Juphoon

RCS SDK

We are dedicated to providing Usable, Simple and Elegant (USE) communication products and solutions.

Juphoon RCS solution can provide both SDK and Application to operators, device manufacturers and industry players.

Juphoon RCS client is a standard-compliant client for PC and mobile handsets. It is fully compliant with RCS 5.1 specifications based on IETF, OMA, 3GPP, GSMA standards. And it reaches joyn accreditation with Hot Fixes (RCS-e 1.2.2). Developed with Juphoon RCS SDK, the cross-platform client delivers an enhanced communication experience to end users over all IP networks and on varied devices, with excellent interoperability and premium voice and video performance.

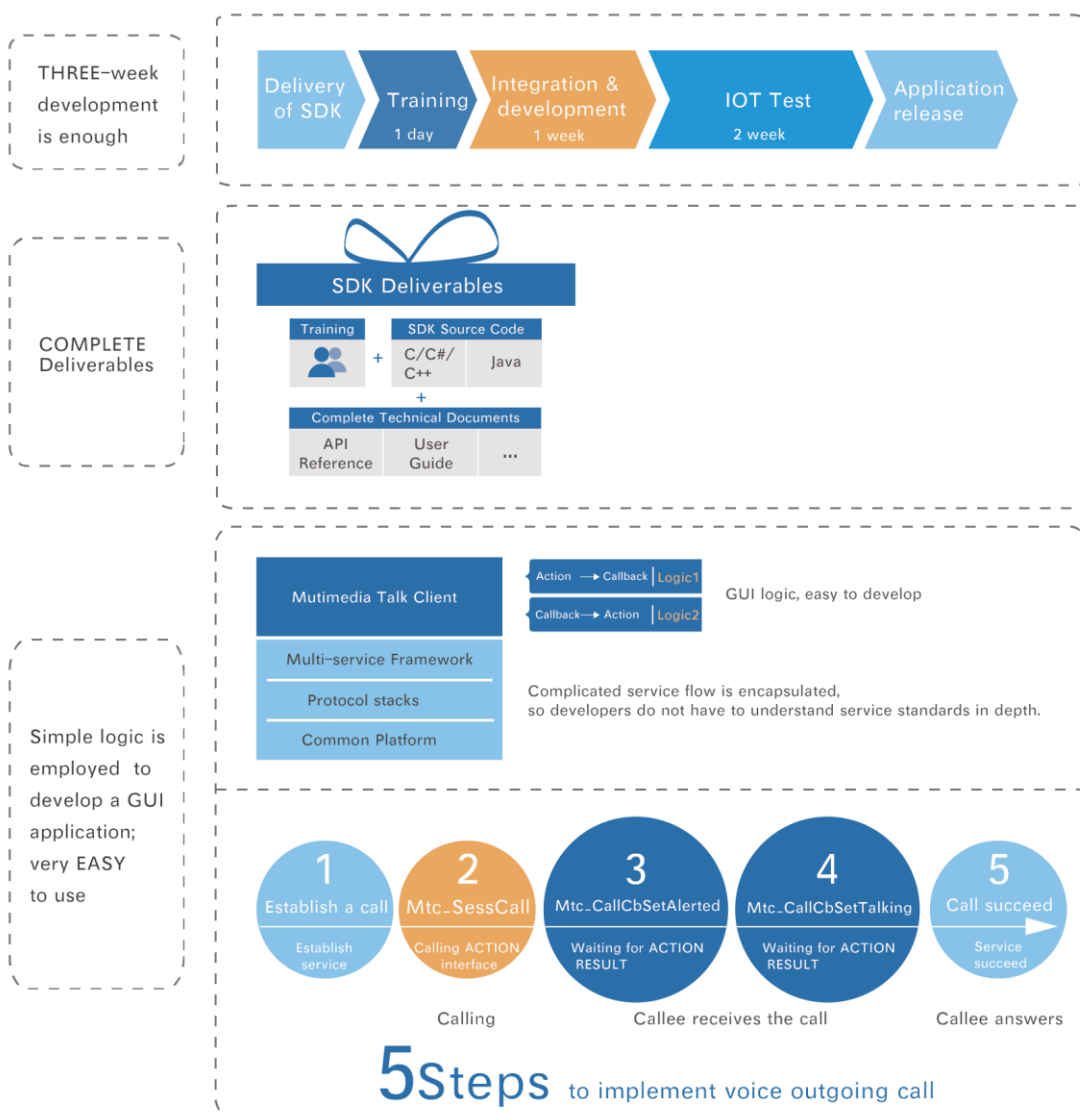joyn Hot Fixes (RCS-e 1.2.2)
Blackbird & Crane to be supported

RCS Release 5.1
Rich Communication Service

Core Features

Easy to use

Juphoon RCS SDK is simple and user friendly. Its user interfaces are named in an intuitive way and can be directly integrated with GUI logic. Thus it is quite easy to use and only a few couple lines of code are needed to realize a function. The SDK is delivered with professional technical documents and support which can help you to launch competitive client products asap.

THREE-week development is enough

| Delivery of SDK | Training 1 day | Integration & development 1 week | IOT Test 2 week | Application release |

COMPLETE Deliverables

SDK Deliverables

| Training | SDK Source Code |
| | C/C#/C++ | Java |

+

| Complete Technical Documents |
| API Reference | User Guide | ... |

Simple logic is employed to develop a GUI application; very EASY to use

Mutimedia Talk Client

Action ⟶ Callback | Logic1
Callback ⟶ Action | Logic2

GUI logic, easy to develop

Multi-service Framework

Protocol stacks

Common Platform

Complicated service flow is encapsulated, so developers do not have to understand service standards in depth.

1 Establish a call — Establish service
2 Mtc_SessCall — Calling ACTION interface
3 Mtc_CallCbSetAlerted — Waiting for ACTION RESULT
4 Mtc_CallCbSetTalking — Waiting for ACTION RESULT
5 Call succeed — Service succeed

Calling   Callee receives the call   Callee answers

5Steps to implement voice outgoing call

Excellent Compatibility and Interoperability

Supported OS

Windows (XP, 7, 8), Android (2.3-4.x), iOS(5.x - 7.x), Linux, etc.

Supported devices

Android mobile, Android tablet, PC, and iPhone (4, 4S, 5, 5s, 5c), iPad (2, 3, 4, mini),

Juphoon RCS/joyn solution is interoperable with following RCS servers and networks.

Premium voice and video quality

A superior multimedia engine is embedded to support HD voice and video call and ensure the best possible calling experience for every user, though they may use different devices and/or call over unreliable or heterogeneous wireless networks.

Transfer smaller images to devices with lower resolution and/or performance to achieve smooth experience.
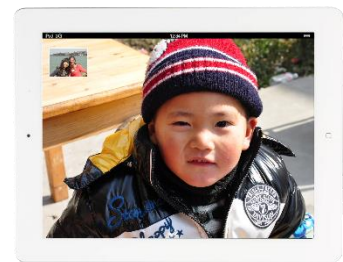
Transfer larger images to capable devices for outstanding HD video experience.

| Clear and smooth, even on unstable networks	Reduce video call data usage	Adapt video quality to device capabilities
SPo enables perfect adaptation of video transfer to bandwidth fluctuation, helping deliver clear and smooth video experience, even over unstable and/or heterogeneous networks.	Bandwidth efficient mode is applied to reduce video call data usage by 30% up to 90% off, without a perceptible decrease in video quality.	MDM can help optimize video quality to match device capabilities automatically, thus delivering best possible video quality on all supported devices and reducing deployment costs.

Architecure
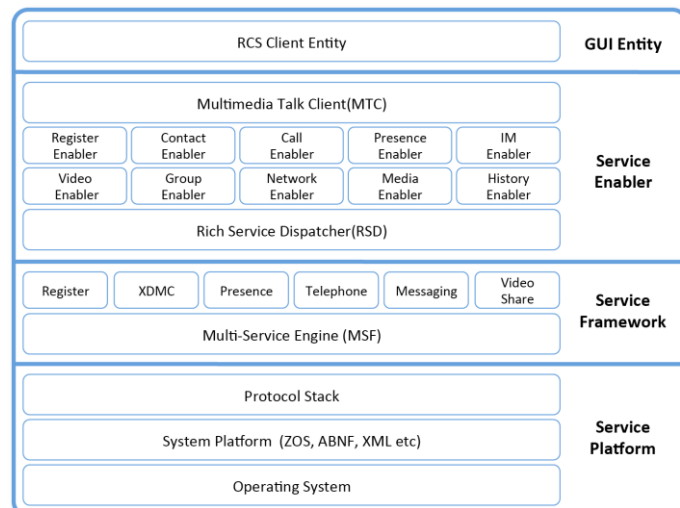
Specification

Auto-Configuration

- Auto-provisioning for mobile, tablet, PC;
- Primary device provisioning
- Secondary device provisioning

Content Sharing

- File transfer
  - Store & Forward
  - Thumbnail, notification
- Image sharing
- Live video sharing
- Location sharing

XML Document Management Client

- Resource lists
  - Multiple device
- Permanent presence
  - Multiple device
- Presence rules
- Rls-services
- Personal network blacklist

Contact & Presence

- Network Buddy (OMA)
- Availability, geolocation portrait icon, nickname, etc.
- Supporting RLS and watcher-info subscription
- Add/delete/black user, blacklist

Supported OS

- Windows XP, 7, 8
- Linux
- Android 2.3 up to 4.x
- iOS 5.x up to 7.x
- Mac OS X
- Symbian S60

Voice Processing

- Codecs: G.711, G.722, G.729, iLBC, iSAC, AMR-NB/WB, Opus
- AEC
- AES
- ANS
  - NS-MIC, Noise Suppressor for Microphone
  - NS-SPEAKER, Noise Suppressor for data from network
- AGC
  - AGC-MIC, Auto Gain Control for Microphone
  - AGC-SPEAKER, Auto Gain Control for Speaker
- VAD(VAD Voice Activity Detection)
- CNG (Comfortable Noise Generation)
- PLC (Packet Loss Concealment)
- FEC, RED, ARS
- DTMF
  - Inband ITU Q.23
  - Outband RFC2833
  - IR92 3.3
- Very Fast Adaptive Jitter Buffer
- Front End Handling in IR92 3.2.7
- Voice quality diagnosis

Capability Discovery

- Capability discovery
  - SIP OPTIONS
  - Presence Sever
- Capability exchange.
- Pushing and polling
- Dual-stack capability interworking

Security

- SIP DIGEST and IMS AKA
- HTTP DIGEST
- IPSec

Video Processing

- Codec: H.264, H.265, H.263, VP8
- FEC (Forward error correction)
- RED (Redundancy)
- TMMBR/TMMBN
- SPo (Sweet Point Control)
  - ARS(Auto bit Rate Sensing)
  - Framerate Auto Control
  - Resolution Auto Control
- FIR(full intral frame request)
- Color Enhance
- Render
  - Render in Isolated Window
  - PiP Picture in Picture
  - External Render
- Adaptive Jitter Buffer
- Packet Lost, PLC Packet Loss Concealment
- Video quality diagnosis

Messaging

- Instant Messaging of SIMPLE and CPM
  - Pager Mode
  - Large Mode
  - Session based 1-1/group chat
  - Standalone messaging
- Deliver, display notification;
- Deferred message
- Composing status

Protocol

- SIP (UDP, TCP, TLS)
- SDP
- DNS
- RTP/RTCP/SRTP
- MSRP (TCP, TLS)
- HTTP (TCP, TLS)
- XCAP
- IMAP (TCP, TLS)
- STUN/TURN/ICE for NAT traversal