Y	Y	
eAddr	Internet address book	query contact	Y	Y	
		query department	Y	Y	
		get and set contact icon	Y	Y	

5 How to Crop

5.1 Crop Description

EC SDK Demo(Android) devided module base on the functional charact, can be based on the actual needs of developers, in the modification of a small number of code, the need to cut the function.

5.2 Example 1:cropping "instant message"

📖**NOTE**

No special instructions，red box [red box] in the content indicates that needs to be deleted.

Step 1 Modify Gradle relative configuration.

1. Delete "settings.gradle"dependence：':Demo_Service:ImService' and ':ImSDK'；

2. Delete "build.gradle" relative dependence：

Step 2 Delete the unused project, packages, files, and file directories.

    1.   Delete "ImSDK" and "ImServer" project library：

    2.   Delete"instant message"relative page process Java code：
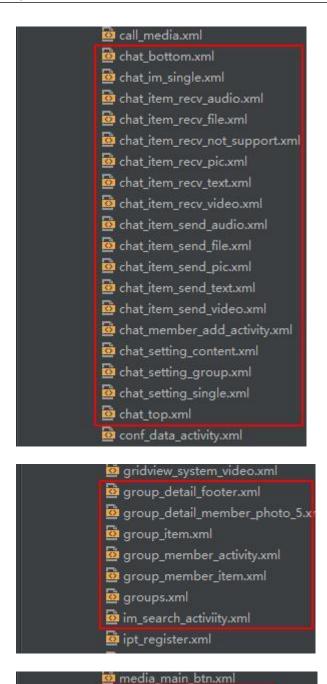
3. Delete"instant message"relative page *layout.xml file.

☐**NOTE**

Here is an example，contains the main related layout.xml files，not all of which can be further removed by the developer as needed.

Step 3 Delete references to the contents of the above steps in the engineering library.

As：

□□**NOTE**

Developers can use the "build" method to find the relevant reference, and then to screen.

Step 4 Shielding the main interface entrance.

Step 5 Shielding the interface entrance of setting user status.

☐**NOTE**

> Because the interface of setting state has been removed, if you do not block this entry, clicking on the avatar will cause the program to crash.

Step 6 Shielding other unused interface entrance.

As main interface "Search" button :

Modify MainActivity.java file，add a line code in the suitable place：

```
mSearchBtn.setVisibility(View.GONE);
```

Step 7 Delete other"instant message relative"resource file.

　　　　----End
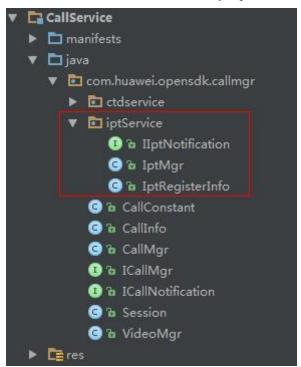
# 5.3 Example 2：cropping"IPT service"

No special instructions，red box ⬛⬛⬛ in the content indicates that needs to be deleted.
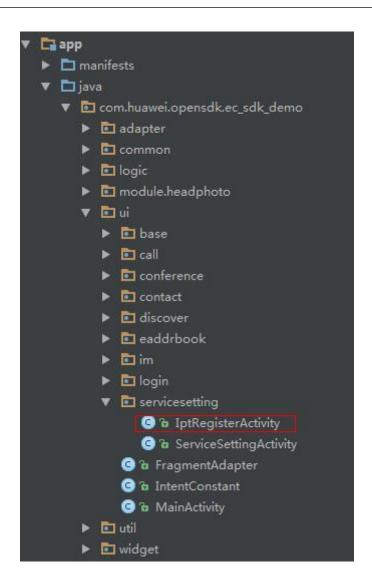
Step 1 Delete unused file and file directory.

　　1.　Delete"IPT service"relative service layer process code：

　　2.　Delete"IPT service"relative interface process java code：

NOTE

    – IptRegisterActivity file need to be removed.

    – ServiceSettingActivity file's case value and content need to be removed.

3. Delete"IPT service"relative reference code：

NOTE
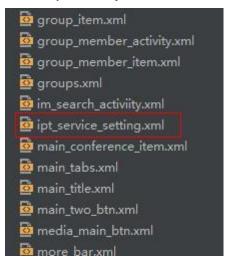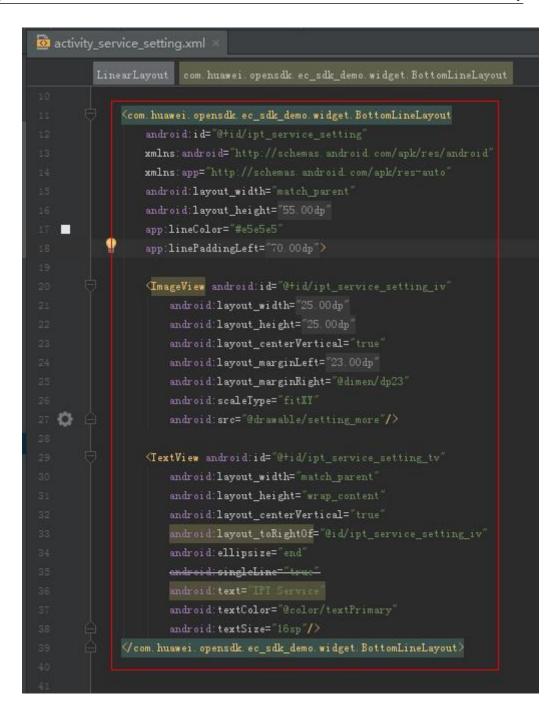
    – ServiceMgr project，ServiceNotify file's ipt interface notify need to be removed.

4. Delete"IPT service"relative interface *layout.xml file.

NOTE

Here is an example，contains the main related layout.xml files，not all of which can be further removed by the developer as needed.

5. Shielding IPT registeration interface entrance.

6. Shielding the divert button

7. Shielding the blind transfer button.

8. Delete divert and blind transfer interface button

----End

5.4 Example 3：cropping "eaddr contact"

📖**NOTE**

1、No special instructions，red box ▬▬▬▬ in the content indicates that needs to be deleted.

2、Due to"instant message"dependent"eaddr contact"to achieve icon update upload function，so，after cropping"eaddr contact"，icon update upload function can't be used.

Step 1 Modify Gradle relative configuration

   1.   Delete "settings.gradle" relative dependence：':Demo_Service:ContactService'；

   2.   Delete relative "build.gradle" dependence：

Step 2 Delete the unused project, packages, files, and file directories.

   1.   Delete "ContactServer" project library and "TupEaddr.jar" package:

2. Delete "eaddr contact" relative interface process Java code：
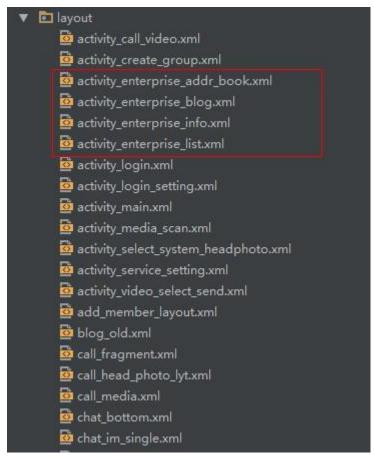
📖**NOTE**

     –   In ServiceMgr project，eaddr interface notify of ServiceNotify need to be removed.

    3.   Delete"eaddr contact"relative interface *layout.xml file.
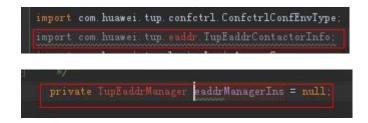
NOTE

Here is an example，contains the main related layout.xml files，not all of which can be further removed by the developer as needed.

Step 3 Delete reference of content from above step.

As：

NOTE
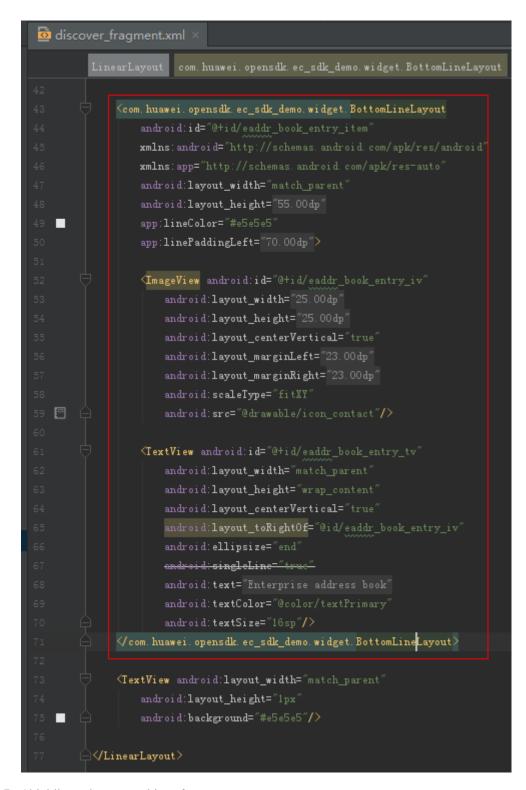
Developers can use the "build" method to find the relevant reference, and then to shield

Step 4 Shielding the main interface entrance.

Step 5 Shielding other unused interface entrance.

📖NOTE

If the "instant message" module is cropped out, this can be ignored.

As set and obtain icon entrance：

Step 6 Delete other"eaddr contact"relative resource file.

----End
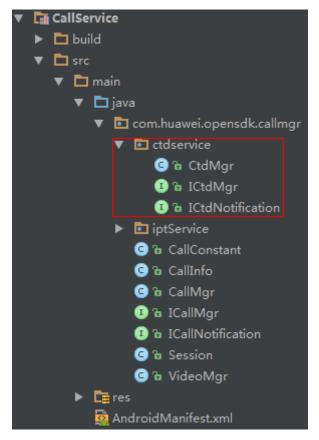
5.5 Example 4：cropping"CTD service"

📖**NOTE**

No special instructions，red box ███████████ in the content indicates that needs to be deleted.

Step 1 Delete unuse file and file direcory.

1. Delete "CTD service"relative service layer process code:

2. Delete"CTD service"relative reference code：

    – Delete ECApplication reference

– Delete ServiceNotify reference

- Delete CallFunc reference

– Delete CallFragment reference

> **NOTE**
>
> Here **else** also need to be removed.

3. Shielding the main interface entrance:

4. Delete interface logic：

```
            CallFragment.java ×

                CallFragment   onClick()
169                            LogUtil.i(UIConstants.DEMO_TAG, "call number is empty!");
170                            return;
171                        }
172                        toNumber = toNumber.substring(0, toNumber.length() - 1);
173                        mDialPlateControl.setCallNumber(toNumber);
174                        break;
175                    case R.id.select_ctd_btn:
176                        this.isChecked = !mCtdButton.isSelected();
177                        mCtdButton.setSelected(isChecked);
178                        if (isChecked)
179                        {
180                            final EditText callerNumber = new EditText(getActivity());
181                            callerNumber.setText(mSipNumber);
182                            AlertDialog builder = new AlertDialog.Builder(getActivity())
183                                    .setTitle("Please input caller number")
184                                    .setView(callerNumber)
185                                    .setPositiveButton("Sure", (dialog, which) -> {
188                                        CallFragment.setNumber(callerNumber.getText().toSt
189                                    }).setNegativeButton("Exit", null)
191                                    .create();
192                            builder.show();
193                        }
194                        break;
195                    default:
196                        break;
197                }
```

----End

6 **FAQ**

NA

7 Change History

Publish Date	Document Version	Revise Declare
2018-05-31	01	Cooperate 6.1.0 version(at present only fit to convergent meeting network), document first published.