SUMMIT RCS
CLIENTS

Summit's **ONE IMS Client** for
RCS, VoLTE
& webRTC

As an OEM embedded VoLTE stack, OTT joyn app or a web-based RCS service, there is only one IMS client which consistently delivers the richest set of features across the widest array of platforms, on smartphones, tablets, desktops and set-top-boxes/smart TVs.

Available on Android, iOS, Windows, Mac OSX, Linux and more.

Summit's industry leading RCS/IMS client, launched in over 16 countries and counting, delivers services ranging from joyn Blackbird, RCS 5.2, **RCS/VoLTE Enterprise**, including innovative new services implemented through RCS APIs such as:

mHealth, Home Automation, RCS Gaming and Virtual Reality.

RichCommunicationSuite.com | summit-tech.com

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SUMMIT TECH

Rich Communication Suite

The Summit RCS client is a standards compliant smartphone, PC and tablet client that meets GSMA RCS requirements for Rich Communication Services based on IMS. Summit's RCS client delivers an enhanced user experience that facilitates the management of multiple voice and video sessions, messaging, and advanced calling functionality. Developed using the Summit IMS SDK, the cross platform Summit RCS client is based on IETF, OMA, 3GPP, and GSMA standards and is supported on iOS devices, Android devices, Windows smartphones & tablets, set-top boxes, HTML5/WebRTC as well as on OS X and Windows desktops.

joyn
joyn Hotfixes
Blackbird & Crane

GSMA
RCS 5.x
Rich Communication Suite

Enriched Call
IMS voice sessions (VoIP / VoLTE / VoHSPA) can be enriched to include media services such as video, chat, IM, media transfer.

Enhanced Messaging
OMA SIMPLE IM 1-1 or 1-N instant messaging that can be enhanced with images, media, location and video sharing - OMA CPM - Support for Integrated Inbox: RCS, SMS & MMS.

Presence
Basic and extended presence information including geolocation, service capabilities, taglines and avatars. When a presence server is not deployed, service capabilities are discovered through the joyn SIP OPTIONS method.

Enhanced Phonebook
The Summit RCS Client marks-up the native address book to highlight RCS service capabilities, and synchronizes your contacts with a network Converged Address Book (CAB / NAB).

Advanced Skinning Framework
Full customization of the presentation layer look and behavior is supported, with no impact on the IMS SDK below it.

Device RCS API
The Summit RCS stack exposes three levels of API control to app developers, providing high-level, intermediate and fine-grained interfaces. Developers can add rich communication features to existing applications, or create their own services based on RCS infrastructure.

Interoperability
Uses standards-based methods to detect the service capabilities of devices on different platforms and operators, to provide a positive user experience while highlighting your network's differentiating services.

Supported Audio Codecs
AMR-NB, AMR-WB, G711 a-law, G711 u-law, Speex, iLBC, G.722, G.722,2, OPUS

Supported Video Codecs
H.263, H.263-1998, H.263-2000, H.264, WebM (VP8)

Service Provisioning
Auto Configuration Server (ACS)

By optionally coupling the Summit RCS client with Summit ACS, service deployment is simplified with the additional benefit of serving as a reference implementation for device OEMs.

The Summit Auto-Configuration Server (ACS) improves time-to-market by focusing on an operator's specific RCS configuration requirements as well as providing a customizable and adaptable interface to existing provisioning systems across multiple device OEMs, ranging from smartphones to tablets.

· joyn, RCS 5.x compliant
· Extensible XML configuration documents
· Simple and flexible templates
· Enable / disable features for specific devices, OS version, or client versions
· Optional or mandatory client upgrade notification
· Active user reporting
· Registration reporting

Contact: info@richcommunicationsuite.com

SUMMIT TECH

Summit Tech provides a full-featured, cross-platform Rich Communications Suite (RCS, joyn) IMS stack, SDK and clients available for all form factors of Android, iOS, Windows Phone, Windows, OS X, Linux, BBOS, Symbian, J2ME, Adobe Flash and HTML5. Individual SDK components and enablers within Summit's SDK are decoupled building blocks that can be integrated with existing stacks and clients provided by carriers and OEMs. In addition, Summit's enhanced user-experience (UX) framework is available to OEMs allowing for the creation of a unique RCS flow that integrates seamlessly with existing components.

RCS/joyn Advanced Communications

Auto-provisioning over the air, secondary device provisioning over WLAN (Tablet, PC)	RCS 5.x, joyn Hotfixes and Blackbird
Capability discovery via SIP OPTIONS or Presence Server (PS) anonymous subscribe, Dual-stack capability interworking	RCS 5.x, joyn Hotfixes and Blackbird
Integrated Messaging (unified inbox): RCS, SMS, MMS	GSMA RCS roadmap
Session-based 1-to-1 & group chat, Deferred message delivery, conversation history, IMDN	Instant Messaging using OMA SIMPLE or CPM
File transfer thumbnail, store & forward, pause & resume, geo-location push / pull, vCard share	RCS 5.x and joyn enhancements
Image share over CS, 1-way and 2-way live video share over CS	GSMA IR.79 - Image Share Interoperability GSMA IR.74 - Video Share Interoperability
Converged Address Book: Synchronizing address book across different devices and platforms by storing it on the network	OMA CAB v1.0, S-CAB
CPM Messaging & Message Store	Message Store synchronization (IMAP), SMS and MMS integration (pager mode, long mode)

Audio/Video Communication

Voice and Video breakout over Wi-Fi, HSPA & LTE for all-IP network convergence	RCS 5.x
N-way conference calls and supplementary services for VoIP and VoLTE	GSMA IR.58/92 IMS Profile for Voice and SMS, GSMA IR.94 IMS Profile for Conversational Video
RTP voice and video calls, coupled with RTCP-based connectivity feedback, preconditions, SRTP, DTMF events	3GPP TS 26.114 Multimedia Telephony
NAT Traversal by use of STUN/TURN protocol (if required)	RFC 5245 Interactive Connectivity Establishment (ICE)

Optimized Components

- Acoustic Echo Cancellation and Noise Reduction - optimized for performance on mobile devices
- Integration with platform-provided codecs or hardware optimized SW codecs
- Jitter buffer, implemented with separate characteristics for audio and video
- Video rotation awareness
- Adaptive video bitrate
- Adaptive FEC

Social Presence

Social presence: Availability, portrait icon, tagline, geo-location, nickname, homepage, VIP & non-VIP contacts	RCS 5.x
Symmetric presence authorization, XDMS (Ut), supporting RCS standard lists: granted, revoked, blocked, SPI-only lists, RLS and watcher-info subscription	RCS 5.x
Multi-device presence: Synchronizing own live presence, resource lists and perm-presence across multiple UEs	RCS 5.x
Presence information extensions: Facebook, Twitter & more	RCS 5.x, Summit

Core Functionality

Summit Tech's IMS stack has been verified against several first-tier IMS cores, SBCs and application servers

Registration and authentication over IPv4 or IPv6, sigcomp, Voice and Video calling, emergency calling, TLS	3GPP TS 24.229 IP multimedia call control protocol
Multiple registrations (one number, request forking) using sip.instance or GRUU	RFC 5626, 5627, 5628
Telephony supplementary services	3GPP TS 24.173 IMS multimedia telephony communication service and supplementary services
VoWiFi Non-3GPP Access / EPC Access	EPDG support as per 3GPP TS 24.302, TS 33.402 with IPSEC, IKEv2
SMS over IP	3GPP TS 24.341 Support of SMS over IP networks
QoS negotiation using reliable provisional responses	RFC 3262
SIP keep-alives to sustain TCP/TLS/UDP connections over Wi-Fi/public access	RFC 5626
Low memory footprint, optimized for battery life	IMS stack components written in C/C++
16kHz HD Audio+Video Call using H.264, AMR NB/WB (Narrow/Wide-Band), G.722, iLBC, OPUS	2-Way Conversational Video including in-session upgrades and downgrades, call hold and pause

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SUMMIT TECH

SUMMIT RCS
SERVER PRODUCTS
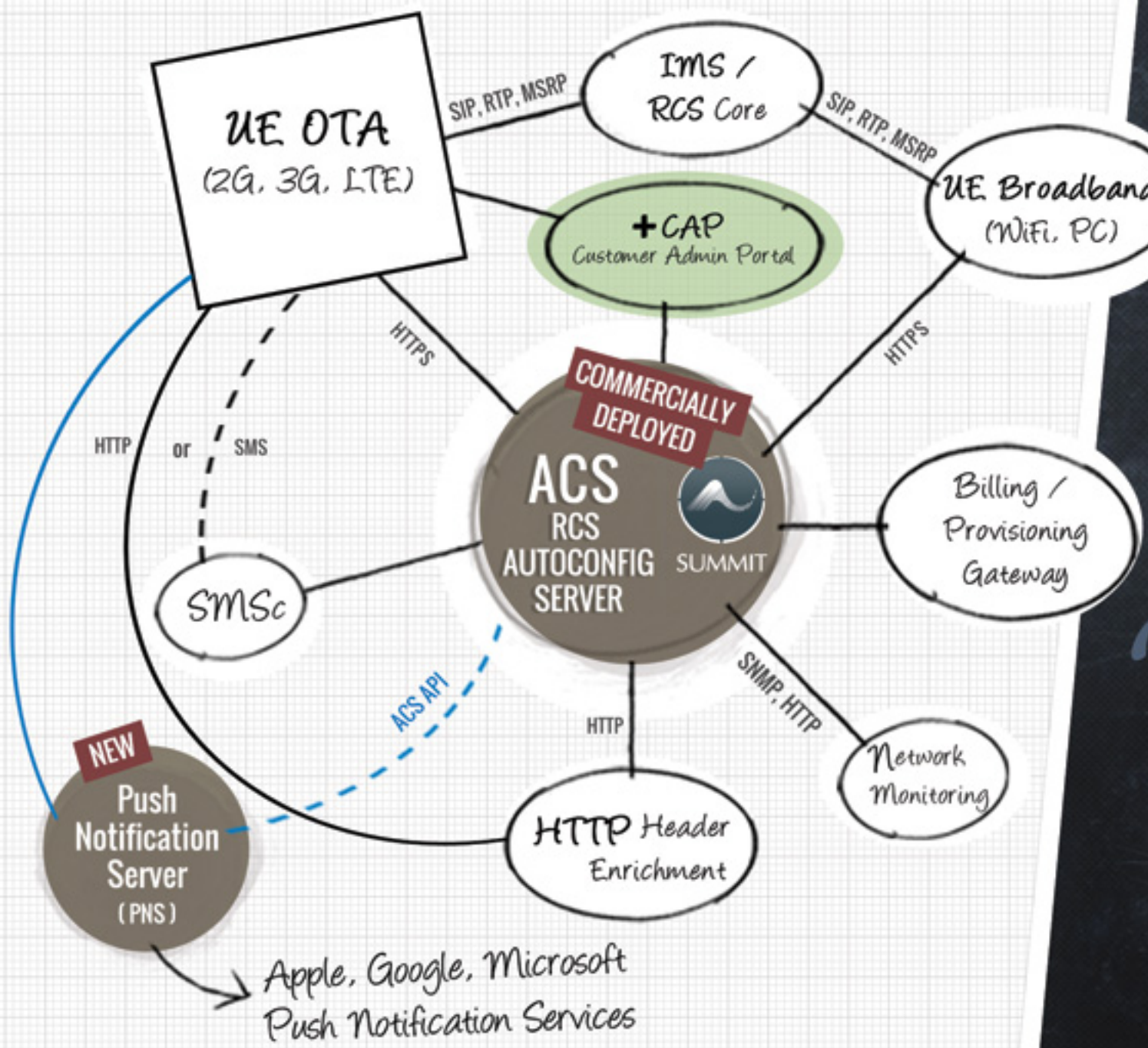
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ACS in the Network

RCS Service Provisioning - Auto Configuration Server (ACS)

The Summit Auto-Configuration Server (ACS) allows operators to easily deploy a scalable RCS provisioning solution. Current device management solutions can be complex to integrate with existing services across devices and platforms, ranging from smartphones, tablets, PCs to web clients.

ACS (autoconfiguration server) shortens time-to-market and reduces risk on complex service deployments by focusing on an operator's specific RCS configuration requirements, including Mobile Device Management solutions.

+CAP

is an extension to ACS enabling customer support services, engineering / testing tools, as well as a marketing and analytics engine.

Connecting

Authenticating

Welcome to
joyn
RCS

Network Diagram

UE OTA
(2G, 3G, LTE)

IMS / RCS Core

SIP, RTP, MSRP

SIP, RTP, MSRP

UE Broadband
(WiFi, PC)

+CAP
Customer Admin Portal

HTTPS

HTTPS

HTTP or SMS

HTTPS

COMMERCIALLY DEPLOYED

ACS
RCS AUTOCONFIG SERVER

SUMMIT

Billing / Provisioning Gateway

SMSc

ACS API

HTTP

SNMP, HTTP

Network Monitoring

NEW
Push Notification Server
(PNS)

HTTP Header Enrichment

Apple, Google, Microsoft
Push Notification Services

With the added ability to support operator specific requirements, Summit's RCS accredited GSMA clients

+

Summit's proven ACS solution

=

"...the ideal foundation from which an operator can anchor a complex IMS deployment!"
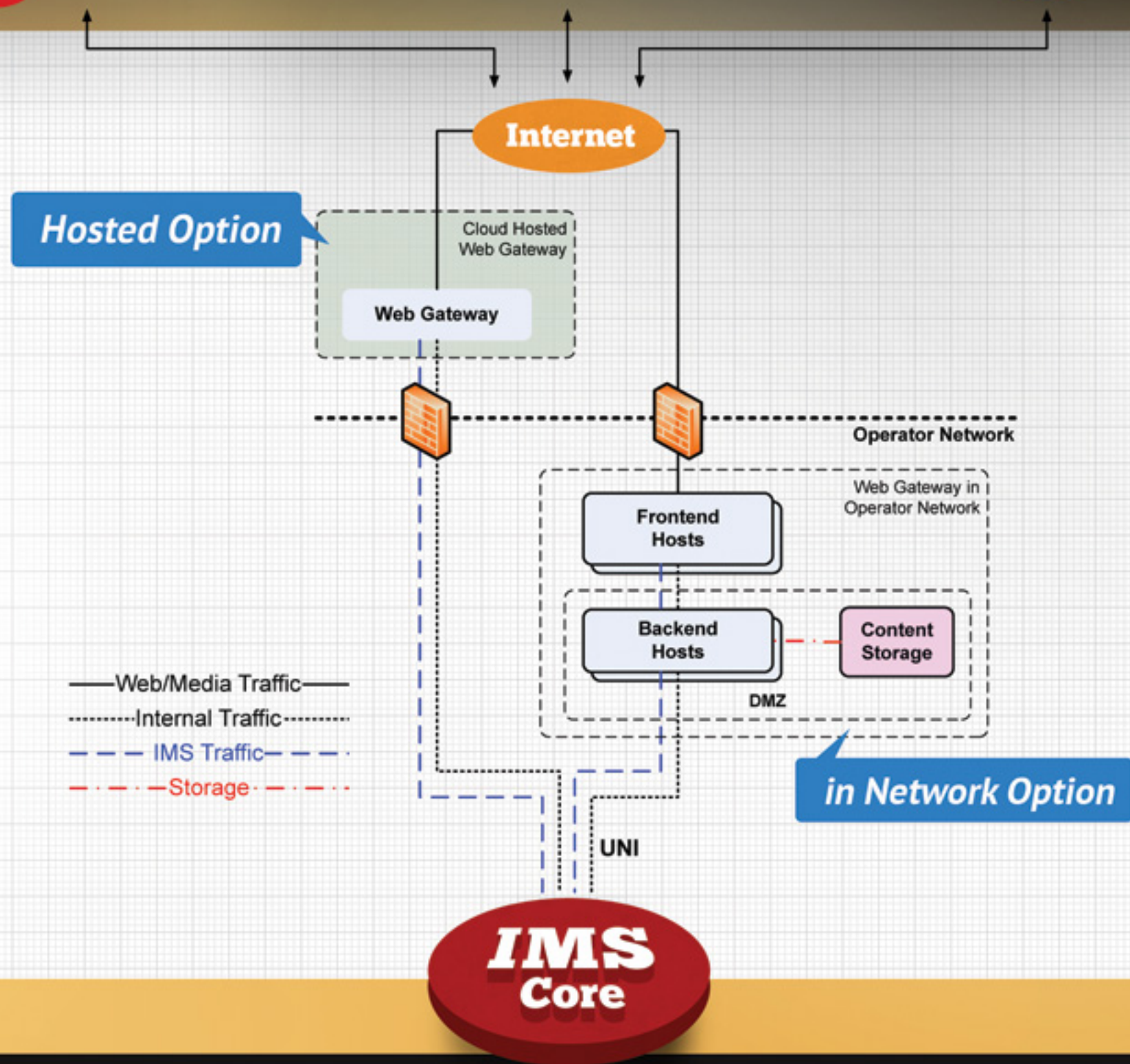
RCS Web Gateway

Web Sockets & RCS Network API Gateway Enabling Thin Clients

SUMMIT

NOKIA

ZTE

SONY

Alicia Stone

Marylin Newman
Contacts

Firefox OS

Julie Summers

Let's talk tomorrow, it would be so great to see you!

Are we on for tonight?

Ok, as long as we watch my favorite movie, eat some lobster... and refreshments are on you! Haha. Pick you up in 30 minutes, cool?

C# WINDOWS APP

Firefox Mobile OS

HTML 5

Internet

Hosted Option

Cloud Hosted Web Gateway

Web Gateway

Operator Network

Web Gateway in Operator Network

Frontend Hosts

Backend Hosts

Content Storage

DMZ

Web/Media Traffic
Internal Traffic
IMS Traffic
Storage

in Network Option

UNI

IMS Core

www.**RichCommunicationSuite**.com
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SUMMIT RCS
ADVANCED
SERVICES

Enterprise

"No compromise in features, functions and Quality of Service."

CONFERENCE CALL

Multi-party voice conference calling on 3G IR.58 & LTE IR.92 including supplementary services & Video Conference Calling supporting MCU & HDVC IR.39

WHITEBOARD

Overlay real-time design and sketches over live video or screen and image sharing sessions

CALL HANDOVER

Answer a call on any of your devices from smartphone, tablet or PC, and seamlessly handover calls between devices based on your need for mobility or enhanced multimedia sessions on PCs. Enrich calls with group chat sessions, screen share, video and whiteboards.

Multiple Device Registration   *Multiple Lines*
Single Number Reachability   *Call Transfer, Merge...*
Multiple Identities (Home, Work)

SCREEN SHARE

Connect your PC or laptop to a supporting Conference Calling Unit and share your desktop with mobile users during conference calls
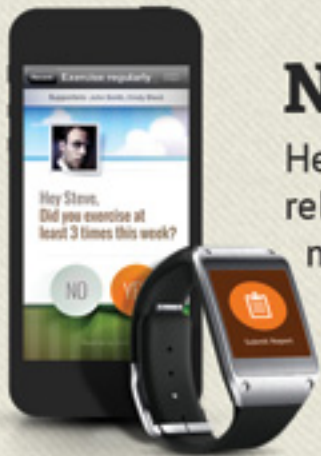
⌃ SUMMIT | **RCS API**

m**Health**

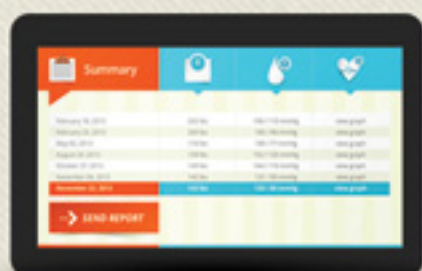## "An enhanced human experience through unified network services."

NOTIFICATION

Healthcare service providers require a reliable mechanism for notifying users on matters regarding virtual visits to remote self-testing and monitoring.
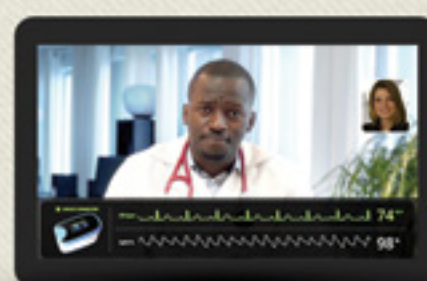
REPORT

Data gathered and sent through networks must be reliable, secure and adhere to regulated government requirements for patient privacy.

SHARE

Your health matters to you and your loved ones - when you want to share your progress, simply have the service notify friends and family through summary

COMMUNICATION

Complement your home self-testing sessions through HD Video Virtual Visits including real-time monitoring of test results. Live counselling with healthcare professionals can occur more frequently and at reduced costs.

CONNECTED *LIVING*

YOUR SECURITY SYSTEM, HOME CLIMATE CONTROL & EVEN YOUR APPLIANCES

all connected by a unified notification system & app ensuring global interoperability while lowering the cost of operation for service providers & device manufacturers

Z WAVE **Bluetooth®**

ZigBee® **WiFi**

& MORE

CLIMATE
CONTROL
Your home environment system instantly notifies you of actions it will take to ensure efficient and cost saving operations

SECURITY
SYSTEM
Family members can Arm / Disarm the system effortlessly with location push, e.g. when everyone's away - arm the system

VIDEO
SURVEILLANCE
Security cameras seamlessly integrate with your alarm system by activating home video share sessions linked to emergency services when alarms are triggered

LOCKS
Remote access to the status of doorlocks. Based on identity, location or proximity, auto lock / unlock doors. Doorbells can send notifications globally to family members resulting in a Video Share session

SUMMIT | RCS API

Gaming

In-game Communication API

💬 Chat 🎤 Voice 🎥 Video

Gaming Communities
Social presence, game setup, scheduling & matchmaking

RCS SDK Available for:

- C++ SDK: Windows, Ojective C, Android

- a Unity plugin for rapid integration with the Unity gaming platform

Javascript SDK
HTML 5 Web browsers

Interface to the Summit RCS
Web Gateway

SUMMIT

mHealth

NOTIFICATION

Healthcare service providers require a reliable mechanism for connecting with users on matters regarding remote self-testing, monitoring and virtual visits.

MONITORING

Data gathered and sent through networks must be reliable, secure and adhere to regulated government requirements for patient privacy.

COMMUNICATION

Seeing your doctor in person is a necessity, virtual visits reduce the need for on-site visits by improving your self monitoring sessions through HD video calling with real-time overlay of test results and live counselling with healthcare professionals.

Your health matters to your family and friends, share your progress in real-time with virtual support groups.

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Quality of Service
where it matters

SUMMIT
RCS API

MNO
Mobile Network Operator

SERVICE PROVIDERS

clinics / hospitals
wellness / lifestyle
insurers / employers

IMS is a core technology that mobile operators are presently deploying to support IP-based Rich Communication Services (RCS). This will enable telecom-grade virtual doctor visits, remote diagnostics, and data sharing over secure networks. Summit Tech provides Rich Communication Service APIs allowing 3rd party developers to deliver mHealth services over telecom networks.

RCS APIs facilitate provisioning and monitoring of devices such as glucometers, oximeters, scales, ECGs and blood pressure monitors with the ability to superimpose data in realtime over HIPAA compliant HD video calls, enabling patients to manage how and when their medical records are shared. 3rd party providers can leverage RCS as an accountable and secure notification mechanism for time sensitive messages ensuring that patients and healthcare providers are reliably notified. By leveraging research from top behavioural economists at Yale University, this application also takes advantage of the innovative technology to ensure that patients systematically reach their personal health and wellness goals.

Contact
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